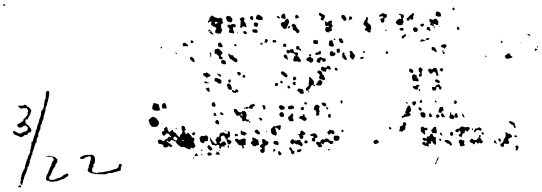
PROPERTY OF THE
PUBLIC LIBRARY OF THE
CITY OF BOSTON,
DEPOSITED IN THE
BOSTON MEDICAL LIBRARY

№ 5743.1

Vol.
pt. 2
1898



THE FRANCIS A. COUNTWAY
LIBRARY OF MEDICINE
BOSTON, MA

JUL 24 2003

THE [illegible]NWAY
[illegible]INE
BOSTON, MA

JUL 24 2003

Public Library of the City of Boston.

THE LANCET.

No. 3894.] LONDON, SATURDAY, APRIL 16, 1898. [Pp. 120+40.

CONTENTS.

HUNTERIAN LECTURES (Abstract of the) on the Surgery of the Kidney. Delivered before the Royal College of Surgeons of England on March 21st, 23rd, & 25th, 1898, by HENRY MORRIS, F.R.C.S. Eng., Surgeon to the Middlesex Hospital.—Lecture I. 1037

A LECTURE on Moveable Kidney and its Treatment. Delivered at the West London Hospital by LEONARD A. BIDWELL, F.R.C.S.Eng., Senior Assistant Surgeon to the West London Hospital... 1041

ORIGINAL ARTICLES.

A Case in which the Cæcum and the Ascending and Transverse Colon were Removed for Malignant Disease; Recovery. By R. LAWFORD KNAGGS, M.C. Cantab., F.R.C.S.Eng., Assistant Surgeon to the Leeds General Infirmary.—*(Illustrated)* 1042

On Pneumonia following Injuries to the Chest and the Possible Occurrence of Pulmonary Tuberculosis as a Sequence to Trauma. By THOMAS HARRIS, M.D., F.R.C.P.Lond., Physician to the Manchester Royal Infirmary and Lecturer on Diseases of the Respiratory Organs in Owens College.—*(Illustrated)* 1045

Vitality: An Appeal, an Apology, and a Challenge addressed to Brother Practitioners. By LIONEL S. BEALE 1048

Notes on a Case of Porro-Tait's Operation. By ALBERT E. MORISON, M.B., F.R.C.S. Edin., Honorary Surgeon to the Hartlepools Hospital 1050

Uterus Unicornis. By HEYWOOD SMITH, M.A., M.D. Oxon. 1051

A Case of Extensive Extravasations of Blood in various parts of the Body occurring in an Anæmic Woman. By EDWARD JOSEPH BLACKETT, M.R.C.S. Eng., L.R.C.P. Lond. 1052

CLINICAL NOTES:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A Symptom following Angina Pectoris. By ALBERT S. WORTON, M.B., C.M.Glasg. 1053

Parotitis from Obstruction of Stensen's Duct. By R. HILL BROWN, M.B., C.M.Edin. ... 1053

A Case of Dead Twin Retained to Full Term. By WALTER C. HEARDEN, M.R.C.S. Eng., L.R.C.P. 1053

A MIRROR OF HOSPITAL PRACTICE.

TEDDINGTON COTTAGE HOSPITAL: A Case of Cæsarean Section. (Under the care of Mr. R. A. Clarke) 1053

SHEFFIELD ROYAL HOSPITAL: A Case of Pulmonary Abscess Successfully Drained. (Under the care of Dr. Duncan Burgess and Mr. Sinclair White) 1054

MEDICAL SOCIETIES.

PATHOLOGICAL SOCIETY: Immunity from Cobra Poison.—Exhibition of Specimens 1055

HARVEIAN SOCIETY: The Treatment of Caries of the Spine 1056

OBSTETRICAL SOCIETY: The Menstruation and Ovulation of Monkeys and of the Human Female 1056

WEST KENT MEDICO-CHIRURGICAL SOCIETY: The Use and Abuse of Mydriatics.—Morphia in Cardiac Diseases 1057

ROYAL ACADEMY OF MEDICINE IN IRELAND: Clinical Report of the Rotunda Hospital 1057

ULSTER MEDICAL SOCIETY: Management of Labour.—Life Insurance 1058

REVIEWS AND NOTICES OF BOOKS.

Memory and its Cultivation. By F. W. Edridge-Green, M.D.Durh., F.R.C.S.Eng. ... 1058

The Royal London Ophthalmic Hospital Reports. Edited by William Lang, F.R.C.S. Eng. 1059

A Manual of Botany. By J. Reynolds Green, Sc.D., F.R.S. F.L.S. Vol. II. 1059

Analytical Key to the Natural Orders of Flowering Plants. By Franz Thonner 1059

The Principles of Bacteriology. By A. C. Abbott, M.D. 1059

Il Piede e la sua Razionale Calzatura. By Dr. F. Brunelli 1060

Archives de Physiologie. Publiées par MM. Bouchard, Chauveau, et Marcy 1060

ANALYTICAL RECORDS FROM THE LANCET LABORATORY.

Vejos and Fluid Vejos.—Aerated Waters.—Voline—Health Foods.—"Perfected" Cod-Liver Oil.—Bensolyptus.—Special Blend Old Scotch Whisky 1060

NEW INVENTIONS.

A New Clinical Thermometer 1061

LEADING ARTICLES.

THE GENERAL MEDICAL COUNCIL AND THE MIDWIVES QUESTION 1062

THE VACCINATION BILL 1063

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY 1064

ANNOTATIONS.

The Small-pox Epidemic at Middlesbrough 1065

The Victory in the Soudan 1065

The Right to Practise in Natal 1066

School Boards and Medical Certificates 1066

An Alleged Outbreak of Oyster-borne Illness 1066

The Treatment of Tetanus 1067

Medical Lectures to Lay Audiences 1067

Ichthyosis and Arterial Atrophy 1067

The Vaccination Bill and the Jenner Society 1067

The Dangers of Imported Milk 1068

Affection of the Heart in Cancrum Oris 1068

"Professor" D'Odiardi and his Electrical Hospital 1068

National Vaccine Establishment 1069

The Degree of M.D. in German Universities 1069

Symmetrical Gangrene from Embolism of One Iliac Artery 1069

The Royal Hampshire County Hospital, Winchester 1069

The Prosecution of Mr. H. K. Hunter 1069

Tuberculosis in Fishes 1069

The Hanwell Schools 1069

The Medical and Dentists' Registers 1070

THE BRITISH PHARMACOPŒIA 1072

VITAL STATISTICS: Health of English Towns ... 1076

Health of Scotch Towns 1076

Health of Dublin 1076

SPECIAL ARTICLES.

The Royal Commission on the Metropolitan Water-supply 1070

The General Medical Council and the "L.S.A." 1075

Third Report to the Registered Practitioners of England and Wales 1075

The Services: Casualties in Modern Sea Fights 1077

Notes from India: Sudden Abandonment of Plague Operations in Bombay; the New Measures; Increase of Plague in the Punjab; the Wounded Europeans 1080

Birmingham: Birmingham Medical Institute; the Athletic Institute 1081

Manchester: the Rivers Committee and the Local Government Board; Manchester Literary and Philosophical Society 1081

Scotland: Glasgow University; the Aerial Transmission of Enteric Fever 1082

Ireland: The Irish Medical Association; Dispensary Medical Officers' Substitutes 1082

Paris: A Sequel to the Laporte Case; L'Assistance Publique 1083

Rome: Tragic Death of a Distinguished Medico-psychologist; "A Lurid Industry" 1084

Australia: Typhoid Fever in Victoria; the Sydney Hospitals 1085

CORRESPONDENCE.

The Crown Vacancy in the General Medical Council (Mr. Morton Smale) 1078

New Drugs and Preparations (Dr. D. Hooper) 1078

Sick and Obstetric Nurses Bill (Dr. Alexander McCook Weir) 1078

The Epidemic of Measles (Mr. G. G. Gidley) 1078

Venesection in Apoplexy (Dr. F. Lucas Benham) 1079

The Vaccination Bill (Mr. T. Garrett Horder) 1079

The Incubation Period of Small-pox and the Influence of Vaccination on the same (Mr. Wm. Berry) 1080

An Unknown Larval Parasite (Mr. Stanley Kellett Smith) 1080

Politics or Practice (Mr. Thos. M. Watt) 1080

A Question of Treatment 1099

An Appeal (Dr. G. D. Knight) 1099

Wanted a Home 1099

An Obstinate Case of Herpes (Dr. G. Hay Reynolds) 1099

To Contradict a Rumour (Mr. G. Brooke Smalley) 1099

A Correction (Mr. M. P. King) 1099

OBITUARY.

William Grosvenor, L.R.C.S., L.R.C.P.Edin. 1086

Deaths of Eminent Foreign Medical Men 1086

THE GENERAL MEDICAL COUNCIL.

The late Sir Richard Quain ... 1087

The Midwives Question 1087

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY:

Notes and Comments 1089

Preliminary Organisation ... 1090

The Opening Ceremony 1091

The Sections 1094

The Sanitary Exhibition 1093

MEDICAL NEWS.

Pass-lists of the Examining Board in England by the Royal Colleges of Physicians and Surgeons, and Society of Apothecaries of London ... 1095

Royal College of Surgeons in Ireland 1095

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics 1096

House of Commons 1096

Appointments 1097

Vacancies 1097

Births, Marriages, and Deaths 1097

Medical Diary 1098

Notes, Short Comments, and Answers to Correspondents ... 1098

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS.

COVER.

PAGE

BAILLIERE, TINDALL, & COX:—
Ball ..... Diseases of the Nose .. 1
Campbell.... Respiratory Exercises in the Treatment of Disease 1
Cory ..... Theory and Practice of Vaccination 1
Eccles ..... Massage 1
Gemmel ... Idiopathic Ulcerative Colitis 1
Herschell .. Indigestion 1
Macnaughton-Jones..... Diseases of Women.... 1
Parkinson .. Diagnosis of Disease .. 1
The Tailerman Treatment..... 1

CORNISH BROS. (BIRMINGHAM):—
Foxwell .... The Enlarged Cirrhotic Liver..... 1
" .... Spas of Mid Wales 1

GRIFFIN & CO.:—
Donald..... Midwifery..... 1
Foxwell .... Heart and Lung Disease 1
Lafar..... Technical Mycology .. 1
Phillips .... Diseases of Women.... 1

LONGMANS & CO.:—
Power & Godlee .... Diseases of the Lungs.. 1

PENTLAND, Y. J.:—
Text-book of Physiology..... 1
Waring..... Operative Surgery 1
Webster .... Diseases of Women..... 1
Williamson.. Diabetes Mellitus 1

SEGG & CO.:—
Pedley ..... Dis. of Children's Teeth 1

WRIGHT & CO. (BRISTOL):—
Dowse ..... On the Technology of Mechano-Therapy &c. 1

MEDICAL LIBRARIES, &c.:—
Davidson—Sight Testing for the G.P. 1

BAILLIERE, TINDALL, & COX:—
Allingham .. Colotomy &c. 6
" .. Diseases of the Rectum 6
Browne .... Diphtheria &c. 8

PAGE

BAILLIERE—(Continued.)
Campbell.... Respiratory Exercises in the Treatment of Disease 8

BALE, SONS, & DANIELSSON:—
Treves ..... Peritonitis 6

BURLEIGH:—
Churchill.... Consumption &c. 8

CASSELL & CO.:—
Manson .... Tropical Diseases 6
Marsh ..... Diseases of the Joints.. 9
Morris ..... Ringworm 6
Treves ..... Intestinal Obstruction 6

CHURCHILL, J. & A.:—
Allen ..... Chemistry of Urine 7
Bernays .... Analytical Chemistry .. 7
Bigg ..... Spinal Curvatures &c... 9
" ..... Deformities of the Head and Neck 9
" ..... Manual of Orthopraxy 9
Bloxam .... Chemistry 7
" .. Laboratory Teaching .. 7
Brockbank .. On Gall Stones 7
Butlin ..... Operative Surgery of Malignant Disease &c. 8
" ..... Sarcoma and Carcinoma 8
" ..... Malignant Disease of the Larynx 8
Cautley..... Methods of Feeding.... 7
Chemical Technology 7
Clowes & Coleman .. Quantitative Analysis.. 7
" .. Practical Chemistry &c. 7
" .. Elementary Practical Chemistry 7
" .. Elementary Quantitative Analysis 7
Cripps ..... Diseases of the Rectum 6
" ..... Cancer of the Rectum.. 6
Frankland, Sir E., & Japp ..... Inorganic Chemistry .. 7
Fresenius' Quantitative Analysis 7
Galabin .... Manual of Midwifery .. 7
" .... Diseases of Women 7
Harley ..... Diseases of the Liver .. 9
" ..... Sounding for gall-stones, &c. 9
" ..... Excision of Gall-stones, &c. 9
Jacobson .... Operations of Surgery.. 7
Johnson .... Analyst's Laboratory Companion..... 7
Lazarus-Barlow.... General Pathology 7

PAGE

CHURCHILL—(Continued.)
Ramsay .... Inorganic Chemistry .. 7
" .... Elementary Chemistry 7
Roberts .... Practice of Midwifery.. 7
Squire ..... Companion to the Brit. Pharmacopœia 4
Sutton ..... Handbook of Volumetric Analysis..... 7
Tilden ..... Manual of Chemistry .. 7
Valentin's Qualitative Analysis..... 7
Wagner's Manual of Chemical Technology 7
Walsham .. Surgery 7
Watts's Chemistry 7
White ..... Materia Medica &c. 7

GRIFFIN & CO.:—
Journal of Anatomy and Physiology.. 8

KEGAN, PAUL, & CO.:—
Taylor ..... Diseases of the Eye 8

KIMPTON, H.:—
Taylor ..... Sexual Disorders of the Male and Female 6

LEWIS:—
Aldersmith.. Ringworm and Alopecia Areata 3
Anderson .. Yellow Fever in the West Indies 3
Baber ..... Examination of the Nose 3
Beevor..... Diseases of the Nervous System 3
Campbell.... Headache &c. 8
" .... Flushing and Morbid Blushing 8
" .... Nervous Organisation of Man &c. 8
" .... Causation of Disease .. 8
Fenwick .... Dyspepsia of Phthisis.. 4
" .... Disorders of Digestion 4
Jones ..... Medical Electricity 3
Lewers..... Diseases of Women 3
Parkes ..... Hygiene and Public Health 3
Roose ..... Gout &c. 3
Snaking .... The Nervous System .. 3
" .... Diseases of the Brain .. 3
Swanzy .... Diseases of the Eye 3
Weakes .... On Deafness &c. 3

LONGMANS & CO.:—
Althaus .... Electrical Treatment .. 8
" .... Sclerosis of the Spinal Cord 8
" .... On Impotency 8
Ashby & Wright.... Diseases of Children .. 5

PAGE

LONGMANS—(Continued.)
Brodie ..... Experimental Physiology 5
Clarke ..... Surgical Pathology &c. 5
Coats..... Manual of Pathology .. 5
Cooke's Tablets of Anatomy..... 9
Dakin ..... Handbook of Midwifery 5
Dickinson .. Renal and Urinary Affections 5
Brigham, Sir J. R. ..... The Science and Art of Surgery 5
Gray's Anatomy 5
Liveing .... Handbook on Diseases of the Skin..... 9
Obstetrical Transactions..... 9
Quain ..... Dictionary of Medicine 5
" ..... Elements of Anatomy.. 5
Schäfer..... Essentials of Histology 5
Stevenson .. Wounds in War..... 5
Tirard ..... Diphtheria &c. 5
Waller ..... Human Physiology 5

MACMILLAN & CO.:—
Treves ..... Perityphlitis &c. 8

OLIVER & BOYD (EDIN.):—
Blandford .. Insanity..... 9

PENTLAND, Y. J.:—
Lockwood .. Traumatic Infection.... 8
" .. Aseptic Surgery..... 9

RENSHAW:—
Milton ..... Spermatorrhœa 8
Ryley ..... Sterility in Women 8
Wood ..... Application of Trusses 8

SIMPKIN, MARSHALL, & CO.:—
Startin..... Pharmacopœia of Dis. of the Skin..... 8

SMITH, ELDER, & CO.:—
Smith ..... Curvatures of the Spine 5

SPRAGUE & CO:—
Ernst..... Orthopædic Apparatus Guide 6

WRIGHT & CO. (BRISTOL):—
Saundby .... Renal Diseases 9

MEDICAL LIBRARIES &c.:—
Baker—
Hart—Atlas &c. 9
Books out of Print &c..... 9
Behnke—Stammering 9

OFFICIAL AND GENERAL ANNOUNCEMENTS.

APPOINTMENTS VACANT:—
Birkenhead Union 85
Borough of Middlesbrough 85
Chester General Infirmary..... 85
City of London Freemen's School &c. 84
City of London Hos. for Dis. of Chest 84
Flintshire Dispensary 84
General Hospital, Nottingham..... 84
General Infirmary, Gloucester 85
Hants County Asylum 85
Hospital for Women &c., Leeds 86
Hospital of St. Francis..... 84
Middlesbrough County &c Asylum .. 85
North Staffordshire Infirmary &c. 85
R. N. R., Ebury-street 85
Mousay Parish Council, Orkney 84
Ross Cottage Hospital 84
Royal Albert Hospital, Devonport .. 85
Royal College of Surgeons of England 84
Royal Cornwall Infirmary, Truro 85
Rural District Council of Easington.. 84
Scarborough Hos. and Dispensary.... 84
Staffordshire General Infirmary 84
St. Paul's Hospital for Skin Diseases 85
Tadcaster Union Workhouse Infirmary 84
West Ham Hospital, Stratford 84
Wolverhampton &c. General Hospital 85
York Dispensary..... 84

ASSISTANCIES, MEDICAL..... 90

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 79
Aston Hall, Warwickshire..... 83
Barnwood House Hospital..... 80
B. B. B., L.O., Strand 81
Bournemouth Hydropathic 79
Capel Lodge, near Folkestone..... 83
Clapham Common Home &c. 83
Coppice, The, Nottingham..... 80
Crook, Dr., Margate 83
Dalrymple Home, Rickmansworth .. 79
Dorchester Asylum 84
Dunain Park, near Inverness 83
Exeter Asylum..... 80
Flower House, Catford..... 79
F.R.C.P., L.O., Strand 83
Grove House, Church Stretton 80
Grove, The, Catton, Norwich 80
Haydock Lodge, Newton-le-Willows.. 81
High Shot House, Twickenham 79
Hitch, Mrs., Hollington 80
Hurgranoca, The, Wandsworth..... 79
Kingswood-park, near Bristol 81
Lady Superintendent, Croydon 83
M. M. G., L.O., Strand 84
Melbourne House, Leicester..... 80
Moat House, Tamworth 80

ASYLUMS—(Continued.)
M. O. S., Bouverie-street 79
Neuron, L.O., Strand 79
Northlands, Old Wandsworth 83
Northwoods House, Winterbourne .. 79
Overdale Asylum, Whitefield 80
Pendleton, Brighton 83
Perteau, Winchelsea 82
Perton, L.O., Strand 83
Scott, Madeira 83
Small-pox &c. Hospital, South Mimms 84
Smedley Hydropathy, Matlock 77
Springfield House, Bedford 80
St. Andrew's Hospital, Northampton 80
St. Luke's Hospital, S.U. 80
Stocker, Lancaster-place..... 83
Stretton House, Church Stretton 80
Tower House, Leicester 80
Tower House, Westgate-on-Sea 81
Warnsford Asylum, Oxford 80
West Malling-place, Kent 81
Women's Temp. Home, Sydenham .. 83
Wonford House, Exeter 79
Wye House, Buxton 80
Wyke House, Isleworth 79
Yarrow House, Broadstairs 81

BATHS:—
Badgastein 77
Barium Springs 49
Baths of Homburg 82
Buxton Mineral Waters 83
Campbell 82
Hot Mineral Springs of Bath 77
Kreuznach Baths 77
Uriage les Bains 77
Wiesbaden 82
Wiseman 77
Woodhall Spa Baths 82

COMPANIONS &c.:—
Barns, Eastbourne 84

FINANCIAL &c.:—
Birkbeck Bank..... 76
Equitable Reversionary Interest Soc. 76

HOMES &c. WANTED:—
Batsford, Strand 84

HOTELS:—
Ilfracombe Hotel 77
Montreux, Hotel de Ville Belmont .. 81
Orotava, Teneriffe 77
Pump House, Lake Hotel, and Baths, Llangammarch Wells, Central Wales 49
Thackeray Hotel..... 77
Thackeray House 77

HOUSE AND ESTATE AGENTS:—
Dr. C., Notting-hill 86
Garvey & Gook, Regent-street 86
CONSULTING-ROOMS:—
Urbs, L.O., Strand 86

LIFE AND FIRE ASSURANCES:—
Prudential 76
Union Assurance Society 76

MASSAGE:—
Nauheim Treatment in London 82
Society of Trained Masseuses 76

MEDICAL ACCOUNTANTS &c.:—
Kemble 89
Morris 89
Peacock & Hadley 86
Turner 89

MEDICAL AGENTS:—
Adams & Parkes 86
Lee & Martin 86
Manchester Medical &c. Assoc., Ltd. 89
Needes, Herbert 86
Needes, J. C. 86
Orridge..... 86
Peacock & Hadley 86
Scholastic, Clerical, & Med. Assoc. .. 87
Turner 88
Wilson..... 88

MEDICAL SCHOOLS (LONDON):—
Charing Cross Hospital Medical School 71
Cooke's School of Anatomy 72
Dental Hospital of London 82
Guy's Hospital Medical School 72
King's College, London, Med. School 72
London Hospital Medical College 72
London School of Med. for Women .. 73
Middlesex Hospital Medical School .. 75
St. Bartholomew's Hos. and College.. 71
St. George's Hospital Med. School.... 72
St. Mary's Hospital Medical school .. 72
St. Thomas's Hospital Medical School 71
University College, London..... 72
Westminster Hospital Med. School .. 71

MEDICAL SCHOOLS (PROVINCIAL):—
Anderson's College Medical School .. 75
Glasgow Royal Infirmary 74
Mason Univ. College, Birmingham .. 73
Owens College, Manchester 74
University College, Bristol 74
University College, Cardiff 76
University College, Liverpool..... 74
University College, Sheffield..... 73
Univ. of Durham College of Medicine 75

MEDICAL SCHOOLS—(Continued.)
University of Edinburgh 75
Yorkshire College, Leeds 75

NURSING INSTITUTES:—
Baker-street Assoc. of Trained Nurses 78
Clapham &c. Nursing Institution 78
General Lying-in Hospital, Lambeth 79
General Nursing Institution 79
Hamilton Association 78
Hos. for Sick Children, Gt. Ormond-st. 78
London Nurses' Association 79
Male and Female Benefit Association 78
Male Nurses' Co-operation 78
Mental Nurses' Co-operation..... 79
Middlesex Hos. Trained Nurses' Inst. 78
Nurses' Co-operation, Portland-place 79
Queen Charlotte's Lying-in Hospital 78
St. John's House..... 77
Temperance Male and Female Assoc. 78
Wigmore Nurses' Co-operation 78
Wilson's Nursing Institute 78

OFFICIAL NOTICES:—
Clinique on Diseases of the Skin 75
Examination Hall 72
Grocers' Company 75
Guy's Hospital..... 72
King's College, London 72, 73
London Hospital Medical College .. 75
London Post-graduate Course 76
London Skin Hospital 75
Medical Department of the Navy 72
Royal College of Surgeons, Edin. 75
Royal London Ophthalmic Hospital.. 72
Royal Westminster Opthalmic Hos. 72
St. George's Hospital Med. School.... 75
St. John Ambulance Association 76
St. John's Hospital for Skin Diseases 72
West-end Pathological Laboratory .. 76
West London Post-Graduate Course.. 74

PARTNERSHIPS & PRACTICES 89

RAILWAY & STEAMSHIP CO.'S:—
Albion Steamship Co.—
Norway Cruises 77
New Zealand Shipping Company 17
Royal Mail Steam Packet Company .. 77

SCHOOLS, PREPARATORY, &c.:—
Scholastic, Clerical, and Med. Assoc. 78

TUTORS AND LECTURERS:—
Boultbee 76
Cassab 76
Fellowships .. 76
Jennings 76
Kerr 76
M.D 76
Spinifex 76
Tutor 76
Van Praagh.... 76
Weymouth 76

(For Index to Trade and Miscellaneous Advertisements see page 4.)

July 19, 1898

ABSTRACT OF

The Hunterian Lectures

ON

THE SURGERY OF THE KIDNEY.

Delivered before the Royal College of Surgeons of England on March 21st, 23rd, and 25th, 1898,

BY HENRY MORRIS, F.R.C.S. ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

LECTURE I.

Delivered on March 21st.

THE ORIGIN AND PROGRESS OF RENAL SURGERY AND THE CONSERVATIVE TENDENCY OF ITS RECENT DEVELOPMENT.

MR. PRESIDENT AND GENTLEMEN, — In selecting the subject for the lectures which by the grace of the Council I am about to deliver I was influenced by the fact that "renal surgery," though it has attracted a good deal of attention amongst surgeons during the last twenty years, has not yet received the general recognition by the profession at large to which it is entitled, nor has it hitherto been the theme of any Hunterian professor. I propose in this lecture to describe briefly the origin, and then to trace the progress, of this quite modern branch of surgery.

History.—In the sixteenth, seventeenth, and eighteenth centuries the practicability of nephrotomy was repeatedly discussed by Camerarius and François Rousset in 1581, by Shenck in 1584, and other early writers, and in 1829 it found a very ardent supporter in P. N. Gerdy.[1] As regards nephrectomy, various physiological experiments upon animals were undertaken by Zambeccarius[2] about the year 1670, and Roonhuyzen[3] in 1672, to show that life could be well maintained after removing one of the kidneys. The cases of the archer of Meudon, of the British consul at Venice, and others, which had found their way into surgical literature, may be dismissed in the words of M. Hevin,[4] who wrote in the year 1757: "It is very doubtful, if not absolutely improbable, that cutting into the kidney had ever been practised without the operation having been determined by an abscess swelling or by a fistula due to renal abscess which had broken and discharged in the lumbar region." None of these cases had any influence in encouraging surgeons to operate upon the kidney and no surgical treatment for any kind of renal disease was systematically employed until the second half of the present century had well advanced.

Nephrectomy.—The dawn of renal surgery admittedly dates from Aug. 2nd, 1869, when Gustav Simon, of Heidelberg, successfully removed by the lumbar method the kidney of a woman who had an ureteral fistula opening upon the abdominal wall above the pubes and following on ovariotomy done one and a half years before. Simon performed his operation in face of the pronouncement long before made by Rayer that it was "madness to dream of extirpating a kidney in the human subject." He no doubt was aware of the experimental results of Prévost and Dumas (1823), of Claude Bernard, Rayer, Meissner, Shephard, all of whom established the fact that animals could live with only one kidney. For himself, he compared the results of 15 hysterectomies with 15 nephrectomies practised on animals and was satisfied that there was no more danger from a surgical point of view in the one operation than in the other and at the same time he convinced himself that the physiological changes effected by the kidneys could be amply performed by one after the ablation of the other organ. Rather more than a year after Simon's case Gilmore in America followed (December, 1870) with a very successful nephrectomy for a painful shrunken fibrous kidney in a woman, five months pregnant, who recovered without a miscarriage. In England the first nephrectomy was performed by Arthur E. Durham on May 14th, 1872. The next was by Jessop and the third by Barker. Barker, who had made himself thoroughly familiar with Simon's work, read two important papers before the Royal Medical and Chirurgical Society; one in March, 1880, and the other in April, 1881. He therein tabulated all the nephrectomies done up to those dates and thus brought the whole subject of extirpation of the kidney before the notice of British surgeons, who till then, for the most part, were quite unfamiliar with it. In France, where the earliest and most ardent advocates of nephrotomy had lived, nephrectomy was for several years either neglected or opposed. It was not until May 20th, 1880, nearly eleven years after Simon's successful initiative, that M. Léon Le Fort practised the first nephrectomy done in France.

Nephrotomy is the operation which had received most consideration in past times, especially in its bearing on the treatment of renal calculous disorders; but it was not in all probability ever systematically put into practice until 1870. Previously to 1870 fluid swellings, believed to be of the kidney, had been punctured and opened by the thermo-cautery and perinephric abscesses had been incised through the loin. On April 27th, 1869, three months before Gustav Simon's first nephrectomy, a paper was read by Thomas Smith describing a method for exposing the kidney through the loin. This he advocated for diagnostic purposes and for the extraction of a calculus if of suitable size and shape and capable of removal through the renal pelvis, but not if fixed in the substance of the kidney or if its removal entailed cutting into the normal secreting structure. Though the author had no actual case of his own to record and advocated nothing more than had been recommended on several occasions during the two preceding centuries, there can, I think, be little doubt that his paper, coming when it did, influenced the minds of surgeons to a degree which previous similar suggestions had failed to do. In July of the same year (1869) Annandale, and in January, 1870, Spencer Wells[5] wrote in favour of nephrotomy in some cases of renal calculus. These articles, together with Simon's success, were all factors leading up to the application of nephrotomy to a class of case for which no one had as yet, so far as our absolute knowledge goes, suggested it—namely, for cases of renal calculus in a kidney otherwise normal. In 1870 Bryant performed nephrotomy for tuberculous pyonephrosis, but at too late a stage to save his patient; and in the same year Gunn and Durham each cut down *upon* the kidney; and Lente and Barbour each cut *into* the kidney with the object of removing calculi, but none were found. All four patients recovered. During the next ten years, 1870–1880, nephrotomy was done in some half-dozen cases (according to Dickinson's tables), in each of which there was a large pyonephrosis, more or less pointing at the loin; and in four of these calculi were extracted.

Nephrolithotomy.—No further advance, however, was made in the operative treatment of renal disorders till Feb. 11th, 1880, when I successfully removed a mulberry calculus weighing 31 gr. from the undistended and, to the naked eye, quite normal kidney of a young woman. The kidney was exposed through an oblique lumbar incision and the stone reached and removed through the renal parenchyma. This case demonstrated for the first time that a stone could be removed safely by cutting freely upon it through a thick layer of renal tissue. It thus became the starting point of both the development and the conservatism of renal surgery which I am persuaded will become more and more conservative in the future. The second nephrolithotomy was performed in August, 1881, by the late Mr. Marcus Beck; others more or less quickly followed and in the list of my operations for removal of renal calculus by nephrolithotomy I am able to show 34 operations with recovery in 33 and death in 1. These results disprove the supposed dangers of nephrolithotomy and show the invalidity of the objections which in all previous times had been urged against the proposal to operate upon a kidney not already converted into a mere abscess sac.

Nephropexy.—Fourten months after the first nephrolithotomy Hahn of Berlin introduced an operation at first called nephrorrhaphy and afterwards by the French writers

[1] P. N. Gerdy: Anatomie des Formes Extérieures du Corps Humain. Paris et Bruxelles, 1829. See a long footnote on pages 150, 151, 152, 153, and 154.

[2] Zambeccarius: Experimenta circa divers var. animal. viv. esset visc. et supplem. (act. nov. erudit Lipsiae), t. sect. 6, p. 275.

[3] Roonhuyzen: Observ. Chir., part i., obs. 22. Lafitte: Sur les cas où la Néphrectomie defait avec succès. (Mémoire de l'Académie de Chirurgie, édition 1819, tome ii., p. 235.)

[4] Hévin: Researches, Historical and Critical, on Nephrotomy or Cutting into the Kidney, 1757. (Mémoire de l'Académie Royale de Chirurgie, tome iii., part 2, sect. 2.)

[5] Medical Times and Gazette, Jan. 8th, 1870.

nephropexy for fixing moveable kidneys. This consisted in an incision alongside the sacro-lumbalis muscle from the twelfth rib to the crest of the ilium; the quadratus lumborum was cut and the fibro-fatty capsule of the kidney opened along the outer border of the kidney; the fibro-fatty capsule was separated to some extent from the kidney and dragged forcibly backwards into the wound along with it. By means of six or eight catgut sutures this capsule was stitched into the wound and the wound itself plugged with carbolic gauze. In his account, published in July, 1881, Hahn describes two cases thus operated upon by himself in April of that year. The patients were both women and recovered in four weeks with the kidneys as securely in their attached position as immediately after operation. This was an important advance because it at once had the effect of putting a stop to nephrectomy for moveable kidney which had been recommended and practised by Martin of Berlin in 1878. I never felt confidence in this mode of fixation and preferred to attach the kidney itself to the cut edges of the transversalis fascia and the aponeurosis of the transversalis muscle by means of three sutures dipping deeply into the posterior surface of the organ and running for from three-quarters of an inch to an inch in its substance. I have used various materials for suture—stout catgut, kangaroo tendon, and silk, but now always employ silk. The results obtained have in most of the cases been perfectly satisfactory, and I see from time to time patients upon whom I operated nine or ten years ago with their kidneys as firmly fixed as can be desired and who have been quite free from their former symptoms ever since the operation. Tuffier recommends partial decortication of the kidney and the suturing of the tunica propria to the edges of the parietal wound. This done he thinks the parenchyma does not fail to attach itself firmly to the neighbouring tissue by the whole of the exposed area. A fourth method has more recently been suggested by Vulliet of Geneva and was first tried by his friend Poullet of Lyons. It consists in making use of a long slender slip of the tendon of the erector spinæ of the patient as the means of fixation of the kidney. I prefer Vulliet's method to Tuffier's, but neither is so simple, or so rapidly done as, or more efficacious than my own.

Partial excisions.—Another most important advance in the conservatism of the surgery of the kidney is the excision of diseased portions of the organ in place of nephrectomy. This step was a natural result of the establishment of nephrolithotomy as a sound surgical procedure. The fear of uncontrollable bleeding during the operation and the doubts as to the healing power of a kidney cut into or otherwise wounded being once removed, the attempt to save the greater part of the organ when only a small portion was diseased or injured was bound to be made. Tuffier's experiments on animals in 1888 and Barth's histological researches supply ample proofs of the healing power of the kidney and of the process by which this healing is accomplished, even after extirpation of considerable portions. Dr. Paoli[6] of Perugia performed extra-peritoneal operations for resection of the kidney upon 25 dogs, cats, and rabbits with perfect recovery and published his results in 1890. But such experiments were not required to convince us that wounds of the human kidney readily heal. In 1883 and 1884 I collected for my work on diseases of the kidney a number of cases proving the cicatrising capacity of the human kidney after incised, punctured, lacerated, and also gunshot wounds. Up to the present time partial excision or resection has been very rarely performed. An excellent epitome of the work hitherto done in this direction is contained in a paper read before the British Medical Association at Carlisle in 1896 by Oscar Bloch of Copenhagen. He therein reports a case in which he removed, in September, 1895, half the kidney affected by a new growth and gives abstracts of ten cases which he collected from German and French sources.

My own experience of resection commenced in November, 1890, when in drawing out a kidney of a young man, aged twenty-four years, which I was exploring for calculus, several abscesses were seen in the cortex, which I opened, evacuated, and scraped. The kidney was replaced and the loin wound closed, but a week later I had to remove the whole kidney on account of acute general pyonephritis. The man quite recovered after a long convalescence and is well and leading an active life to-day. In April, 1892,[7] I scraped out six tuberculous masses in the kidney of a man, aged twenty-eight years, which I was exploring for calculus. An excellent recovery followed. In a third case I found three areas of grouped miliary tubercles at different points of the kidney. I removed them by excising three wedges of the renal parenchyma and in so doing opened up the calyces. The patient made a rapid recovery and left the home without a sinus on Jan. 16th, 1895. In March, 1897, two years and two months afterwards, the patient was quite well. In three other cases I have done similar successful operations on women. Partial resections are capable of a wider application than has yet been given to the operation, especially in the case of tumours taking origin from the renal capsule, and those which, though originating in the perinephric tissue, grow into, and partially destroy, the kidney itself. Bardenheuer and, in this country, E. Owen and Keetley, acting on the same conservative principle, have treated cases of accidental injuries of the kidneys by taking away a portion and leaving the bulk of the organ.

Operations on the ureter.—Operations upon the ureter are an advance of the last few years, but not many have been recorded up to the present time. They are of very considerable importance because of the influence they are having, and are destined to have, upon renal surgery generally. Ureterotomy has been employed in the treatment of hydronephrosis, calculus, and calculous anuria. Ureterectomy will improve the results of operations for advanced tuberculous disease and also of those performed for calculous pyonephrosis complicated with ureteritis. Ureteral anastomosis and other plastic operations on the ureter will save many kidneys which would formerly have been nephrectomised on account of hydronephrosis, fistulæ, and surgical injuries of the ureter. It is of interest to note that ureterotomy, like nephrotomy and nephrolithotomy, was suggested many years before it was put into practice. The first allusion to it which I have met with is in Velpeau's "Surgery" (edition 1851, p. 1021). In 1856 a remarkable series of articles was published by Dr. C. Gigon of Angoulême[8] in which he suggested opening the ureter with the object of establishing an artificial passage for the escape of the urine in a case of calculous anuria.

Ureterotomy for calculus.—In 1879 Thomas Addis Emmet of New York (in the edition of his work on the "Principles and Practice of Gynæcology") stated that in three cases he had met with stones obstructing the vesical end of the ureters. In one he removed the stone through the bladder by means of curette forceps after opening the bladder. In the second case he removed a stone weighing 98 grains by cutting upon it through the vaginal wall without having opened either the bladder or the peritoneum and he closed the opening with interrupted sutures. His third case does not seem to have been operated upon. In 1882 Bardenheuer performed ureterotomy for calculous anuria, removed four stones, one of which was impacted in the upper end of the ureter, and closed the ureteral incision by sutures. In Bardenheuer's case the urine did not find its way subsequently into the bladder, so he divided the ureter and established a lumbar ureteral fistula. In 1885 Cullingworth removed a calculus from the lower end of the ureter of a woman by abdominal section. In and since 1887 ureterotomy was performed for the extraction of calculi impacted in different parts of the ureter by means of a retro-peritoneal operation in the lumbar or inguino-lumbar region by Godlee in 1887, by Kirkham and Torrey in 1889, by Twynam in 1890 and by several other surgeons since.

Ureterotomy for stricture and valvular obstruction.—Another application of ureterotomy is in cases of ureteral stenosis. Simon in 1876 was the first to give theoretical directions for this operation. I do not know that he ever performed it. Trendelenburg in 1890 was, I believe, the first to make the attempt. In 1892 Fenger of Chicago performed the first successful ureterotomy for a valvular stricture of the ureter; on Nov. 26th of the same year he operated upon a man, aged forty-seven years, for intermittent hydronephrosis of twenty years' duration due to a stricture of the ureter close to its junction with the infundibulum. The kidney and upper end of the ureter were exposed through a lumbar incision. The upper end of the ureter for half an inch was found embedded in cicatricial tissue; below this the ureter was normal. A longitudinal incision, a centimetre long, was made into the ureter just below the cicatrix and the

[6] Verhandlungen des Internationalen Medicinischen Congresses, Berlin, 1890.

[7] Brit. Med. Jour., vol. i., 1892, p. 899.

[8] L'Union Médicale, Feb. 14th, 18th, and 21st, 1856.

strictured part of the tube was divided from below upwards to the renal pelvis. The ends of the incision in the ureter were stitched together by the Heineke-Mikulicz manner for closing the pylorus after division for stenosis. I have recently done a similar operation on a female patient, aged twenty-nine years, who for four or five months has had intermittent periods of aching in the right kidney, which was very moveable, associated with very frequent micturition. At these times the urine became very thick and offensive and at other times there was pus in small but distinct quantity in the urine. There was marked tenderness on bimanual examination so that renal calculus was suspected. Through a lumbar incision the upper end of the kidney was seen to be firmly bound down by tough fibrous adhesions. The pelvis of the kidney was distended to the size of a tennis ball and the ureter was so constricted as barely to admit the smallest ureteral catheter. The kidney was incised along the convex border and thoroughly explored for stone. None was present, but the calyces were found to be slightly sacculated. The constricted orifice of the ureter was longitudinally divided upon the catheter, which was passed from a small opening in the infundibulum through the stricture to the bladder, and the ends of the incision were drawn together by the Heineke-Mikulicz method by means of two fine silk sutures passed after the manner of Lembert. Nephropexy was then performed by Vulliet's plan. The wound healed entirely by first intention and there has been no return since of the symptoms which led to the operation.

Resection of the ureter.—Resection of the ureter is the operation whereby an inch or two, or a little more, of the duct is removed and the ureter is united to the infundibulum, or the divided ends of the ureter to one another, as the case may be, so as to restore the continuity of the conduit. It was first proposed by Marcel Beaudoin in 1891 and first performed by Küster in May, 1891. Küster reported his case at the Congress of Surgeons held in Berlin in 1892.[9] The patient was a boy, aged thirteen years, with only a single kidney, who for two years had passed *all* his urine through a fistula, following lumbar nephrotomy, for hydronephrosis. The cause of the hydronephrosis was a very slight stricture of the ureter near the renal pelvis. The strictured part of the ureter was excised and the cutend of the ureter was sutured to the renal pelvis. By the end of four months from the date of this operation all the urine was passed naturally and the fistula was quite closed. Cramer of Cologne followed Küster's lead in a case of hydronephrosis in 1893 and again on operating on a case of pyonephrosis in 1894.[10] Weller Van Hook in 1893 published a case in which he practised Küster's operation, but immediately he had completed it he found an obstruction in the ureter lower down and therefore removed the kidney. In 1897 I operated upon a female patient, aged fifty-six years, for painful intermittent hydronephrosis and found the ureter running obliquely in the wall of the distended renal pelvis. In this case I first laid the ureter and renal pelvis freely open into one another and stitched the divided edges of the ureter to those of the renal pelvis. The result was not satisfactory so I excised three-quarters of an inch of the ureter, closed the greater part of the incision in the renal pelvis and then sutured the ureter to the lowest part of the infundibulum as Küster had done. Again the result did not satisfy me because of the small calibre and extreme tenuity of the ureter, so to avoid a fistula and a long convalescence on the one hand, or stenosis of the ureter at the site of operation and a subsequent nephrectomy on the other hand, I removed the kidney there and then. The operations for resection of the ureter for hydronephrosis (or pyonephrosis) above quoted show that the aim in our treatment of hydronephrosis ought to be conservative. Before actually proceeding to resect the ureter for stricture or a valve the surgeon should not fail to ascertain whether there is a clear channel in the ureter below the stricture or valve to be divided, otherwise he may find that the operation is useless when completed.

Ureterectomy.—By resection of the ureter is meant the cutting out of a short piece of the duct, not exceeding from two to two and a half inches, with the object of restoring it to its proper capacity as a conduit of the urine to the bladder. It is a truly conservative operation. More extensive excisions of the ureter, and even the removal of the whole length of the duct, have of late years been occasionally practised and with most beneficial results; but, like nephrectomy, such operations are, of course, not of a conservative nature. Ureterectomy, partial or complete, has been performed for tuberculosis, suppuration in the dilated ureter, hydrops of the ureter, and for the cure of suppurating lumbar fistula due to the presence of a diseased ureter, after nephrectomy had been done. The operation may be either primary or secondary. It is primary when the ureter is removed simultaneously with the kidney; secondary when the excision of the ureter follows the removal of the kidney as a distinct subsequent operation. Two different routes have been followed in the complete removal—namely, the transperitoneal and the extra-peritoneal; but the latter gives so complete and satisfactory a field for the necessary manipulations and has other anatomical and surgical advantages that it is not probable the transperitoneal method will find any followers. Several different routes have been taken or suggested for the partial ureterectomies affecting the lower part of the duct. In the male the inguinal extra-peritoneal route—i.e., through an incision the same as the lower part of the incision for complete extra-peritoneal ureterectomy—is the best, but in the female the para-sacral, or a combination of the inguinal and vaginal methods as practised by Kelly, has advantages over the others.

Wounds of the ureter.—Another way in which great advance has been made in renal surgery in the conservative direction is in the management of wounds of the ureter inflicted accidentally during the course of such operations as ovariotomy, abdominal and vaginal hysterectomy, and the removal of suppurating Fallopian tubes and ovaries. The ureter has also been wounded in at least one instance during the course of an operation on the pelvis by the method known as Kraske's. For these injuries nephrectomy had hitherto been performed and in many instances of the kind healthy kidneys have been removed. This is a discomforting reflection; and not unnaturally as soon as accidental surgical wounds became of pretty frequent occurrence there were surgeons who set themselves to devise some alternative for nephrectomy. Numerous experiments on animals were made by Tuffier in France, Boari and Pozzi, Gusserow and Pawlik, Alfonso Poggi of Bologna, Van Hook, Byron Robinson, Bovée, and others in America, and a great variety of methods have been devised for remedying the injury without sacrificing the kidney. They may be grouped into two distinct classes—viz., (1) those designed to restore the continuity of the ureter; and, failing this, (2) those for anastomosing the cut end of the ureter with the external surface, with the intestine, or with the bladder. If the ureter should be wounded during an abdominal or vaginal operation and the injury is detected by the surgeon at the time, one or the other of these operations ought to be, if possible, immediately practised. Such a complication can only be suitably grappled with by one familiar with the varieties and possibilities of surgery which recent experiments and scattered cases have brought to light. It is very desirable, therefore, that surgeons and gynæcologists who are exposed to the risks of injuring the ureter should have a fair working knowledge of the remedies, short of sacrificing the kidney, which are available.

Uretero-ureteral anastomosis.—Schopf,[11] in 1886, was the first who practised uretero-ureteral anastomosis in the human subject. He employed the end-to-end method. In 1887 Alfonso Poggi[12] of Bologna invaginated the upper into the lower end of the divided ureter. This is the end-in-end method. Six years after Poggi's experiments Van Hook[13] of Chicago published a description of his experiments on dogs of the lateral implantation of the upper portion of the ureter into an opening in the side of the lower portion. Van Hook points out an important fact in connexion with these ureteral operations—namely, "the lumen of the tube can be enormously increased by stretching without prejudice to the integrity of its walls." When the upper portion of the divided ureter is very much distended and has to be puckered to get it into the lower portion, which may be only half its size or even less, three sutures instead of one might be advantageously employed as was done by Emmet.[14] Finally, Bovée in 1895 adopted a plan which consists in suturing the cut ends together obliquely. He published

[9] Archiv für Klinische Chirurgie, vol. xliv., 1892, p. 850.
[10] Centralblatt für Chirurgie, 1894, No. 47, p. 1145.

[11] F. Schopf: Centralblatt für Gynäkologie, No. 30, 1887.
[12] Riforma Medica, 1887-88, N.S. viii., 39.
[13] Journal of the American Medical Association. No. 21, July—December, 1893.
[14] Bache Emmet: The American Journal of Obstetrics, April, 1895.

an account of it in January, 1897.[15] He performed his operation on a woman, aged thirty-six years, whose right ureter he unintentionally included in a ligature and then divided when excising the right ovary and tube for an abscess. Of the 12 cases of the application of these methods to ureters injured during surgical operations, in 11 the section of the duct was complete and in one incomplete (Pawlik's case). To this case of incomplete section of the ureter I may add one of my own in which the dilated ureter was three parts divided. In both of them the mode of treatment was practically the same—viz., closure of the wound by very fine silk sutures passed in the fashion of Lembert and covering the injured ureter with the peritoneum. For transverse wounds which do not completely divide the ureter but involve one-third or more of its circumference Van Hook has proposed the following operation: "Make two longitudinal incisions in the ureter with a pair of small scissors, beginning at the middle of the wound to be closed, and suture longitudinally"—i.e., in the direction of the long axis of the tube—"with the object of producing a very wide instead of a very contracted lumen." By this method cicatricial contraction cannot obstruct the flow of urine. When the wound involves the peritoneal aspect of the duct—as it necessarily does in accidents during abdominal operations—he advises that the union should be protected by surrounding it with a fold of peritoneum. A mere puncture or a small wound which merely gapes slightly may be securely closed by one or more Lembert sutures and a covering of peritoneum.

The classes of cases in which uretero-ureteral anastomosis is applicable are the following. To restore the continuity of the duct (1) after accidental section during abdominal operations; (2) after unintentional resection of a short length of the duct during abdominal operations (two or even three inches may be removed and the ends afterwards brought together without undue tension on the union); (3) after resection of a portion of the ureter for stricture, ulceration, sloughing around a calculus, or any other condition which, if not removed, would terminate in stenosis; and (4) after rupture and other injuries from external violence—as soon as the case is diagnosed when intra-peritoneal and before suppuration or sloughing occurs when retro-peritoneal.

Ureteral grafting.—An immense amount of labour and ingenuity has been given to devising methods (1) for the cure of ureteral fistula and (2) for the prevention of ureteral fistula and of nephrectomy in cases in which the ureter has suffered a loss of substance too great to permit of uretero-ureteral anastomosis. Very numerous have been the experiments to test the feasibility of grafting the cut end of the ureter (1) into the bladder; (2) into the rectum; (3) into other parts of the small and large intestines; and (4) on to the skin in the loin. Various other ingenious plans have been proposed as substitutes for nephrectomy whereby the urine is conducted to the bladder even after parts of the ureter, too great to permit of uretero-ureteral anastomosis or of bladder-grafting, have been cut away or otherwise destroyed. But the results of actual operations show that grafting into the bladder—uretéro-cysto-néostomie as Bazy has named it—should be always the operation of choice when it can possibly be done. All this industry is the result of the comparative frequency of uretero-vaginal and uretero-uterine fistulæ, especially since the vulgarisation of vaginal hysterectomy. Thus a great many ingenious operations, some of great difficulty and requiring attention to very minute operative details, have been practised or proposed with the object of avoiding nephrectomy. How needful this was must be only too well known to surgeons who have heard or read of such cases as the following. A woman who had undergone vaginal hysterectomy by a distinguished gynæcologist recovered with an uretero-vaginal fistula. The patient was handed over to a distinguished general surgeon to be cured of this fistula. Efforts were made in a most careful manner to ascertain which ureter it was which had been wounded and become entangled in the vaginal cicatrix. These failing to afford definite information the ureter of the suspected kidney was exposed through a lumbar incision and was temporarily ligatured. During this experiment—which was, of course, made under chloroform—no urine escaped by the vagina but a certain amount was withdrawn by catheter from the bladder at the expiration of a given time. The inference was that the ureter temporarily ligatured was the one involved in the vaginal fistula, so the corresponding kidney was there and then excised. Imagine the surgeon's chagrin and the patient's distress the next day when it was discovered that though she had lost a healthy kidney the operation had not cured her of the fistula, for the wrong organ had been removed.

It is impossible for me here to describe the work done or even to name the many workers in this field of experimental and clinical surgery. I can only mention briefly the most satisfactory plastic operations upon the ureter by vesical grafting. They may be classified as follows: (1) invaginating the fistulous aperture itself into the bladder after first incising the vesico-vaginal septum; (2) grafting the ureter into the bladder through the vagina; (3) grafting the ureter into the bladder by an extra-peritoneal route through an incision in the abdominal wall; and (4) grafting the ureter into the bladder by a transperitoneal or intra-peritoneal operation.

Since Simon in 1869 first practised nephrectomy as the remedy for ureteral fistula the operation has been frequently performed for this cause up to the present time. Tuffier in a recently published communication refers to 24 cases which he had collected. But with our present knowledge of the surgery of the ureter nephrectomy for fistula has become in most instances, I do not say in all, an unjustifiable procedure. It ought to be reserved for quite exceptional cases, as, for instance, where the state of the kidney itself is prejudicial to health; or when the surgeon having tried and failed has given up the attempt to cure a troublesome and loathsome fistula by plastic operation. Nephrectomy as a primary operation for surgical injuries of the ureter is quite unjustifiable and as a secondary operation for these injuries it comes under the criticism just made upon it for the treatment of fistula. As a remedy for moveable kidney nephrectomy has come and gone, never, it is hoped, to return. In cases of limited suppuration, of circumscribed tuberculous disease, of innocent growths, and in certain injuries of the kidney, partial excisions are now being performed in place of nephrectomy. In many instances of calculous pyonephroses irrigation of the renal calyces and infundibulum, followed by suture of the kidney, has taken the place of nephrectomy. In hydronephrosis a few laudable attempts have been made, and in a good proportion of them with success, to remove the cause of the obstruction and thus by means of a plastic operation to spare the kidney. In fact, the tendency of the surgery of to-day is to save as much of the kidney tissue as possible consistently with the safety and well-being of the patient. In this very imperfect survey of the origin and progress of renal surgery I hope I have succeeded in showing that whilst its origin was nephrectomy, its progress, especially during the last ten years, has been in the direction of rendering nephrectomy more and more an operation to be avoided.

[15] Wesley Bovée: Annals of Surgery, January, 1897; also September, 1897, p. 318.

BEDFORD MEDICAL SOCIETY.—A general meeting of this society was held on March 31st, the President, Mr. M. F. Cock, being in the chair.—The President delivered an address referring especially to the Midwives Registration and Vaccination Bills and medical aid associations.—A discussion on the Midwives Bill followed and a resolution condemning the Bill was unanimously passed.—Dr. Goldsmith introduced a discussion on Post-partum Hæmorrhage with special reference to the Treatment by Compression of the Abdominal Aorta.—Dr. Coombs showed a man with Coloboma of the Iris and Choroid.—Dr. Hartley showed a woman who had suffered from a large Varicose Vein which had become obliterated by an attack of Phlebitis and had entirely disappeared.—Dr. Ross showed sections of Carcinoma of the Mamma and Myeloid Sarcoma of the Femur.

LITERARY INTELLIGENCE.—A new work entitled "The Blood: How to Examine and Diagnose its Diseases," by Mr. Alfred C. Coles, M.D. Edin., with six coloured plates, will be published in a few days by Messrs. J. & A. Churchill. The same firm also announce a fifth edition of Tomes' "Manual of Dental Anatomy" with several new illustrations. This well-known handbook is intended for the dental student qualifying for examination, but to meet the requirements of the student of biology the portion on comparative odontology has been expanded.

A Lecture
ON
MOVEABLE KIDNEY AND ITS TREATMENT.

Delivered at the West London Hospital

BY LEONARD A. BIDWELL, F.R.C.S. ENG.,
SENIOR ASSISTANT SURGEON TO THE WEST LONDON HOSPITAL.

GENTLEMEN,—Two different forms of moveable kidney are usually described: in the first variety the organ is freely mobile and forms a definite abdominal tumour, the term "floating kidney" being used for this condition; in the second variety the organ can be displaced only to a small extent and the affection is called "dislocated kidney." The symptoms of these two forms vary considerably and it is often found that they are more severe in the cases where the displacement of the kidney is least marked; in some cases of floating kidney the accidental detection of an abdominal tumour has alone drawn attention to the condition.

Moveable kidney was at one time considered to be a rare affection, but some German statistics, made after examination of a large number of patients in several hospitals, show that some degree of mobility of the kidney is present in about 1 in 250 patients, although in a great number of cases the patients do not suffer any inconvenience from this mobility. It is stated that the proportion of males to females affected is 60 to 87, but probably this ratio is much too high, since the condition is extremely rare in males. The right kidney is affected much more frequently than the left and the proportion is stated to be 11 to 1. The symptoms usually complained of are pain of a dragging nature in the loin and considerable tenderness over the kidney. In some cases there may be symptoms resembling those of renal colic, such as pain running down into the groin and into the genitals. This may be accompanied by increased frequency of micturition and sometimes even by alteration in the urine itself. These latter symptoms are met with more frequently in cases of dislocated kidney and are probably due to a kink of the ureter which produces obstruction of that duct. We also find other symptoms in connexion with this condition, such as severe digestive disturbances, especially pain and vomiting, these symptoms being called "gastric crises." In some cases these crises may resemble gall-stone colic and the gall-bladder has more than once been explored for attacks in reality due to floating kidney. Very severe attacks of migraine are also sometimes associated with floating kidney.

Some of these symptoms are due to the presence of a tumour in the abdomen, others to the dragging on adhesions to the duodenum, others to the interference with the flow of urine from the pelvis of the kidney, and others again may be explained by the effects of dragging on the renal plexus. On examining a case of floating kidney we shall find a large tumour in one lumbar region which can be moved in nearly every direction; it can sometimes be pushed over to the opposite side and can always be made to disappear under the ribs. One thing which is specially marked is the large size of the organ and one often hears a floating kidney described as being much enlarged. This enlargement, however, is only apparent, and when the kidney is exposed it will usually be found to be of the normal size; the apparent enlargement is accounted for by the fact that the abdominal parietes are grasped together with the kidney. In some cases no tumour can be detected at one examination, but is easily found at another time; in fact, the kidney seems to become supported for a time, possibly by the pressure of a full colon; in such a case by turning the patient on her face the kidney becomes dislodged and can be felt. In cases of dislocated kidney the organ may be felt by placing one hand under the loin and the other on the front of the abdomen just below the ribs while the patient is lying on her back, the lower end of the kidney will then be felt to slip up from between the fingers of the two hands; on making the patient sit up again the kidney descends and can again be felt.

Several theories have been advanced with regard to the causation of this condition, but at present we are more or less in ignorance. According to some the condition is due to the effects of wearing corsets which push down the liver and consequently the kidney also; its occurrence is also explained by absorption of the renal fat, but this explanation will not hold water, since in the living body the renal fat is semi-fluid. Congestion of the liver is also credited with causing the displacement in much the same way as tight-lacing. Kendal Franks has pointed out that a consideration of the anatomical relations and connexions of the kidney afford the most rational explanation of the condition. Now the anterior surface of the kidney is marked by the impressions of the organs immediately upon it and it has in consequence the shape of a double inclined plane. This shows that there are two forces acting on the kidney, one pressing it upwards and backwards and the other downwards and backwards. Franks therefore suggests that the kidney is kept in its proper position by the direct pressure backwards resulting from the united action of these two forces. On the right side the kidney is pressed on by the liver above and by the ascending colon below, while on the left side the stomach and the spleen exert pressure above and the descending colon below. Now in order to lose this support some forcible dislocation must occur. This will occur after an injury, such as a fall on the feet, a blow or a squeeze in the loin; it may also be caused by allowing the patient to sit up too soon after parturition. The occurrence of the so-called gastric crises associated with moveable kidney are explained by the connexions which exist between the kidney and the duodenum; consequently any traction on the latter structure by the descent of the kidney would be liable to cause kinking of the duodenum with consequent obstruction to the passage of food from the stomach. In support of this view it is pointed out that the gastric symptoms are not met with when the trouble is on the left side. On this side, however, the descent of the kidney may cause a kink in the splenic flexure of the colon by traction and intractable constipation may result.

With regard to the consequences of moveable kidney if left untreated the most important are the effects of kinking of the ureter producing hydronephrosis and atrophy of the kidney. Apart from this the patient's life may become almost unbearable either from continual pain, from frequent gastric crises, from uncontrollable irritability of the bladder, or from bowel trouble. In either of such cases some treatment is absolutely necessary.

TREATMENT.

The necessity for active treatment will of course depend upon the severity of the symptoms and also upon the condition of the kidney—i.e., whether floating or dislocated. In the former case, where little is complained of except the presence of a tumour, the application of a properly-fitting belt or truss will probably be all that is required. Unfortunately it is often very difficult to get a belt which is comfortable and patients sometimes find that wearing a belt is worse than the disease; this is especially the case when the kidney is tender to the touch. Some surgeons prefer a truss with a pad which presses the kidney up under the ribs. This is undoubtedly a good appliance when it can be borne.

In cases of floating kidney where neither a belt nor a truss can be worn, and in practically all cases of dislocated kidney, the question of operative interference must be considered. Two operations have been proposed—namely, nephrectomy and nephrorraphy. The first-named, however, is unnecessary and should not be undertaken except in a case of floating kidney with a distinct meso-nephron, in which the whole of the kidney substance has been destroyed by long-continued hydronephrosis. In all other cases the operation of nephrorraphy should be performed. Many different ways of performing this operation have been devised, but since the kidney is normally situated under cover of the ribs these methods in which the organ is attached below the last rib are not to be recommended. Among the various methods I may mention: (1) that where the kidney is exposed and the perirenal fat is freely disturbed, no stitches being employed but the wound being plugged to excite adhesions; (2) that where the kidney is attached to the lumbar wound by stitches which are passed through the kidney capsule and out of the skin, and which are withdrawn at the end of fourteen days; (3) that where the capsule is attached by means of buried silk or tendon sutures to the lumbar fascia (these are left in permanently); (4) that where the buried sutures are made to penetrate the kidney substance;

(5) that where the kidney is sutured to the last rib; and (6) that where the kidney is run up and fixed under the ribs by means of one of the tendons of the longissimus dorsi muscle (Vulliett's method). Besides these methods in which the kidney is exposed by a lumbar incision the organ may be reached by the transperitoneal route by an incision in the linea semilunaris and the kidney may then be stitched to the last rib. After a trial of all these methods except the last named I am inclined to recommend the method of Vulliett, since it answers most of the requirements of a nephrorraphy; thus the kidney is fixed in its normal position under cover of the ribs, the material used for suturing is unirritating and not quickly absorbed since it is a living tendon, and lastly the peritoneal cavity is not opened. A description of three cases in which this operation was performed will explain the method.

CASE 1.—A woman, aged twenty-two years, was sent to me by Mr. Cox of Watford. She had suffered for two years from severe dragging pain in the right loin in which region a tumour moveable in a direction upwards and downwards could be felt. The symptoms which gave the most trouble were reflex irritability of the bladder causing increased frequency of micturition; there was also severe pain in the back. As this was evidently a case of dislocated kidney and as the patient was very anxious for some relief she was admitted into the West London Hospital and on Aug. 5th, 1897, she was put under ether and an incision 4 in. in length was made just below and parallel to the last rib. After the kidney had been exposed and freed from its connexions a sponge was placed in this wound and the patient was turned more on her face. Another incision 1½ in. in length was then made just to the right of the spine, its lower end being on a level with the first lumbar vertebra; after dividing the deep fascia the tendon of the longissimus dorsi was exposed. A portion of this on the inner side about ¼ in. in width was separated with a scalpel and then a finger was introduced underneath it. On pulling forcibly upon this it gave way at its attachment to the ribs above, providing a strip about 7 in. or 8 in. in length firmly attached below to the spine of the first lumbar vertebra. A probe was then passed from the dorsal into the lumbar wound between the transverse processes of the last and the eleventh dorsal vertebræ; and after incisions had been made in the capsule of the kidney at its upper and lower ends the separated tendon was brought down by means of a probe to the kidney and was passed beneath the whole length of the capsule. The tendon was then threaded again into the probe and passed back into the dorsal wound. On pulling upon it the kidney was made to run up under the ribs and it became firmly fixed in this position. The free end of the tendon was fixed by tying it in a reef knot to another portion of the longissimus dorsi. The lumbar wound was united by two layers of buried silk sutures and both incisions were completely closed without drainage by means of silkworm gut sutures. Both wounds healed by first intention and the patient left the hospital three weeks after the operation. The kidney has not given any further trouble and cannot now be felt.

CASE 2.—A woman, aged thirty years, had suffered from symptoms of floating kidney for ten years. The symptoms had commenced in consequence of a blow on the right side. A tumour could be felt in the right side which was freely moveable and the patient suffered from an incessant dragging and aching pain in the region of the kidney. An appliance had been tried without any benefit. She was admitted into the West London Hospital and on Sept. 28th, 1897, was put under ether and the kidney exposed by a lumbar incision. A distinct meso-nephron was found but the peritoneum was separated without being opened. A dorsal incision was then made and after isolating a portion of the longissimus dorsi and bringing it into the lumbar wound the capsule of the kidney was threaded with it and run up under the ribs in the same way as in the preceding case. The end of the tendon was sewn down in the wound instead of being tied. Both wounds were completely closed without drainage and healed by first intention, the patient leaving the hospital three weeks after the operation.

CASE 3.—A married woman, aged twenty-nine years, had suffered for some years from moveable kidney and at times was completely disabled by the pain. A distinct and freely moveable tumour could be felt. I saw the case with Dr. Berry of Watford and operated with his assistance on Nov. 13th, 1897. The operation was performed in the same way as in the two preceding cases, the only difficulty being that owing to the presence of a definite meso-nephron the peritoneum was opened in exposing the kidney; the rent in the peritoneum was sutured with fine silk and the operation completed in the usual way. There was no trouble from the peritoneal wound and the patient made an excellent recovery. I have recently heard from her medical attendant that she is now free from pain and that the kidney cannot be felt.

In these three cases, two of which were examples of floating kidney and the other of dislocated kidney, the results have been entirely satisfactory; with the other methods of operating my results have not been so good since the kidney could be felt after the operation in all the cases and in one there was a recurrence of the symptoms which necessitated a second operation. This was discouraging and made me hesitate to recommend a nephrorraphy since I could not promise that the condition would not recur. With Vulliett's method, however, I feel that one can offer every prospect of permanent relief and so I should urge the operation even in preference to the application of a belt, since its results are much more satisfactory and the procedure is practically devoid of risk.

A CASE IN WHICH THE CÆCUM AND THE ASCENDING AND TRANSVERSE COLON WERE REMOVED FOR MALIGNANT DISEASE; RECOVERY.

BY R. LAWFORD KNAGGS, M.C. CANTAB., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE LEEDS GENERAL INFIRMARY.

Dr. F. J. SHEPHERD[1] of Montreal has published a list of 13 cases in which large portions of intestine varying from 10 ft. to 31½ in. had been removed by various operators. Apparently these all referred to the small intestine and were instructive from the evidence they afforded that good health and nutrition can be maintained after the removal of considerable proportions of the whole intestinal absorbing surface.

The large intestine does not lend itself so readily to resection as the small one, and, moreover, the cases in which removal of relatively large proportions would be really justifiable are not of frequent occurrence. Mr. Treves, in THE LANCET of Jan. 29th, 1898 (p. 276), has narrated a remarkable case in which he successfully removed the lower portion of the large intestine from the anus as high as the splenic flexure for a congenital condition of rectum which had produced a chronic obstruction, and the following case, in which the bowel resected for malignant disease extended from the termination of the ileum to the splenic flexure, is an additional proof that very extensive portions of the large intestine may be taken away with safety.

A woman, aged thirty-three years, unmarried, was admitted into the Leeds General Infirmary on July 31st, 1897, when she gave the following history. When six years old she had suffered from tuberculous hip disease. Eighteen months ago she began to have pain, which was generally diffused about the abdomen. Six months later attacks of vomiting and diarrhœa were added, but she sought no advice till two months before admission, when pain first became marked upon the right side. A fortnight later a swelling appeared upon that side of the abdomen and grew rapidly. The diarrhœa persisted but medical treatment checked the vomiting. She had lost much flesh during the last month. On examination a large defined tumour was found occupying the right side of the abdomen and extending just beyond the middle line. It moved downwards on respiration. If grasped by both hands movement up or down was very limited, but laterally and to the left it was remarkably free. Though it could be felt bi-manually in the loin it did not project so clearly behind as a kidney tumour usually does. The shape of the mass was an elongated oval, and its consistency varied at different parts, but in the main it was firm and resistant. Usually dull to percussion, there were times when it was resonant in places. Its examination gave no pain and never elicited visible or palpable contractions either in the lump or in other parts of the abdomen. On vaginal examination the swelling appeared to have no

[1] Brit. Med. Jour., Oct. 9th, 1897, p. 967.

connexion with the pelvic viscera. The tongue was slightly furred, the appetite was good, the motions were loose and contained no blood, and the urine was normal. Though the history as given above was very suggestive of an intestinal growth, yet some doubt was thought to exist as to the true nature of the tumour. An exploratory operation was therefore decided upon.

Operation.—On Aug. 12th the patient was anæsthetised and the abdomen was opened by a 6 inch incision over the lump and to the outer side of the right linea semilunaris. The swelling was found to be situated in the large intestine and to be undoubtedly growth. It was as large as a medium-sized melon and much omentum was attached to it. Its connexions appeared so complicated that it was drawn outside the abdomen for investigation. The discovery was then

FIG. 1.

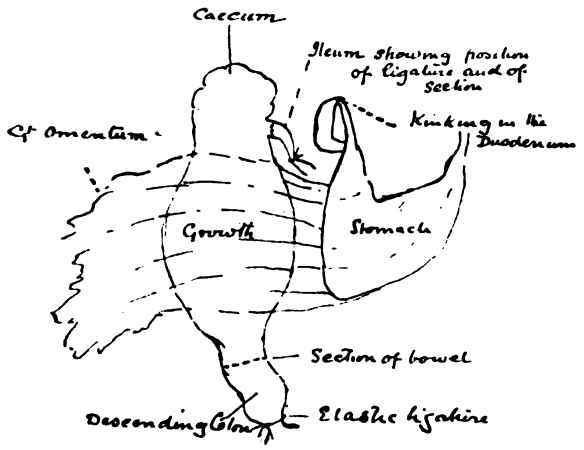


Diagram illustrating the condition met with on commencing operation.

made that the stomach was closely attached to its left side by what proved to be the upper portion of the great omentum, and it was seen that the omentum previously alluded to constituted its lower free portion and that the disease affected the transverse colon. At this point it is perhaps desirable, in order that the description of the operation may be more easily followed, to explain that the normal position of the ascending colon had been completely reversed as a result of this displacement of parts. A finger was now passed above and another below the free edges of the omentum which stretched between the stomach and the colon. They met behind, so this layer of tissue was secured by five or six silk ligatures and divided. A piece of india-rubber tubing was next passed through the mesocolon and tied tightly round the large bowel in the right iliac fossa some four inches below the growth, and the intestine was cut across above the ligature but well clear of the disease. Then the mesocolon was approached with considerable anxiety. It looked and felt like a large roll of fat as big as a flattened fist. It was dealt with from below upwards, portion after portion being ligatured with strong silk and divided. The tumour was now largely detached and hanging outside the wound, and its weight gradually drew down the cæcum from the right hypochondrium. So little of the ascending colon was left uninvolved by the growth that it was quite out of the question to unite two portions of large bowel. The ileum was therefore encircled with another piece of tubing about three inches from the ileo-cæcal valve and was divided close to its entrance into the large intestine. The remaining strands of ascending meso-colon and (?) mesentery were now ligatured and divided with as much consideration for the vitality of the cut end of the ileum as the unusual condition of parts permitted and the growth was removed. In the thick mass of the mesocolon many glands had been felt and when it was divided some were seen, but it was doubtful if they were diseased and it was not thought wise, by attempting to remove them, to enter upon a proceeding which could hardly be thorough and would add largely to the risks which the patient already had to face. The cut ends of the ileum and colon were now united by a Murphy's button. There was considerable strain upon the small bowel and a supporting suture tore through as it was being tightened, so reliance had to be placed upon the button alone. Lastly, the protecting sponges were drawn from the abdomen and iodoform gauze was packed down over the surface of the junction and brought out at the upper angle of the wound and the lower part of the incision was closed in layers. A dry dressing was applied. The operation lasted an hour and the patient was less seriously affected than I had expected, though one or two subcutaneous injections of brandy and strychnia were given towards the end.

The after-progress was not quite uneventful. For a few days there were a certain amount of vomiting and also hiccough which at first was very troublesome. Both symptoms disappeared after the bowels had been freely opened on the fifth day. Rectal feeding was kept up for several days but fluid nourishment by the mouth was commenced the day after the operation. For the first few days the stomach was seen in active movement forming a marked swelling below the thin parietes and later the small intestines in their peristaltic movements produced a lumpy surface of the now flattened abdomen. These movements were never painful and as the abdominal wall became fatter they were gradually lost sight of. The removal of the original gauze packing was attempted on the fifth day but its deeper portion stuck and did not finally separate till two days later. Within the next twenty-four hours fæces appeared in the discharge and for some days a large quantity escaped, but after lasting a week the fæcal fistula closed and never gave any more trouble. On the seventeenth day several ligatures and some sloughy tissue came away, and from that time the granulating track gradually diminished till on the twenty-seventh day, when the patient went to the Ida Convalescent Hospital, it was only packed with a small piece of gauze. The button was passed on the twenty-fourth day. When the patient went home on Oct. 30th there was no abdominal tenderness and nothing at all suspicious could be felt. The sinus admitted a probe for three-quarters of an inch, but it evidently extended deeper. Only a small amount of discharge persisted. The appetite was good and the bowels acted regularly. In appearance there was so great an improvement that on returning from a holiday I had passed her bed without recognising her. She must have gained considerably in weight and she expressed herself as feeling better than she had done for many months. Since her discharge she has attended as an out-patient and when last seen, on Feb. 11th, 1898, the sinus had soundly healed almost from the moment of the discharge of two silk ligatures a week before. Her weight has continued to increase slowly since observations were instituted and she is to all appearance perfectly recovered and in good health. Once recently she has had some slight intestinal derangement but it was only temporary and passed away without treatment. There is no reason to suppose that it was other than purely accidental and it is only mentioned now in view of the future possibilities of such a case.

Description of the specimen.—The upper section has been made through the ileum close to the ileo-cæcal valve and the lower section well to the right of the attachment of the great omentum to the transverse colon and consequently in the immediate neighbourhood of the splenic flexure. The bowel removed includes, therefore, the cæcum and vermiform appendix, the whole of the ascending colon, and the whole of the transverse colon as far as it is possible to ascertain. The specimen, after being kept for months in spirit, measures 10½ in. in length and 11 in. in circumference at the thickest part. The mass of the growth extends from 2½ in. to 3 in. from the extremity of the cæcum to within 2 in. from the end of the specimen, and its length is about 5½ in. Attached to the specimen is what appears to be the whole of the free part of the large omentum. It is adherent over the anterior surface of the intestine, and above the latter can be seen the line of section made just before the omentum passed to the stomach. The broad cut surface of the meso-colon can be recognised behind this. The specimen has been slit open on its posterior surface and the growth is seen to completely encircle the lumen. It infiltrates the walls of the gut but not its serous covering, and it has not produced any marked external puckering, though from the cross section of the growth it is evident that a good deal of contraction has taken place. The attached base varies in extent at different parts of the circumference from 2 in. to 3 in. in the longitudinal direction of the bowel. It is thickest posteriorly where its cross section measures from 1½ in. to 2 in. in different places. The

lumen of the bowel is completely filled by a large cauliflower-like mass which has sprouted both above and below the main growth. Its lower end extends for a couple of inches below the attached portion and tapers to a point. Fæces can only have filtered through the interstices of this

FIG. 2.



The specimen has been opened along its posterior surface. The cross section of the ileum can be seen at the right hand upper corner. The figure is about one fifth of the actual size of the specimen.

mass. The vermiform appendix was unfortunately cut across in removing the growth and has not been preserved. It was dilated as if from back pressure.

A microscopical examination of the tumour was made for me by Mr. Stott, the honorary pathologist to the infirmary, who reported that it was a columnar-celled epithelioma: "Throughout the section there were irregularly shaped spaces filled with columnar cells. In some of the spaces there was a gland lumen, in others the cells completely filled the spaces."

The position occupied by the tumour in this case was a very unusual one for a mass in the transverse colon. There can be no question that it reached that position in consequence of its weight. The late appearance of the tumour in the loin and its marked lateral mobility to the left are both consistent with this fact, and certain features of some interest that were observed during the progress of the case were associated with this altered position of the large gut. It is probable that the growth began in the transverse colon near to the hepatic flexure, which gradually became straightened out as the ascending colon was involved by its lateral extension. The contracting nature of the growth not only diminished the length of the affected segment, but gave it a much greater rigidity, and by crowding together the ascending and transverse mesocolons produced the greatly thickened pedicle which constituted one of the chief anxieties of the operation. A change in the normal relations of the various parts resulted from the gravitation of the bulky tumour, the rigid intestine rotating upon an antero-posterior axis so that the heavy end came to occupy the loin, whilst the cæcum was tilted above it and lay in contact with the under surface of the liver. Consequently upon this change in position of the transverse colon the stomach was pulled downwards and to the right until it lay beneath the umbilicus, and this altered position of the stomach, in its turn, would lead to kinking of the duodenum at the junction of its first and second parts, where the moveable portion joins the fixed. Most probably the obstruction which called forth the vigorous muscular contractions of the stomach so noticeable after the removal of the tumour arose in this way.

An attempt may be made to explain the hiccough which was so marked a feature on the first few days following operation upon anatomical grounds. It was probably occasioned by the ligatures which were applied to the great omentum along the great curvature of the stomach. These must have included many offsets from the sympathetic nerves on the right gastro-epiploic artery which originate in the solar plexus surrounding the cœliac axis. From this also the diaphragmatic sympathetic plexuses arise, and the one which accompanies the right diaphragmatic artery communicates with the phrenic nerve on the under surface of the diaphragm.[2]

There are two practical points connected with the operation which merit some attention. I prefer to use Mayo Robson's bobbin wherever possible because I believe it gives greater security, and I hold Murphy's button in reserve for those cases where the condition of the patient makes it imperative to cut down the time spent on the operation to the smallest possible limit. It was for this reason that a Murphy's button was used in this case, but the tension upon the two ends and the depth of the upper one were such that I am convinced that an attempt to use the bobbin would have failed to secure a satisfactory union. The experience therefore gained from this case inclines me to the belief that in exceptional instances a Murphy's button may be found of use where union by suture upon one of the various forms of bone bobbin is impracticable. The other point is the plan that was adopted of packing down to the seat of union with gauze. In the last volume of the Transactions of the Clinical Society (vol. xxx., p. 89) Mr. Sheild describes a case of excision of the cæcum in which on account of similar doubts as to the vitality of the ends of the bowel the same method was used. The value of the proceeding was in both cases unmistakeable, and in my case by preventing a general extravasation of fæces or a localised fæcal abscess it undoubtedly saved the patient's life. Had I packed in another case of removal of a growth from the sigmoid flexure where the meso-sigmoid was so contracted that the proceedings could not be carried on outside the abdomen the patient would have been spared the long anxiety of a deep-seated pelvic abscess and its subsequent surgical treatment.

In those cases of resection of the bowel in which gauze-packing down to, and around, the union is employed any leakage taking place from imperfect suturing or from sloughing edges does so into a cavity communicating freely with the exterior and walled off from the general peritoneum by the adhesions induced around the packing. The deep granulating cavity which results rapidly dwindles to a sinus, and as its deeper parts cicatrize the closure of the fæcal fistula may be counted upon with considerable confidence. Gauze-packing will, I believe, prove to be of great value in preventing the serious and often fatal complications resulting from leakage after resection of the intestine, and as such complications constitute the chief danger after these operations a method which can do so much to avert them is worth a more extended application in suitable—i.e., in doubtful—cases.

In conclusion, I would gratefully acknowledge my indebtedness to the resident in charge, Dr. J. A. Clough, who by his skilful assistance at the operation and his subsequent attention to the patient contributed not a little to the successful issue of the case, whilst by his notes he has enabled me to record it.

Leeds.

[2] At the ganglion diaphragmaticum (Morris's Anatomy, p. 871).

THE YARROW HOME FOR CONVALESCENT CHILDREN, BROADSTAIRS.—This home, which has been established with the object of providing accommodation for children of the better classes, has issued a satisfactory report and balance-sheet for the year ending December, 1897, but it is pointed out that while the number of admissions during the summer months is satisfactory the applicants are fewer between October and April than during the rest of the year. The trustees wish it to be generally known that the institution is specially designed for a winter residence. "It is warmed and ventilated and its grounds have sheltered walks and shrubberies and it is in all respects as serviceable and advantageous for weak and ailing children in the winter as it is during the summer months." The income from investments amounted to £3024 5*s.* and the payments from the parents or friends of the children to £645 5*s.*, making the total sum received during the year £3669 10*s.* The total ordinary expenditure under all heads amounted to £2728 19*s.* 6*d.*

ON

PNEUMONIA FOLLOWING INJURIES TO THE CHEST AND THE POSSIBLE OCCURRENCE OF PULMONARY TUBERCULOSIS AS A SEQUENCE TO TRAUMA.

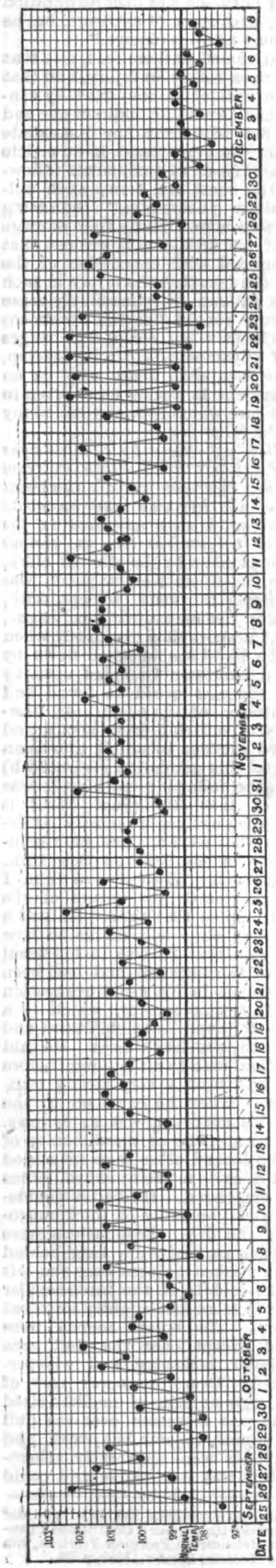
BY THOMAS HARRIS, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY AND LECTURER ON DISEASES OF THE RESPIRATORY ORGANS IN OWENS COLLEGE.

THE most diverse views have been held and the most contrary statements made in reference to the relation of injuries of the chest to acute pneumonia, and these diverse opinions are, I believe, held by many at the present time as well as being evident in the writings of older authors. It is proposed in the present communication to consider first whether pneumonia does or does not follow as a consequence and is not a mere coincidence to direct injuries to the chest, and also whether in rare cases we may not have pulmonary tuberculosis supervene upon, and be directly traceable to, such injuries. It seems advisable to leave out of count penetrating wounds of the thorax and the action of various bodies gaining entrance to the lungs by the respiratory passages. Grisolle,[1] who was such a careful observer and wrote so cautiously, says that pneumonia sometimes follows the attempt to lift a heavy burden, that he has observed several such cases, and quotes Frank as having made a similar observation, but, he adds, nothing is rarer than to see pneumonia following contusions of the thorax whether there has or has not been fracture of the ribs. Hæmorrhage often may take place into the lung in such cases but rarely does pneumonia follow, and he summarises the question by saying that the pulmonary tissue has less tendency to inflame under the action of external violence than one would *a priori* suppose to be the case and that pneumonia developed by traumatic causes remains, in the majority of cases, circumscribed. Wunderlich,[2] on the contrary, says that he has often seen pneumonia beginning after severe contusions of the chest and running a typical course and he regards that cause as not an uncommon one. Jürgensen,[3] on the other hand, is just as positive in upholding the other view. He says no injury to the chest can produce a true croupous pneumonia and he somewhat sarcastically criticises the frequently quoted case of traumatic pneumonia related by Morgagni [4] by saying that it illustrates the lack of critical judgment with which observations are sometimes made. Coming to more recent times we find that, while Fagge [5] says that true pneumonia is not set up by local injuries to the chest, wounds to the lungs, or foreign bodies in the bronchi, Osler [6] briefly affirms that pneumonia follows traumatism with great frequency, more particularly injury to the chest. Sturges and Coupland[7] in a very able and cautious criticism of the relation of pneumonia to trauma summarise the question as follows: "Lobar pneumonia does undoubtedly sometimes follow injury, either immediately or within a short interval. In some instances this sequence is accidental, the inflammation not being caused by the injury but only brought to light through its agency. In others there is a real but indirect relationship; the pneumonia arises, that is to say, not from any harm done immediately to the lung, but from the nervous shock which bodily injury, whether of the chest or elsewhere, is apt to produce, and which, in common with fatigue, destitution, and alcoholic excess, predisposes the individual to such attacks. We have here, in fact, only a further illustration of the occurrence of true lobar pneumonia of definite duration and orderly course, not as a consequence of exposure, but as a real expression of some obscure nervous change."

It is evident that these last-named authors recognise that in some instances pneumonia does follow an injury, and that the sequence is not always an accidental one, but they consider that the relationship of the two is an indirect one and that the inflammation does not arise from any immediate injury to the lung. Litten,[8] on the other hand, in an article published in 1882 records several cases of pneumonia following directly on an injury to the chest and terms such pulmonary affections "contusions pneumonia," indicating clearly that he believes that they arise directly from damage to the lung. From perusal of his article it is evident that he considers the cases as associated with concussion of the lung. He calls attention to the fact that the injury in such cases often did not cause the patients to immediately cease work and that they often only sought hospital treatment some little time after the accident when secondary changes in the lungs in the shape of pneumonia began to develop. He also lays stress upon the fact that there may be no external signs of contusion evident in severe cases, even in some which end fatally. The case which specially called my attention to the subject was the following.

Injury to the chest, immediately followed by clinical signs of acute lobar pneumonia of the left side; death in from ten to eleven weeks afterwards; necropsy reveals thickened pleura over the lower lobe of the left side and an acute tuberculosis of both lungs, but much more advanced in the left lower lobe; old obsolescent tuberculous foci in various parts of the lungs. (From notes taken by the clinical clerk, Mr. E. W. Floyd).—A man, aged sixty-eight years, was brought to the Manchester Royal Infirmary on Sept. 25th, 1897, and was admitted under the care of my colleague, Mr. Southam. He stated that a short time previously when about to get into a tramcar he had been knocked down by the pole of a waggonette and had been trampled upon by the horses. No fracture of the ribs could be found and there was no evidence of contusion of the chest. As, however, he appeared to be ill, was suffering from shock, and was an old man, it was deemed prudent to admit him as an in-patient. On the evening of his admission (Sept. 25th) the temperature was 97 6° F., the following morning it was 98·4° and in the evening of that day (Sept. 26th) it rose to 102 2°. Evidence of pneumonia shortly afterwards appeared and as this showed no signs of resolution he was transferred to one of my beds on Oct. 13th, eighteen days after the accident. When I saw him I questioned him particularly as regards the nature of the accident and as to his health up to that time. He was a very intelligent man, gave a very clear account as to how the accident happened, and said that he was in his usual good health up to the time of the accident and had been engaged on the day of the accident in his usual occupation of an hydraulic packer. This employment, which is a laborious one, he had always followed since childhood and he had apparently never had any previous illness. He said that he had never had a medical man to attend him before during his whole life. He had been a very steady man, though not a total abstainer. When he came on to the medical side of the hospital his condition was as follows. He was propped up in bed on account of the difficulty of breathing. He was a man who looked older than his stated age (sixty-eight years). He had a well-marked arcus senilis; he was considerably emaciated. He had a troublesome cough and brought up about an ounce of thick mucopurulent expectoration during the day. Respirations were 30 per minute. Over the upper part of each lung behind there was good resonance, but marked dulness over the left base, extending as high as the middle of the interscapular region. There was no dulness in front but slightly impaired resonance over the left apex. The breath sounds were normal in front and behind except over the dull area at the left base, where tubular breathing and whispering pectoriloquy were marked. Over the upper part of the dull area there were a large number of medium-sized bubbles. The vocal fremitus was increased over the dull area. The pulse was 120 per minute, regular but weak, and easily compressible. The arteries were apparently atheromatous. The cardiac apex beat was not visible and could

[1] Grisolle: Traité de la Pneumonie, par A. Grisolle. Deuxième édition, Paris, 1864, p. 143.
[2] Wunderlich: Handbuch der Pathologie und Therapie, von Dr. C. A. Wunderlich. Dritter Band, zweite Auflage, S. 305.
[3] Jürgensen: Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. v., p. 30.
[4] Morgagni de Sedibus, &c., Lib. II., Ep. xx., 28.
[5] Fagge: Text-book of the Principles and Practice of Medicine, by the late Charles Hilton Fagge, M.D., F.R.C.P., and Philip Hy. Pye-Smith, M.D. Lond., F.R.S., third edition, vol. i., p. 996.
[6] Osler: The Principles and Practice of Medicine, by William Osler, M.D., F.R.C.P., 1892, p. 512.
[7] Sturges and Coupland: The Natural History and Relations of Pneumonia, by Octavius Sturges, M.D. Cantab., F.R.C.P., and Sidney Coupland, M.D., F.R.C.P. Lond., second edition, p. 327.
[8] Litten: Ueber die durch Contusion erzeugten Erkrankungen der Brustorgane, mit besonderer Berücksichtigung der "Contusions Pneumonie." Aus der Klinik der Herrn Geheimrath Professor Frerichs, von M. Litten, Zeitschrift für Klinische Medicin, Band v., 1882, p. 26.

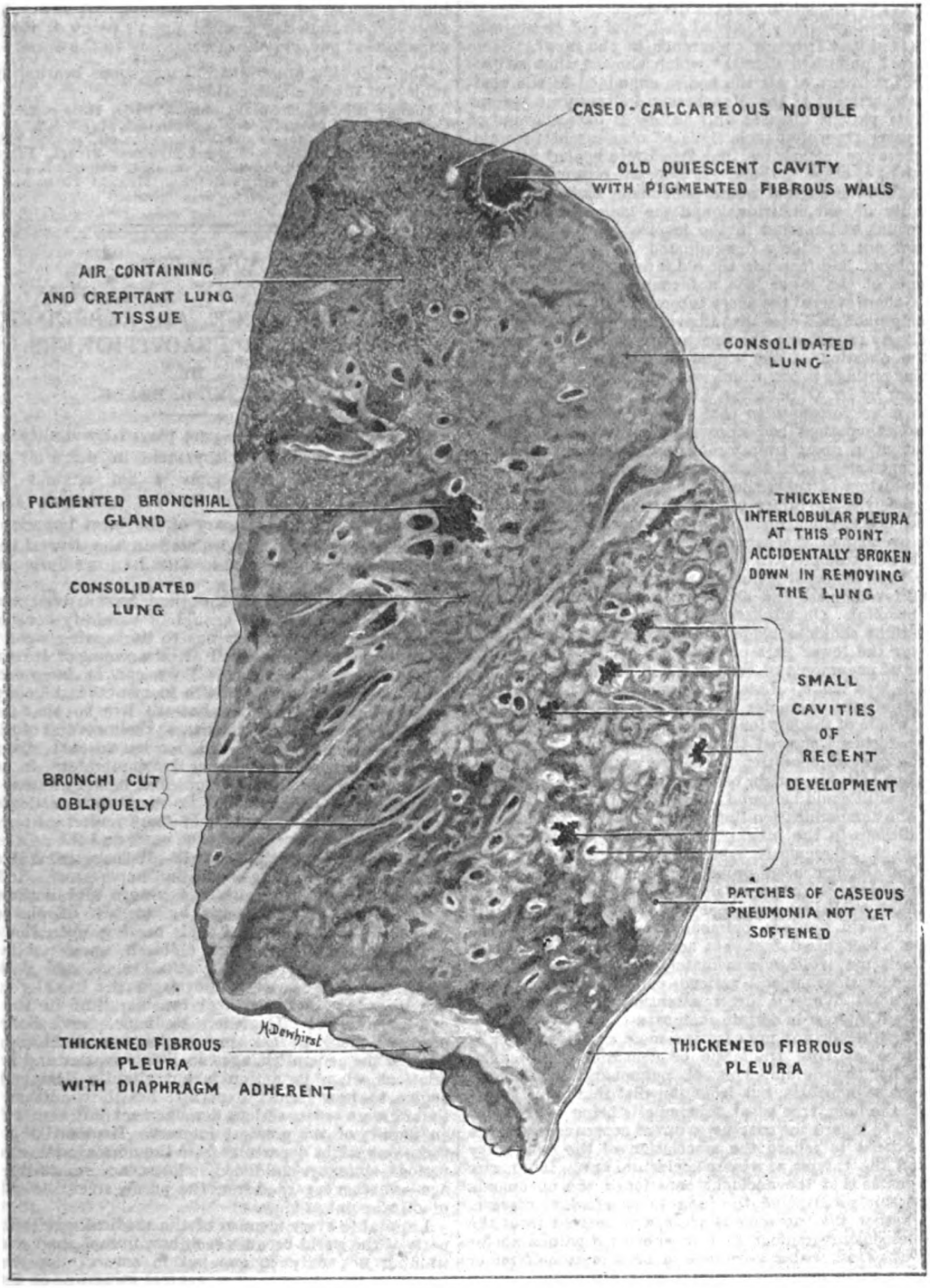


not be felt. There was no increase of the cardiac dulness and the heart-sounds were weak but unaccompanied by any murmurs. The tongue was covered by a thick white fur and the bowels were somewhat constipated. The urine was of specific gravity 1020, acid, contained neither albumin nor sugar, but deposited urates on standing. The sputum was examined for tubercle bacilli with negative results. The patient remained much in the same condition as regards the pulmonary physical signs, but gradually got weaker. On Nov. 20th there was a note that the sputum was again examined for tubercle bacilli, but with negative results. He gradually became weaker, no improvement took place in the condition of the lung, the urine from being free from albumin showed a trace of that substance on several occasions, and he died on Dec. 8th, between ten and eleven weeks after the accident, apparently from simple exhaustion.

During the last two weeks of his illness he was too ill for any careful examination to be made as regards the condition of the chest. The record of temperature is shown on the accompanying chart. It will be noted that in the evening of the day following the accident a rise of temperature to 102·2° was recorded and that during the next five weeks it was an irregular type of temperature, varying usually between 99° and 100° and occasionally reaching 102°. The type of temperature is not the one most usually seen in acute pneumonia, but such an irregular temperature is probably far from being an uncommon type when pneumonia attacks people advanced in years. After the first five weeks for about a fortnight the temperature became of a more continuous type, being generally between 100° and 101°; then this period was followed for about a week by a distinctly intermittent temperature, the evening record being 102°, whilst in the morning it was normal. During the last week of life there was absolutely no rise of temperature whatsoever, which is a remarkable fact in view of what was found at the post-mortem examination.

The necropsy was made on Dec. 9th, 1897, by Dr. Kelynack, the pathological registrar of the infirmary, and the following is an abstract from the report. The body was extremely anæmic and there was marked general wasting. The skin was harsh and wrinkled. There was no sign of fracture of the ribs or injury to the pleura. The left pleura presented extensive pleurisy of old date, especially over the lower lobe of the lung. There were old pleuritic adhesions both over the base of the lung and at the left apex, over the former part being much more general and extensive than over the latter. The right pleura presented indications of acute fibrinous pleurisy, evidently of tuberculous origin, as miliary tubercles could be seen at various parts of the pleura. The weight of the right lung was 1 lb. 11 oz. and that of the left 1 lb. 12 oz. The left lung (see illustration) was almost entirely consolidated throughout its lower lobe by disseminated caseous tuberculous pneumonia. Many of the patches were softening and forming small cavities. At the upper part of the left lower lobe the consolidation appeared somewhat firm as though of old standing. The whole of the upper lobe presented patchy pneumonic consolidation, some of which was certainly tuberculous; but as regards some of the other foci no definite statement could be made as to whether they were simple inflammatory or tuberculous lesions. The consolidated areas in the upper lobe had a greyish white granular appearance, but there was no evident softening or formation of cavities throughout the upper lobe with the exception that in the extreme apex there was a small cavity evidently of very old standing. The apex of the left lung was firmly adherent to the chest wall and on separating the adhesions the above-mentioned old tuberculous cavity was opened into about 1 in. by ½ in. in diameter. The walls of this cavity were extremely thickened and pigmented. At the lower part of this cavity in the substance of the lung was a caseo-calcareous deposit encircled by firm, hard, dense pigmented tissue. The pleura over the lower lobe, as previously stated, was much thickened and of a firm fibrous nature, and between the upper and lower lobes there was firm adhesion (see illustration). With regard to the right lung, there was slight thickening of the pleura over the apex, which apex presented an old caseous and fibrous focus. There were numerous areas of acute tuberculous consolidation throughout this lung, less marked at the base than in the upper lobe, but all were of recent development and less advanced than in the lower lobe of the left organ. The pleura over the lung was studded with miliary tubercles and similar lesions could be seen throughout the lung. The bronchial glands were deeply pigmented and apparently tuberculous. The impression conveyed from an examination of the lungs was that there had been old healed phthisis in the upper lobe of both lungs, which had perfectly healed, and which showed no signs of activity; that recently an acute tuberculosis had developed throughout both lungs, and that this acute tuberculosis presented no relation whatsoever to the old patches of healed phthisis; it did not appear, so far as could be determined from the pathological appearances, that absorption of the tuberculous virus had taken place from the old foci, or that those old foci had been the cause of the recent eruption of tubercle. The thickened pleura over the lower part of the lung was probably the remains of the attack of acute simple pleuro-pneumonia with which his illness had commenced immediately after the accident. Portions of the lung taken from the lower part of the upper lobe and from the lower lobe were examined microscopically and were found to present the usual typical tuberculous features. The giant cells were very marked and numerous. All the other organs were examined, but no tubercles were found in other parts and there was no other disease found than that mentioned with the exception that the vessels of the brain were slightly atheromatous and the kidneys, the united weight of which was 6 oz., were slightly granular and of increased consistency, and the cortex of these organs was slightly diminished.

Considering the history of the case together with the pathological appearances, the inference appears to be justified that we had to do with a pneumonia of the left lower lobe consequent upon an injury to the chest and that the pneumonia had a few weeks before death become infected by the virus of tubercle and an acute tuberculosis had resulted, which acute tuberculosis was most marked and most advanced in the lower lobe of the left side and had probably originated there. As to the source whence the tuberculous



Section through the left lung showing the thickened pleura over the lower lobe and the tuberculous or caseous pneumonia more advanced in the lower than the upper lobe.

virus was derived there may be a difference of opinion. From the fact that there were several patches of healed tubercle it is evident that we had to deal with a subject who was predisposed to tuberculous disease and it is possible that the virus had been absorbed from the old tuberculous foci and had been the cause of the acute eruption of tuberculosis which was the immediate cause of death.

It is now a generally accepted fact that old obsolescent tubercle is of very frequent occurrence in the lungs. Some years ago I published details [9] which showed that no less than 38·84 per cent. of all the bodies examined in the post-mortem department of the Manchester Infirmary of persons dying from various diseases and accidents over the age of twenty years presented such signs of obsolescent tubercle. Such figures are remarkable, but they quite accord with the observations of other authors. It appears, however, equally probable that the original acute pneumonia had so lowered the vitality of the individual and the lungs that tubercle bacilli, which had entered in the inspired air and which we now know are so widely disseminated in the air and in various places, had found in the old inflamed and unresolved pneumonia of the lower lobe a favourable nidus and that they had there started the acute tuberculosis.

The only published case that I have been able to meet with at all closely resembling the one here recorded and bearing upon the question of the traumatic origin of pulmonary tubercular phthisis is one which was published on Nov. 15th of last year by Dr. O. Schrader,[10] but in that case the result was the more fortunate in that at the time the case was published the patient had apparently recovered. The case was that of a man, twenty-nine years of age, who had enjoyed extremely good health and came of a very healthy stock, no history of tuberculosis existing in the family. The patient received an injury of such a serious nature that he remained unconscious for a quarter of an hour afterwards. On the evening of the same day he began to feel ill and although he attempted to work on the following day he had to cease work in consequence of feeling unwell with headache and feverishness and on the next day he was admitted to the hospital. On admission an excoriation was evident over the right shoulder blade and there were a few physical signs over the lower part of the chest on that side. The diagnosis of pneumonia of the lower and middle lobes of the right side was made. Later the temperature became of a more intermittent character and the physical signs extended over the whole of the left lung. The sputum about six weeks after the accident showed the presence of tubercle bacilli. Later the general condition improved, weight was gained, the patient lost his cough, became free from fever, and no tubercle bacilli could be found in any expectoration. At the date of the communication there were no signs to be found of any disease in the lung. Dr. Schrader considered the case one of tuberculosis resulting from an injury, the tuberculosis having been probably preceded by a simple pneumonia, but, as he says, up to that time there could not be found published any proof that a trauma in a healthy individual could produce pulmonary tuberculosis. It has long been a recognised fact that acute disseminated miliary tuberculosis may follow immediately upon injuries of, and surgical operations upon, various parts. Quite recently Dr. F. Parkes Weber [11] drew attention to the possible medico-legal interest in certain such cases.

As to whether or not my case is a mere coincidence or is an instance of true traumatic or contusion pneumonia, followed by the development of pulmonary tuberculosis one cannot be dogmatic, but from the distribution of tuberculosis in the lung, true basal tuberculosis being so rare, one is inclined to regard the case as a direct consequence of the injury and not to regard the association of the pulmonary lesion and the trauma as a mere accidental one. It appears quite probable that the accident occasioned the pneumonia and that this predisposed the lung to tuberculous disease. As to whether the tuberculous virus was derived from the old obsolescent tuberculous foci or whether it gained access to the lungs from without appears to be a matter of minor importance. The case would appear to illustrate the fact to which attention has been called by Delépine [12] and others, that we must consider the condition of the individual and of the lung in reference to the development of tuberculosis in the lungs—that we have to regard the pre-tuberculous state of the organ in reference to the pathogenesis of pulmonary phthisis. Many causes may be predisposing or exciting ones for the development of tuberculosis in the lungs and one of the most uncommon, but yet from the pathologist's and the medical jurist's point of view not an unimportant one, may be direct injury to the chest.

The following are additional references bearing upon the subject of this communication :—

Andral: Clinique Médicale, tome 3, Paris, 1834, p. 293. Béhier: Conférences de Clinique Médicale, Paris, 1864, pp. 200-208. Dr. Thomas Barlow, quoted by Sturges and Coupland, loc. cit., p. 326. Wilson Fox: A Treatise on Diseases of the Lungs and Pleura, London, 1891. Lebert: Klinik der Brustkrankheiten, 1874, Band 1, S. 567. Reports of Hospital Practice: Guy's Hospital, Medical Times and Gazette, 1867, vol. i., 443.

Manchester.

[9] The Curability of Phthisis, Brit. Med. Jour., Dec. 21st, 1889.

[10] Schrader: Ein Fall von Traumatischer Lungen-tuberculose, von Dr. O. Schrader, Berliner Klinische Wochenschrift, November 15, 1897, S. 1001.

[11] THE LANCET, Aug. 7th, 1897, p 366.

[12] Delépine: Pre-tubercular Lesions in Phthisis Pulmonalis, Transactions of the Seventh International Congress of Hygiene and Demography, p. 222.

VITALITY:
AN APPEAL, AN APOLOGY, AND A CHALLENGE ADDRESSED TO BROTHER PRACTITIONERS.

BY
LIONEL S. BEALE.

BEFORE considering the part played by vitality in various departures from the healthy state in some of the most important tissues and organs I am anxious that the attention of the members of the profession should be accorded to a short summary of the most important of the conclusions arrived at and stated in the several papers on Vitality already published in THE LANCET during the past two years.

It seems to me that the time has arrived when this most important question should be carefully considered by every one of us with reference to its bearing upon medical and surgical practice as well as on account of its surpassing general interest. We do all we can to keep our fellow creatures at every period of life in mental and bodily health and have to advise them how to live so that they may efficiently and happily discharge their several duties with as little wear and tear and damage to their tissues and organs as possible. It is our duty, therefore, to ascertain and explain how natural vigour and healthy action may be prolonged into old age and in what manner degenerative changes and impaired action of most important organs may be prevented or retarded in each case, and the necessary end as far as possible postponed. In all these natural changes vital action, Vitality, is of the first importance. Indeed, all questions connected with the nature and actions of all things living must always be to us of the greatest interest in consequence of their bearing upon the training and general management of children, upon public health, upon the working capacity at all ages, and particularly upon the numerous departures from the healthy condition which engage our practical consideration in the several departments of Hygiene, Medicine, and Surgery. I propose, then, to ask my readers to consider with me some of the general changes in living matter and its altered relations when its action is but slightly deranged and it begins to pass from the normal health condition towards that of more or less serious derangement and actual disease—an inquiry of the greatest interest. Most striking, too, are those very slight departures from the normal state at different periods—infancy, childhood, adolescence, maturity, and old age—whether regarded from the purely scientific or from the practical point of view.

I appeal to every member of the medical profession in all parts of the world because each has, in fact, had a scientific training not only in one but in several departments of scientific knowledge. The general structure of the higher organisms and of man as well as of the simpler living things and plants, the minute structure of the several tissues and organs, the physical and chemical phenomena of living things, the phenomena which distinguish the living state from every other state in which matter is known to exist, the minute changes occurring in various departures from health, and the exact points in which diseased tissues and organs differ from those which are healthy are of the greatest

interest. Without such knowledge, which is continually advancing, we should not understand pathological changes and should not be in a position to be of the greatest service to our patients.

Many medical men have been skilful scientific observers, and indeed some have attained equal eminence in science and practice, and recently our profession has been honoured by one of its most distinguished members, like more than one predecessor, being elected President of the Royal Society and of the British Association for the Advancement of Science, but Lord Lister is the very first practitioner upon whom a peerage has been conferred.

Many thoughtful men, led away by the plausible statements so frequently repeated during the last thirty years, have accepted the purely physical and chemical doctrines concerning life and all living nature, notwithstanding the conviction, at least in some cases, that these views were incompatible with many facts of general interest and observation, and not in accordance with the phenomena they themselves have observed in others or with certain changes which they knew were proceeding in their own organisms. Fully conscious of the complexity of the whole question they scarcely dared to express an opinion, and thus involuntarily were included among the supporters of views to which, though popular and fashionable, they were entirely opposed. But at last the chemical and mechanical doctrines of life seem to be really giving place to more rational views based not upon so-called "working hypotheses" and "tendencies of thought," but upon facts of observation and things to be seen and studied by all who can use the microscope, and which are in accordance with our general knowledge derived from long association with and investigation of the highest living forms in nature living under various conditions.

It is now more than forty years since the results of many observations with high magnifying powers and experiments led me to conclude that every living thing and everything that had lived in time past was absolutely dependent for existence upon the operation of *vitality*—a power manifested by living matter only, and restricted to organisms in or upon the earth or water or in the lower strata of the air.

In many communications I showed that although the real living matter was most inconspicuous and was often unrecognised altogether, it was by far the most important of the various anatomical constituents of all tissues and organs of living things at every period of life. I referred to its powers of growth, multiplication, and action, and drew attention to the important points in which this living matter absolutely differed from matter in every other known state or condition; and I claimed that in all cases vital action was due to these powers distinct from all ordinary forces and properties of ordinary matter, and capable of overcoming these and preventing, for the time being, their operation.

So far from the existence of vitality having been disproved, the more minutely investigation has been carried the stronger has become the evidence in its favour. Probably very few scientific men would now dispute or deny its operation upon the matter with which it is temporarily associated. All who rely upon evidence must feel satisfied that the more recent discoveries as to the constitution of our sun and the planets as well as the fixed stars, render it most improbable that life exists in these or other orbs. By increased knowledge the reason has become convinced that vitality, as we know it, is thus limited, and in its nature far removed from any of the tremendous physical phenomena which have been in operation during millions of years millions of miles away from us.

The exact nature of the purely vital phenomena and the various circumstances under which they are modified in nature and particularly in our own fellow creatures in various departures from the normal condition are questions which are constantly presenting themselves to our minds for consideration, although our longing to know more cannot as yet be satisfied. But, on the other hand, it is impossible to accept the assurance that all the phenomena of living things, so very different from any characteristics of the non-living, are due to physical and chemical actions only. The movements of clear structureless living matter have for many years been ascribed to chemical change, but no one among the advocates of this doctrine has attempted to explain how, when, or why the chemical change begins or by what means the special chemical changes characteristic of different kinds of living matter have been established. The view that vital action somehow originates in, or is a modified form of, any of the ordinary forces or properties of non living matter is contradicted by the fact that these are *actually overcome and are in abeyance in matter which exhibits vital action as long as the living state of the matter continues.*

The evidence is now so conclusive that I venture to think that most thoughtful practitioners are already convinced that we, and all for whom we are responsible in sickness, are far removed from the category of machines with mechanical contrivances which men design and make, the action of which they superintend and regulate, and the damaged or worn part of which can be repaired or replaced. All living things grow from the structureless, and not only are all their tissues formed from the structureless, but it is very doubtful whether there is an action which is not directly or indirectly dependent upon the vital changes in structureless living matter. We are not machines; we are not governed by, or the results of, chemical and mechanical changes. Our life is not the mere outcome of chemical and mechanical forces. The facts of observation and the results of experiment not only at this time prove that it is not in accordance with reason to assert that man is a machine and all his actions are mechanical, but that no one acquainted with the well-known facts and guided by reason could have assented to this proposition at any time during the past fifty years. Man is a being whose living matter is endowed in a special manner with powers peculiar to man alone, his living matter, as we know, being influenced by many chemical substances in a manner different from that in which the living matter of other creatures is influenced by the same substances. The differences in action are not to be accounted for by any physical or chemical properties of the substances which can be obtained from the living matter or bioplasm of man's organism, and those who tell us that such and such things are taken from organisms that were *alive* must bear in mind the fact that the matter they examine and analyse is but the matter that *was* living, and that the things they obtain are but those that result at the moment of or soon after death. To chemically analyse living matter is at present impossible.

We who are engaged in studying the living and in trying to promote and maintain healthy vital changes in every part and organ of the living body, cannot possibly accept the assertions, however often repeated, with regard to the properties and composition of lifeless matter as evidence of the nature of the changes which take place in the matter in its living state. Neither must we allow ourselves to be influenced by arguments based upon the composition and characters of portions of tissues and parts of organisms which are not in a living state, even while the actual living matter, which is less conspicuous but most important, exists.

No wonder that during ages past practitioners who held a high scientific position should have been much interested in anything that seemed likely to throw any light upon that greatest of all scientific problems—the nature, and origin, and destination of life—and particularly of those wonderful phenomena which have been watched with intense interest from the first moment of infant life onwards through childhood, maturity, old age, to death. For who can study even the ordinary actions of the limbs as they slowly become perfected without feeling convinced that such actions are indeed widely separated from any mechanical or other movements in non-living matter—that, indeed, there is no analogy whatever between any parts of living beings and any machines, apparatus or laboratories?

And now let me ask if there is one among us who, having thought over this question of the nature of life, is satisfied with the strange doctrines enunciated in many text-books at this time and the evidence advanced in their support?—anyone who receives the arbitrary dicta authoritatively proclaimed as the teachings of science and reason that we and all our actions, thoughts, hopes, and fears are the results of physical and chemical actions in the material particles of which our bodies are composed?

The physicist and chemist, living amongst and constantly improving instruments and methods of examination, and taking part in investigations of wonderful delicacy and ever approaching nearer and nearer to what they look for as perfection and positive knowledge, naturally look forward to the discovery in living things of some mechanical and chemical microcosm capable of disintegrating, arranging and re-arranging—of analytical and synthetical operations akin to those pursued in their laboratories where with marvellous skill substances that have been united for millions and millions of years are separated from one another and made to yield up matters of wonderful properties which have been

unknown and unsuspected until now. Physicists and chemists look forward with confidence to the synthesis in the laboratory of elements which according to authority combined in nature for the first time, only a few millions of years ago and thus think to acquire a knowledge of the manner in which the first particle of living matter originated and began to live and move and grow and form, to multiply, mature, grow old (?) and die. But in not one of the millions of millions of the successors of that primitive living particle has anything like a laboratory been discovered. However, according to prophecy and the so-called tendency of thought, the naturalist of the future is to discover much that the existing naturalist of to-day fails to discern. But, alas, up to the present moment, notwithstanding our increased and ever-increasing knowledge, living nature still retains many secrets, and no physicist or chemist has yet succeeded in discovering the physical and chemical principles by which even the apparently simple vital movements, to say nothing of the evolution of heat, light, and electricity, by particles of clear, colourless, structureless, living matter are to be explained. So far no substance has been discovered or produced in the laboratory, that lives or moves and grows and multiplies and dies like every particle of matter that lives or that has lived in nature.

As regards the great questions bearing on the nature of life which have been considered by some of the greatest intellects in every generation during the past 2000 years, the latest appeals have been and must continue to be made to ever-progressing science, and it is certain that with the ever-accumulating results of investigation, of new facts, and demonstrations, reason will at last be satisfied. But during recent years thought has been overwhelmed and almost stifled by what purports to be scientific authority—authority based only on confident assertions, arbitrary dogmas and strange conjectures often advanced by highly confident people who seem to have been more successful in gaining the acclaims of the public than the confidence of the thoughtful. And for a long time past not a few reasons, facts, and arguments tending to establish conclusions of a very different kind have been ignored and not unfrequently their advocates intimidated and silenced by self-proclaimed authority.

The following are some of the doctrines still maintained and taught, although they as well as the conclusions involved in their acceptance have been shown over and over again to be opposed to scientific facts and observations and to be contrary to reason. It is improbable that any one of them will ever be established or will in future receive the support of those who have studied the structure and vital phenomena of any organism in the living state.

The living and the non-living are one.

All movements in living things are physical and are due to chemical change.

Life is made up of physical and chemical action.

Vital mechanics—vital chemistry.

Man is a machine and all his actions are mechanical.

The sun is the source of life.

Suns resolve themselves into living things.

Living things are built by the sun.

The sun forms hearts and brains and tissues and organs.

The living comes direct from the non-living.

Plants are nearer to the non-living than animals.

All life came from matter, is due to the ordinary properties of matter, and obeys mechanical laws.

Living "protoplasm" is a proteid and obeys ordinary chemical laws.

The "growth" of living and lifeless takes place in the same way.

Aggregation is a form of "growth."

Crystals *grow*.

(To be concluded.)

ROYAL MICROSCOPICAL SOCIETY.—The next meeting of this society will be held on Wednesday, April 20th, at 8 P.M. precisely, when Mr. Henry Morland, F.C.S., will read a paper on Some Organic Substances of High Refractivity Available for Mounting Specimens for Examination under the Microscope, and Mr. E. B. Stringer one on Instantaneous Photomicrography. At 7.30 there will be an exhibition of Diatoms by Mr. Morland.

NOTES ON A CASE OF PORRO-TAIT'S OPERATION.

BY ALBERT E. MORISON, M.B., F.R.C.S. EDIN.,
HONORARY SURGEON TO THE HARTLEPOOLS HOSPITAL.

ON March 20th, 1897, I was asked by Mr. Moffat Young of West Hartlepool to see the case which I am about to record. The patient was a little spare woman, 4 ft. 2 in. in height, but with no apparent deformity of any of her bones. She was twenty-four years of age. There was a history of rickets in childhood. She was three years old before she could walk. At the age of fourteen years (ten years ago) she came under my care suffering from disease of the left hip-joint and she was confined to bed for six months. This, however, had left no deformity of her limb. Mr. Moffat Young first saw her at 4 P.M. on March 20th. Labour began at 9 A.M., but the pains were not severe. The "waters broke" at 3 P.M. As the presenting head made no progress Mr. Moffat Young examined her carefully and found that the lateral diameters of the pelvis were very much diminished. He concluded that some operative interference was necessary and he asked me to see the patient with him and we met at 9 P.M. The patient had been in labour twelve hours and was getting exhausted. The uterus was firmly contracted, but the pains were feeble. On making a vaginal examination the sacro-sub-pubic conjugate was found to be apparently normal, but the lateral diameter of the pelvis was much contracted, only admitting two fingers. The head could be felt high above the pelvic brim. I agreed with Mr. Moffat Young's opinion that there was no chance of delivering the child per vias naturales and the following operation was performed. The patient was chloroformed in bed and when under the anæsthetic she was lifted on to the table. Her abdomen was cleansed with soft soap, turpentine, and ether and purified with 1 in 500 corrosive sublimate lotion. An incision was made in the middle line from the umbilicus to about 1 in. above the pubes and the peritoneal cavity was opened. This wound being too small to allow of the uterus being lifted out of the abdomen was enlarged upwards with scissors. The uterus was then tilted out of the abdomen and a large sponge was packed behind it over the intestines, which were consequently not exposed during the operation. A piece of drainage-tube was passed round the uterus low down and tightened to form an elastic ligature, care being taken to avoid the bladder. The uterus was then opened close to the fundus by a longitudinal incision in the middle line, the fœtus extracted, the cord clamped with two pairs of forceps and divided, and the child handed to a nurse. The uterus was next cut away above the elastic ligature, traction being exerted on the tubing whilst this was being done. The ligature was finally tied in a double knot and a Tait's pedicle pin was passed through the stump. The exposed mucous membrane of the cervix was swabbed with pure carbolic acid and dusted with iodoform and boracic acid. Douglas's pouch was sponged out and the parietal incision was closed with silk sutures, the stump of the uterus being fixed in the lower angle. The wound was dressed with cyanide gauze and wood-wool. The patient was put back to bed in twenty-five minutes. She did not lose more than half an ounce of blood and looked well.

The subsequent history of the case was as follows. Vomiting was troublesome for twenty-four hours. The patient's temperature attained its highest point—99° F.—on the first evening after the operation. The stitches were removed on the eighth day. The pedicle sloughed off on the tenth day and the patient was allowed to get up on the twenty-first day. The child was healthy when born and is now alive and well. The mother did not suckle the child.

Although the operation was performed under disadvantageous surroundings and circumstances the case pursued an entirely satisfactory course throughout. The patient had to be treated in one room of a small cottage hardly large enough to contain an ordinary operating table. The only light available was that supplied by a small paraffin lamp, and it proved to be so feeble an illuminant that Mr. Moffat Young had to hold the lamp close to the patient's abdomen with one hand whilst he administered the anæsthetic with the other,

so that to his skilful assistance the result is largely due. My reason for choosing Lawson Tait's modification of Porro's operation on a delicate woman in the surroundings mentioned was the ease and rapidity with which it can be performed. To entirely draw out the uterus a larger incision in the abdominal wall is required, but this is more than compensated for by the ease with which the elastic ligature can be applied before the uterus is incised, thus reducing the loss of blood to a minimum and preventing the soiling of the peritoneal cavity.

Hartlepool.

UTERUS UNICORNIS.

BY HEYWOOD SMITH, M.A., M.D. OXON.

CASES of true uterus unicornis are so rare that no apology is needed for relating such a case and drawing attention to some features that seem common to most and pointing out some characteristics that seem to make this case a very rare specimen, if not unique.

The patient, who was thirty-three years of age, had been married for four years, and had one child two and a half years old, was brought to me by her husband on Oct. 6th, 1896. The catamenia began at the age of twelve years. They were regular, lasting from four to five days, but lately they had been accompanied by pain in the back and in the right inguinal region. She had suffered from backache for the past twelve months and this had been more severe since August. The pain was worse at the periods. Micturition had been frequent for six months. The pain in the right groin was now constant. She could not walk well and she was getting worse. On vaginal examination the os uteri was found to be rather patent; the canal was soft and slightly irregular. The uterine sound passed in the natural direction for three and a half inches. Behind the uterus and slightly to the left of the median line was felt on conjoint rectal and vaginal examination a body rather firm (? cystic), immoveable (? adherent), and tender. From the dragging pain on the right side a diagnosis was made of the right ovary prolapsed and the left enlarged, inflamed, and adherent. The patient had consulted me twelve years previously for dysmenorrhœa when there were some anteflexion and stenosis. The canal was dilated and she wore a glass stem and a small Hodge's pessary for some months with great benefit.

I sent her to Mr. Bland Sutton for an opinion and he agreed with me that there was an inflamed ovary, probably adherent, and he advised an operation. I therefore on Oct. 13th operated, Mr. Bland Sutton kindly assisting. On opening the abdomen I found an elongated body and brought it to the surface; it looked like the uterus, but the fundus, instead of being broad and flattened antero-posteriorly, was rounded at the top and on the left side, which was quite smooth down to the bottom of the pelvis. On the right the oviduct and the ovary were traced out and brought to the surface, when the ovary was found to be a little larger than normal with the distal one-third distended with blood and a scar at its extremity blood-stained; there were several small cysts, but nothing abnormal. As she had asked me, if possible, to leave one ovary so as not to preclude the possibility of her having another child, and as she apparently possessed only one, I decided to leave it. There was a thickened and pallish band partly surrounding the uterus at the junction of the cervix and body, slightly irregular. We then proceeded to search for the other ovary but failed to find it. At the bottom of Douglas's pouch there was a flattened irregular patch, but not marked enough to have been that organ. We then examined for the tumour we had felt on the left posterior aspect of the pelvis, and Mr. Sutton, recognising the fact that uterus unicornis is usually associated with abnormality of the kidney on the same side as the absence of the uterine appendages, at length satisfied himself that it was the kidney, of normal size, two-thirds of it lying below the brim of the pelvis; this I also verified. The right kidney was normally situated. The wound was then closed in three stages. The patient made a good recovery and lost her pain.

I would draw attention to the special features in this case, first of all remarking that the developed side was the right; this has been the case in all the recorded cases which I have looked into. An unusual feature was that there were no rudimentary structures on the left side, no broad ligament, no round ligament, no ovary, no oviduct, but only smooth peritoneum. The left kidney existed and was apparently normal in size and consistency, but greatly displaced. No attempt was made to trace the ureter. The uterine cavity was an inch longer than normal, and the patient had had a child. It must be remembered that the specimen was not removed and lying on a plate for careful examination, as most of the former specimens have been, but we were inspecting a living body during the course of an operation and therefore were not justified in making a prolonged examination.

With the aid of J. S. Billing's most valuable catalogue (I could not find the subject in Neale's "Digest") I searched for records of similar cases and have appended a few short abstracts to make this observation more complete, thinking it may be of use for further reference.

Mr. Nunn,[1] of the Middlesex Hospital, showed on Feb. 1st, 1859, a specimen from the dissecting-room from a subject, aged thirty-five years, of uterus unicornis. In this case it was the left side which was undeveloped. But in this case, though the oviduct was undeveloped, yet its fimbriæ were present and the ovary was discovered at the brim of the pelvis. There was also a broad ligament on that side.

Sir W. Turner,[2] Professor of Anatomy in the University of Edinburgh, has written an article on uterus unicornis. The malformation was discovered in the body of a woman, past middle life, in the dissecting-room. The uterus was smaller than normal, its length being 1¼ in. and its breadth 1¼ in. The left side was rounded and on the right only were the broad and round ligaments, the ovary and oviduct. On the left side a band passed which seemed to represent the left uterine cornu atrophied. There was a left ovary attached to the end of this band, small, thin, surfaces flat, with no trace of scars, and there was a short oviduct detached from the left cornu. The cavity of the right cornu measured 2 in. The left kidney was absent, but the left suprarenal capsule was normal. The pelvis was normal.

Dr. Matthews Duncan[3] read a paper before the Edinburgh Obstetrical Society on Jan. 14th, 1874, on a case of uterus unicornis dexter. The subject was sixty years of age and died from cancer of the pylorus. The left kidney, ureter, and renal artery were absent; the vagina and cervix were normal; but there was no passage from the cervical canal to the cavity of the uterus. The uterine body was rather elongated (as in my case) and on the left the organ was free and was covered with peritoneum, there being no trace of the left broad ligament, oviduct, ovary, or left angle of the uterus. The figure[4] accompanying the article is almost an exact representation of the organ in my case.

At the Obstetrical Society Dr. Braxton Hicks showed for Dr. Ogston, jun.,[5] an unilateral uterus and kidney (solitary) with two ureters. The uterus has only its right half developed, its left half, left oviduct, ovary, and broad ligament being wanting. There was no trace of a left kidney, but there was a left suprarenal capsule. The right kidney had two ureters, one being imperforate. The body, pelvis, and external genitals were normally developed.

Dr. Amand Routh[6] also showed at the Obstetrical Society a specimen of a fibroid from a one-horned uterus. This was reported upon by Mr. Alban Doran, Dr. W. S. A. Griffith, and Dr. Amand Routh at the meeting of the society on Feb. 2nd. This is not a true uterus unicornis. Here a tumour has encroached on a district of a normal organ and has dislocated its parts. The left ovary was below the tumour, which was in relation to the broad ligament, and the oviduct was evident. The right side of the uterus was normal.

Besides these cases there are several observations by foreign medical men, but in nearly all of them there existed some rudimentary trace of the appendages of the opposite or undeveloped side and in many there was only one kidney.

[1] Transactions of the Pathological Society of London, vol. x.
[2] Edinburgh Medical Journal, February, 1865.
[3] Obstetrical Journal, vol. i., p. 783.
[4] Ibid., p. 784.
[5] Transactions of the Obstetrical Society, vol. xxi., March, 1879.
[6] Ibid., vol. xxix., Jan. 12th, 1887.

I think that my case is remarkable in that there was no trace either of ligaments or appendages on the affected side, and in the position of the left kidney. As this was partly in the true pelvis and adherent it is a wonder that it was not injured by the passage of the head of the child during labour, but as far as I could ascertain there was no special difficulty or pain at that time. I consider, therefore, that this case is worthy of record, as it seems to be almost if not quite unique.

Harley-street, W.

A CASE OF EXTENSIVE EXTRAVASATIONS OF BLOOD IN VARIOUS PARTS OF THE BODY OCCURRING IN AN ANÆMIC WOMAN.

BY EDWARD JOSEPH BLACKETT, M.R.C.S. ENG., L.R.C.P. LOND.

THE following notes on a case in many respects resembling scurvy may possibly be of some little interest, as no cause could be discovered for the affection and the occurrence of a cerebral hæmorrhage during the progress of the case is, as far as I know, an uncommon complication. Some of the symptoms of scurvy were undoubtedly absent and the case was by no means a typical one; still, taking the case as a whole there might, I think, be found some warrant for designating it by that name. However, I will give the notes and let them speak for themselves, leaving the diagnosis of the case to abler men than myself.

The patient was a woman, aged twenty-eight years, who had had no previous illnesses of a serious nature. Her father is living, but her mother died at the age of forty-eight years from "jaundice" and one brother died from phthisis. I went carefully into the question of hæmophilia, but could elicit no history of that disease; the patient had had several teeth extracted a few months ago, but there was no excessive hæmorrhage after their removal. I saw her in November, 1897, when she was suffering from anæmia and amenorrhœa, the latter having existed since October, 1897. Her usual occupation was that of visiting the sick in some of the poorest districts in London about Soho-square, Golden-square, and Hoxton; but she had not come across any cases of scurvy in her visiting or any infectious diseases except measles, the majority of sick persons she had seen being old people suffering from bronchitis and chronic heart affections; neither had she noticed any very bad smells in the houses—at least, not more so than usual, for the sanitary arrangements of the poor are not of the highest order and bad smells are rather the rule than the exception. She had been visiting in these neighbourhoods for the past six months. The sanitary arrangements of the house in which she lived were excellent and the dietary was good, there being plenty of fresh meat and vegetables. Her appetite as a rule was good, though latterly it had fallen off. She had not been eating any tinned foods. The present illness commenced on Feb. 24th, 1898, when she began to spit blood, her friends thinking it came from her lungs. I saw her on the 28th, when she presented the appearance of a well-nourished young woman. Her cheeks were flushed and her lips were of a dark-purple colour and were swollen—in fact, they resembled large blood blisters. These blisters were broken in places and blood-crust was plentiful; there were patches of purpura on the left side of the chin. The insides of the cheeks were also deep-purple in colour, the left side being darker and more swollen than the right. The gums both of the upper and lower jaws were of the same dark colour but were not markedly swollen; this condition, however, may have been masked to some extent by the quantity of coagulated blood which was present along the margins. The front teeth of the upper jaw were missing and the other teeth were in various stages of decay, though not loose. There was a general oozing of blood from the surfaces of the gums and the mucous membrane of the cheeks. The tongue was coated and was swollen and slightly inflamed. There was no fœtor of the breath. There was rather profuse epistaxis. Nothing abnormal was discovered in the lungs and the heart-sounds were normal. Menstruation had occurred on the 25th and had been rather profuse; this was the first time she had been "unwell" since Oct. 18th, 1897. The pulse was, of fair strength and not rapid, the temperature was normal and the bowels were confined. The source of the hæmoptysis was clearly from the mouth and nose and not from the lungs; the blood, though red in colour, was not frothy. On March 1st there was very little change in the general aspect of the patient, the hæmorrhage still continuing, nearly two pints of blood having been lost (from mouth and nose) since the morning of Feb. 28th. Menstruation was still very profuse. A purpuric rash had appeared on the left leg and thigh. The pulse was slightly weaker and the bowels were open. On March 2nd fresh purpuric spots appeared on the upper part of the chest and around the neck. There were also one or two patches of purpura on the scalp. The lips were less swollen and the inside of the mouth was better. The hæmorrhage was ceasing. On the 3rd the first thing I noticed on seeing the patient was that the left side of the face was paralysed, the right side of the mouth was drawn up, and this was very marked when the patient smiled. The left eye could not be closed as could the right. The tongue when protruded was slightly deflected to the left. The patient had severe right frontal headache. The lips, mouth, and tongue were assuming a more natural appearance. The catamenia had stopped. The temperature was 99·2° F. On the morning of the 4th the catamenia recurred; at first clots were passed, but afterwards liquid blood flowed. The patient vomited and the vomited matter was nearly black, but this was due rather to blood which had been swallowed than to any lesion of the stomach, as she said she often used to swallow the blood which collected in her mouth. The face was still drawn and the headache continued. The purpuric rash was still marked on the left leg and thigh and on the upper part of the chest. There was no hæmorrhage from the mouth or nose. On the 5th Dr. Whipham and my father saw the patient and then came to the conclusion that the case was one closely resembling scurvy in many of its aspects and that the facial paralysis was due to a cerebral hæmorrhage. There was marked reduplication of the second pulmonary sound, but otherwise the heart sounds were normal and nothing abnormal could be detected in the lungs. The catamenial flow was still very profuse and the frontal headache was severe; the tongue was coated, but it was pale; the cheeks were flushed, but the lips and gums had returned nearly to a normal condition. There was slight ulceration on the inside of the left cheek. The pulse was weak, the temperature was normal, and the bowels were open. Nothing worthy of note occurred till the 8th, when the catamenia finally ceased, having lasted almost continuously for eleven days, the usual duration of time being only two or three days. The patient, who had a severe headache, vomited once, the vomited matter consisting of curdled milk and bile, but no blood. On the 10th the tongue appeared to be more deflected to the left and the loss of power in closing the left eye was more marked. The headache had gone. The patient had two attacks of vomiting during the day. The purpuric eruption on the leg, thigh, and body was fading. On the 11th fresh purpuric spots appeared on both elbows and round the waist. On the 14th the patient looked much better; the lips, mouth, and gums were normal, the face was not so much drawn, and the purpuric eruption was fading. On the 18th there was a slight hæmorrhage from the uterus, but it lasted only a few hours. The purpuric eruption had disappeared and the face was nearly normal in appearance.

There has been nothing worthy of note in the further progress of this case; the patient got up for the first time on March 21st, and on the 29th, beyond the fact of feeling very weak, she said she felt quite well. Still the angle of the mouth was slightly drawn up when the patient smiled, but it seemed probable that in time all signs of facial paralysis would disappear and that the patient would make a complete recovery.

The treatment adopted was at first perchloride of iron and dilute sulphuric acid internally and glycerine of tannic acid for local application to the mouth. This was changed on March 3rd to liquid extract of ergot, chlorate of potash, and sulphate of magnesia, and on the 5th a mouth-wash of boro-glyceride and rosewater was substituted for the glycerine of tannic acid. On the 29th the patient was put on solution of strychnia and dilute phosphoric acid. The diet was at first beef-tea and milk with the addition of two fresh lemons daily, and on March 14th solid food was taken for the first time.

Seymour-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A SYMPTOM FOLLOWING ANGINA PECTORIS.

By ALBERT S. WORTON, M.B., C.M. GLASG.

THE following curious sequel of an attack of angina pectoris occurring in a case under my observation may possibly be worth recording. The patient was a woman, fifty-four years of age, who had for many years suffered from cardiac valvular disease consequent on rheumatism, and had within the last three months or so developed symptoms referable to failure of compensation, and with this concurrent attacks of cardiac spasm of the variety known as angina sine dolore. These attacks latterly had occurred daily, each lasting only for a few seconds, but attended always with a marked fear of approaching death. Recently she had drawn my attention to a very curious result of the attack, coming on perhaps twenty minutes or so after the heart condition had ameliorated. This consisted of a feeling of numbness beginning at the extreme tip of the left middle finger, followed immediately by blanching and complete loss of sensation extending gradually up the whole length of the finger until it reached the metacarpo-phalangeal articulation, at which point it was finally arrested without ever proceeding further. By this time the entire finger was, to use her own words, "cold and dead." Unless recourse was had to vigorous rubbing and warming this state would last for about half an hour before sensation spontaneously returned, but five minutes of the above active treatment usually sufficed to restore it to the normal condition. The patient further distinctly averred that it was almost invariably the left middle finger alone which was so affected, although rarely the ring-finger of the same side might also participate, but never under any circumstances whatever were the fingers of the right hand affected. I have never been fortunate enough to actually observe the above sequence of events, but there seems no good reason to doubt statements so definitely put forth and corroborated also by a sister resident in the same house. The phenomenon was obviously due to local vaso-motor spasm analogous to the local syncope of Raynaud's disease and probably its invariable occurrence on the left side is to be accounted for by the much more extensive nervous connexions on this side through the brachial plexus with the cardiac nerve apparatus.

Redditch.

PAROTITIS FROM OBSTRUCTION OF STENSEN'S DUCT.

By R. HILL BROWN, M.B., C.M. EDIN.

THE following case is of interest on account of the rather unusual nature of the exciting cause.

The patient, a married woman, consulted me on account of pain and swelling on the left side of the face. On examination the left parotid gland was found to be considerably enlarged and extremely tender. There was difficulty in opening the mouth owing to the pain and stiffness and feeding was greatly interfered with. On examination of the mouth no unusual features could be detected and the case resembled one of ordinary mumps. There was considerable constitutional disturbance and fever, the temperature being 103° F. The general symptoms became gradually worse. A week after I first saw the patient she complained of a pricking sensation in the cheek as of the presence of a foreign body. On looking into the mouth a small-pointed body was seen projecting from Stensen's duct. It was somewhat firmly impacted in the duct and presented some difficulty to extraction with forceps. The foreign body proved to be a feather about an inch in length, of the kind used in feather mattresses. Almost the whole length of the feather had been embedded in the duct. After its removal a considerable quantity of pus flowed away from the duct. For several days there was a sero-purulent discharge but the pain and swelling rapidly subsided.

The patient remembered getting a feather into her mouth whilst shaking a feather mattress and trying to spit it out. It must have slipped between the gum and the cheek, the end getting accidentally impacted in the opening of Stensen's duct. The movements of the cheek in eating would probably help it in its passage along the duct. The organisms producing suppuration would be introduced along with the feather from the cavity of the mouth.

Nottingham.

A CASE OF DEAD TWIN RETAINED TO FULL TERM.

By WALTER C. HEARNDEN, M.R.C.S. ENG., L.S.A.

ON March 2nd I was sent for to attend a multipara, thirty-two years of age. On arrival I found that a healthy girl, weighing 7 lb., had been born about twenty minutes and the placenta had been expelled naturally. The nurse produced a small dead fœtus which had come away with the placenta. It measured 3½in. in length when fully extended and the occipito-frontal diameter of the head measured 1⅛ in. It had been squeezed quite flat so that the body was not more than ¼ in. thick and the head was still less. It was enclosed in a membrane which could be peeled off it, but the fluids had escaped. There were a small placenta and an umbilical cord 1¼ in. in length. The head was rotated backwards and the spine folded down. The mother, whose last child is six years old, is very delicate, suffering from apex systolic murmur and floating kidney. She complained of great pain in the uterus during the pregnancy and was at times unable to get out of bed for days together.

Leatherhead.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

TEDDINGTON COTTAGE HOSPITAL.

A CASE OF CÆSAREAN SECTION.

(Under the care of Mr. R. A. CLARKE.)

CÆSAREAN section has always possessed a great fascination for the popular mind, and to this fact must be attributed the numerous accounts which exist of its having been the means of ushering into the world several celebrated persons, though in most of the cases the tradition has very little foundation. Yet it is probable that the operation has a high antiquity, though no very trustworthy account is of earlier date than the commencement of the seventeenth century. The operation has been performed in a large number of cases of difficult labour, but unfortunately it has on the whole been accompanied by a very heavy mortality. At one time the mortality after the operation in England was calculated at over 85 per cent., though some allowance must be made for the desperate condition of many of the patients on whom the operation was performed. In 1874 Schroeder collected 480 cases of this operation in England, and of these 244 were fatal, a mortality of 50·8 per cent., and his figures for other countries did not materially differ from these. In more recent times the death-rate has decidedly diminished with the general employment of the antiseptic method; and Dr. R. P. Harris[1] has shown that during the eight years from 1886 to 1894 of 60 Cæsarean operations in the British Isles only 19 women died. This gives a mortality of 31·6 per cent. But results far superior to these have been obtained in the practice of some operators; for instance, Murdoch Cameron[2] of Glasgow had only 1 death in 10 cases, a death-rate of 10 per cent.

[1] THE LANCET, May 19th, 1894, p. 1242.
[2] Brit. Med. Jour., March 7th, 1891, p. 512.

Münchmeyer[3] has recorded that of 28 cases at Dresden only 3 proved fatal; this gives a mortality of 10·7 per cent.; and Paul Zweifel lost 2 cases out of 30, a mortality of only 6·6 per cent. That there is very little in the operation itself to account for the heavy death-rate which has usually accompanied it is shown by the fact that at least 6 cases are on record in which the patient has operated on herself, and in 5 of these she has recovered[4]; the most remarkable of these cases was recorded in THE LANCET in 1886.[5] The operation is also practised by the natives of Uganda, and with much success.[6] With such varying results the causes of the heavy mortality which so often follows the operation need to be investigated. They are chiefly these: hæmorrhage, sepsis, and exhaustion. The use of sutures for the uterine wall was introduced in 1769 by Le Bas of Mouilleron,[7] yet many operators declined to insert sutures into the wall of the uterus for more than a hundred years later; if they are employed hæmorrhage need not be feared. Sepsis is naturally less common now than formerly, but it is noteworthy that long before the introduction of the antiseptic method the mortality after Cæsarean section in the hospitals of large towns was always much greater than in cases operated on in the country. Dr. R. P. Harris has shown that in the United States the death-rate in the country was only 37·5 per cent., while in small towns it was 66 per cent. and in large cities 67 per cent., and the same fact has been noticed in England. The explanation undoubtedly is that at that time there was a much greater risk of sepsis in a hospital than in a country cottage. The third cause of death—namely, exhaustion—is less easy to evade than the two others, for there is a very natural tendency to postpone such an operation until all other modes of delivery have been tried. When compared with other methods Cæsarean section probably does not give results superior to craniotomy if the operator is a skilled obstetrician, but for the average medical man in country practice we think that the Cæsarean operation offers a better prospect of a successful result. In this sketch of the operation we have not considered the question of the child, for it is generally recognised that the life of the mother is the first consideration. At least two cases are recorded in which Cæsarean section has been performed with success four times on the same individual.[8] We cannot but think that in time Cæsarean section will be attended with a much lower mortality and that it will in great part replace craniotomy in cases of difficult labour. In Mr. Clarke's very interesting case it is extremely doubtful if a successful result would have followed any other method of treatment.

On Feb. 16th last, Mr. Clarke having been called to see the patient in consultation with a neighbouring practitioner, was informed that she had been in labour for about 40 hours and on examination he found a right foot and left hand presenting externally; the cord was prolapsed and in the brim could be felt the other hand and lower half of the face, the forehead being firmly impacted on the pubes. Repeated attempts had been made to perform podalic version, by which the presenting leg had been broken, and the jagged ends of the tibia and fibula looked decidedly dangerous; unsuccessful attempts had also been made to grasp the head with forceps and by this time the mother's parts had become intensely swollen and œdematous, the uterus being in a state of strong tonic contraction. Her surroundings from a sanitary point of view being simply deplorable she was removed to the Cottage Hospital before anything further was attempted. On arrival there a consultation was held and as she was in a very exhausted condition a subcutaneous injection of liquor strychninæ was administered and she was at once placed under an anæsthetic. On making a full and careful examination the fœtus was found to be so firmly impacted that it was impossible to move it or to alter its position, and as it lay no part of the head could be reached to perforate without extreme difficulty. Evisceration was practically impossible. As the woman was now showing urgent signs of exhaustion it was decided that Cæsarean section would be the quicker and safer method of delivery, and this Mr. Clarke did at once, removing the fœtus without difficulty. The placenta was not adherent and hæmorrhage was very slight. After thoroughly douching the uterine cavity with water at 120° F. and suturing the uterine incision with six points of stout silk, the abdominal wound was closed with six deep sutures of silk and ten superficial ones of horsehair; a good dusting with iodoform, a pad of blue gauze, and a flannel roller completed the dressing. The patient was now put to bed in a very exhausted condition but she gradually improved. Twelve hours later her temperature was subnormal and it rose slowly until the third day, when it reached 100·2°. It declined to normal by the eighth day. The wound healed by first intention and the recovery was uneventful. At the time of writing (35 days after operation) the patient is up and walking about the ward, apparently none the worse, only wearing a belt as a precautionary measure.

Remarks by Mr. CLARKE.—Contracted pelvic brim being the usual condition which necessitates Cæsarean section, the present case is of special interest as the patient was a multipara, twenty-five years of age, with a normal and full-sized pelvis. I have refrained from giving details of the operation or after-treatment, my only object in writing being to show that Cæsarean section in given cases is a much safer proceeding than protracted attempts at evisceration or perforation, which must often result in severe damage to the uterus and vagina.

[3] Archiv für Gynäkologie, Berlin, Band 37, Heft 2.
[4] American Journal of the Medical Sciences, February, 1888, p. 150.
[5] THE LANCET, May 8th, 1886, p. 890, and May 22nd, 1886, p. 994.
[6] R. W. Felkin: Edinburgh Medical Journal, April, 1883, p. 922.
[7] Journal de Médecine, Chirurgie, et Pharmacie, vol. xxxiv., p. 177.
[8] G. A. Michaelis: Neue Zeitschrift für Geburtskunde, vol. v., p. 1 and Oettler: Monatsschrift für Geburtskunde, vol. xxxiv., p. 441.

SHEFFIELD ROYAL HOSPITAL.

A CASE OF PULMONARY ABSCESS SUCCESSFULLY DRAINED.

(Under the care of Dr. DUNCAN BURGESS and Mr. SINCLAIR WHITE.)

THOUGH pulmonary abscesses have been opened with success in no small number of cases, yet many surgeons hesitate to perform the operation unless the abscess is almost pointing externally. It is true that in many cases which are tuberculous in origin the relief afforded by the operation is only temporary, as the case goes on to its fatal issue, but the relief is often very great. True[1] quotes several cases in which the operation has been successful, and Réclus[2] collected 8 cases in 6 of which recovery resulted. For the notes of the case we are indebted to Mr. Sinclair White.

A woman, aged twenty-five years, was admitted to the Sheffield Royal Hospital on Aug. 13th, 1897, under the care of Dr. Duncan Burgess, who subsequently handed the case over to Mr. Sinclair White. The history was briefly as follows. Three years previously she had an attack of spitting of blood and was said to be in danger of developing phthisis. She then remained well and free from lung trouble for two years. In October, 1896, the spitting of blood returned and continued at intervals for the succeeding three months. From this time onwards until she was operated on she never lost her cough. In March, 1897, she again spat blood, but she was able to go about until June when her cough became very troublesome and for the first time she noticed that the expectorated matter had an offensive odour.

On admission to hospital the patient was moderately emaciated. She had a very troublesome cough and expectorated a large amount of offensive sputum. Microscopical examination of sputum revealed an abundance of pus corpuscles, but no bacilli of tubercule could be detected. The temperature increased to 103° F. in the evening and she had night sweats and hectic. The lower half of the left side of the chest was dull on percussion and vocal resonance and fremitus were diminished. The heart was not displaced. An aspirating needle revealed clear serum at about the depth of the pleura over the affected region. The case was watched until Dr. Burgess returned from his holiday, when he diagnosed a pulmonary abscess and requested Mr. Sinclair White to drain it.

An operation was performed on Sept. 14th, when the patient was placed in the left semi-prone position with the left side of the chest close to the edge of the table. The left eighth and ninth ribs were resected just beyond their angles, about one inch of each rib being removed. The pleura was then carefully opened, when a small quantity of clear serum escaped. On introducing the finger Mr. Sinclair White ascertained that he had got into a detached portion

[1] Essai sur la Chirurgie du Poumon (Paris, 1883).
[2] Transactions of the French Surgical Congress, 1895, in Appendix to S. Paget's Surgery of the Chest.

of the pleura completely shut off from the general pleural space. The lung, covered with glistening pleura, could be seen at the bottom of the opening. An aspirating needle was thrust into the centre of the portion of the lung exposed and at the first attempt pus was found. Leaving the needle for a guide Mr. Sinclair White passed a sharp-pointed bistoury along its course and after traversing half an inch of hepatised lung tissue it entered the abscess cavity, which was approximately 2 in. by 3 in. in extent and irregular in outline. No attempt was made to cleanse the cavity, but a large rubber tube was inserted and was surrounded with iodoform gauze where it passed through the pleura. The operation was well borne and there was very little hæmorrhage from the lung.

From the date of the operation the patient steadily improved. The evening fever, hectic, and sweating at once disappeared and the cough became less troublesome. The discharge rapidly lost the evil odour it had at first possessed and gradually diminished in amount. The tube was replaced by gauze at the end of six weeks and a fortnight later the wound had entirely healed. She was discharged at the end of November in robust health, having gained much flesh and entirely lost her cough.

Remarks by Mr. SINCLAIR WHITE.—The case was a suitable one for operation and gave rise to no surgical difficulty. In the majority of cases of pulmonary abscess which come under the care of surgeons it would appear that the pleural space over the affected region is obliterated by antecedent inflammatory exudation. In such cases the surgeon's task is a simple one. But when the pleura over the affected part of the lung is not obliterated the difficulties and dangers of the operation are greatly increased. At present it would seem that the safest way of dealing with such cases is to divide the operation into two stages with an interval of four or five days. The first stage consists in cutting down to the pleura and passing a ring of sutures through its parietal and visceral layers so as to isolate the area of operation from the rest of the pleural space. The wound is then packed with gauze and as soon as the effused lymph has sealed off the "operation area" the lung is incised. The semi-prone position on the affected side is undoubtedly the most suitable one for operation. It permits of free play for the healthy lung and gives free access to the back of the diseased lung, while it reduces the risk of suffocation from pus suddenly entering the sound lung on opening a large abscess.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Immunity from Cobra Poison.—Molluscum Contagiosum in Sparrows.—Adenochondroma of the Submaxillary Gland.—Primary Myxo sarcoma of the Pleura.—Primary Sarcoma of the Lung.—Myxœdema.—Exhibition of Specimens.

A MEETING of this society was held on April 5th, the President, Dr. J. F. PAYNE, being in the chair.

Dr. WALTER MYERS (Cambridge) read a preliminary note on some experiments bearing on Immunity against Cobra Poison. Dr. Myers first reviewed the different views which were held as to the nature and mode of action of antitoxins. He supported the view that a certain amount of the antitoxic substance was normally present in the animal which furnished the antitoxin and that this chemically combined with and neutralised the toxin. He referred to the experiments of Wassermann, who showed that if the brain of a guinea-pig were intimately mixed with tetanus toxin the latter became neutralised in vitro and inert when injected unless an excess of toxin were present. Dr. Myers's own experiments had been undertaken with cobra poison. He tried to find out whether any of the organs of the guinea-pig had any antitoxic effect on the poison. He found that the brain and spinal cord had no effect and the only organ which gave positive results was the suprarenal body. He used a 10 per cent. emulsion in sterilised normal saline solution. He used rather more than the ordinary lethal dose of the toxin and mixed it with the suprarenal emulsion before injection. Seven animals were injected and of these four survived altogether and the remaining three lived much longer than the "control" animals. Positive results were also obtained from the suprarenal body of the sheep, two out of three of the animals experimented on recovering.

Mr. S. G. SHATTOCK exhibited specimens of Molluscum Contagiosum in two mated Bunting Sparrows. In November, 1897, a bunting sparrow was sent to the Royal College of Surgeons of England with a spheroidal tumour under the mandible, which was found on histological examination to be in all details a molluscum contagiosum as this is met with in the human subject, the typical molluscous bodies occurring in the epithelium, arranged in the well-known acinoid groups. The molluscous material was not chemically identical with the eleidin of the stratum granulosum. About a month later the mate of this bird was sent to the College, a similar swelling having developed in it after the death of the first sparrow. The growth in the second case lay in front of the left eye and likewise presented the histological appearances diagnostic of molluscum. Circumstances rendered it as probable here that the disease had been contracted in the second bird by inoculation, as did the clinical evidence that the disease was contagious in the human subject. Mr. Shattock did not see how dermatologists could question its contagious character. He had examined molluscum in the sparrow, but it was especially in fowls, turkeys, and pigeons that the disease occurred, the lesions being commonly about the head owing to the fact that this was the least protected part and the most exposed to inoculation by reason of the well-known habits of birds, whether of amorous or vindictive kind. He had been unable to discover whether the disease was present amongst those to whom the birds belonged. Mr. Hutchinson had recorded a unique instance in which molluscum was present in a dog (as proved by microscopic examination) and in its owner and in which the latter appeared to have contracted the disease from the former. As to the protozoic nature of the molluscous bodies this was still *sub judice* and until Koch's second postulate was carried out no statement in this regard could be held as anything else than an opinion. He referred to the comparatively simple attempts in this direction made by Mr. Ballance and himself, which gave a negative result. As damp sand and pond water were the natural habitats of the common amœba, and as psorospermiæ flourished so widely in the fresh water of ponds and rivers, wet sand was the medium selected. After complete sterilisation the sand was placed in capsules and heaped up to one side, so that when the sterilised water was added part of the sand remained above the water level, the object of which was to obtain a littoral for the better aeration of any protozoa that might develop. Freshly excised mollusca were divided and pushed into the wet sand, the latter being subsequently examined from time to time by withdrawing portions from the neighbourhood of the fragments; no evidences of protozoic life were ever encountered.—Dr. COLCOTT FOX said that the disease was not very uncommon among fowls and sometimes took the form of a destructive epidemic. Yaws had been described as occurring in fowls in the West Indies. A friend sent him home specimens of supposed yaws in a fowl, but on examination the disease turned out to be molluscum contagiosum.—The PRESIDENT did not think that it was doubted in this country that the disease was contagious, although it did not pass very readily from man to man. It was probable therefore that it carried on its life in its most certain and most prolific form in the lower animals, especially poultry.

Mr. H. J. CURTIS exhibited a specimen of Adenochondroma of the Right Submaxillary Gland. The case occurred in a woman, twenty-four years of age, under the care of Mr. A. E. Barker. The growth had been noticed for eight or nine years and three years before the patient came for advice it had begun to increase in size gradually. The tumour formed a swelling below the middle of the right superior maxilla. It was very hard and of the size of a walnut. It moved freely beneath the skin, but from its deep surface a process could be felt extending inwards. It could also be felt in the mouth and made still more prominent there by external pressure. The patient was perfectly well and free from recurrence nine months after removal of the growth. The tumour was enclosed in a firm fibrous capsule and was nodular. On section numerous pearly-white cartilaginous-looking patches were seen scattered over the cut surface, which was otherwise of a light buff colour. Microscopically hyaline cartilage with immature stellate cells pervaded the whole growth, the cartilage columns being separated by solid cylinders of cubical epithelium, which also appeared as tubular acini. In some of the tubules secretion was clearly visible. Referring to the literature of the

subject, after careful search Mr. Curtis found that some 11 or 12 cases have been recorded on the continent and, including the present specimen, 9 by English observers. The benign nature of this tumour, so much more commonly seen in the parotid, was referred to in connexion with prognosis and the need for the careful record of every case was emphasised so as to obtain a more accurate estimate of the frequency with which it occurs.

Dr. PERCY KIDD and Dr. S. H. HABERSHON showed a specimen of Primary Myxo-sarcoma of the Pleura. The patient, a girl, aged eighteen and a half years, was admitted into the Brompton Hospital on Sept. 1st, 1897, for pain in the left side and dyspnœa which had set in suddenly a month previously. On admission there were physical signs of a large effusion into the left pleura, the heart being greatly displaced to the right. But at first it was noted that although the dulness in front extended from apex to base posteriorly the dulness did not reach higher than the middle of the scapula. Subsequently the whole left side became dull to percussion and the dulness extended across the upper part of the sternum to the right as far as the mid-clavicular line. There were no enlarged glands and no paralysis of the vocal cords. The temperature only once rose above 100° F. Paracentesis was performed on four occasions, but only a little blood was obtained. Dyspnœa and exhaustion increased and the patient died on Oct. 29th, 1897, three months after the onset of her illness. At the necropsy an enormous mass was seen filling up the left chest and extending across into the right side, the heart lying entirely to the right of the sternum. The left lung lay collapsed and carnified behind the tumour, the pleural cavity being obliterated by spongy adhesions. On section the tumour consisted of a coarse fibrous network enclosing many large blood cysts, a smaller number of cystic spaces containing viscid puriform matter and some yellowish-white masses of growth. The lungs, mediastinal and bronchial glands were unaffected and there were no secondary deposits in the body. The softened puriform material consisted microscopically of stellate and pyriform cells with a few pus corpuscles. Sections of the solid growth presented the characters of a myxo-sarcoma with extensive hæmorrhages and numerous large thin-walled vessels.

Dr. HABERSHON also showed a specimen of Primary Sarcoma of the Left Lung from a man, aged seventy-eight years. In its clinical aspects the case was one of importance because it presented the physical signs of an empyema with considerable contraction of the left side and displacement of the heart almost to the axilla. It is always a point of difficulty to decide how far contraction of the affected side is compatible with a malignant growth, and though the case is not an isolated one the condition is by no means common. The growth was a primary sarcoma occupying the position of the centre of the lower lobe of the left lung, softening and ulcerating its way into the œsophagus. The surrounding lung was indurated and in an advanced state of fibrosis.

Mr. CECIL BEADLES gave a very complete demonstration from lantern slides of the microscopic changes of the Thyroid Body, the Pituitary Body, the Skin, the Muscles, and the Adipose Tissue from two cases of Myxœdema. In the second case there were also trichinæ in the sterno-thyroid and pectoral muscles. There was insanity in each case. The chief points shown were the atrophy of the thyroid, enlargement of the pituitary, and a pale gelatinous condition of the fat. The nuclei of the fat-cells were vacuolated. In the lungs there were nodules of dense hyaline material the nature of which was uncertain.

The following card specimens were exhibited:—

Mr. PERCY FURNIVALL: Fœtus showing a Hernia.

Dr. ROLLESTON: Pancreatitis.

Mr. G. T. JAMES: (1) Subdural Hæmorrhage; and (2) Pyosalpinx.

Dr. HEBB: Peri-œsophageal Cyst.

HARVEIAN SOCIETY OF LONDON.

The Treatment of Caries of the Spine.

A MEETING of this society was held on March 31st, Mr. J. H. DREW being in the chair.

Mr. JACKSON CLARKE said that in its main features tuberculosis of the spine might be compared with a similar condition in a large joint. Radical treatment in the form of complete excision of the diseased parts had been practised even in the spine, but the usual means adopted were: (1) Rest on a firm mattress in a supine position with or without weight-extension; (2) Phelps's box; (3) the double Thomas's splint; (4) Sayre's plaster jacket; (5) the felt corset; and (6) steel splints, which might be combined with rest on a prone couch. Whenever symptoms pointed to rapid progress of the disease rest with weight-extension was indicated. In less rapid conditions Mr. Clarke preferred a good steel splint to any form of corset. Chance's (1852) and Taylor's (1871) were the best known of the steel supports. In principle they were closely allied. Mr. Clarke used the older of these instruments and found it very satisfactory, as it admitted of readily-effected modifications in cases of cervical and high dorsal caries. Combined with rest on a prone couch, Chance's splint could be used successfully even in unpromising cases. The chief complications were (1) abscess, (2) sinus, and (3) paraplegia. Mr. Clarke related a case in which a psoas abscess had ruptured, causing a diffuse suppuration in the thigh. Since antiseptics had removed the objections to early opening of abscesses there was now no need of delay when once the condition had been recognised. Sinuses need only be feared when abscesses opened spontaneously, and even when of old standing they could often be made to close by injecting daily one or two drachms of 1 in 40 carbolic lotion. When profuse suppuration persisted or lardaceous disease threatened sinuses might demand operative measures. With regard to paraplegia he had seen even hopeless-looking cases recover without operation, and in every case he would give rest a prolonged trial before contemplating surgical interference. Laminectomy was indicated in many cases of fracture of the spine, but fracture was of rare occurrence in caries, and on *a priori* grounds it would appear undesirable to remove the remaining sound parts of the spinal column opposite the seat of disease. Immediate reduction of the angular deformity had in several cases of paraplegia appeared to do good and it might certainly be tried as an alternative to laminectomy.

Dr. JAMES TAYLOR said that on post-mortem examination paraplegia had been found to be associated with myelitis. He agreed that with prolonged rest most cases would do better than with operation.

Mr. DREW remarked that he was glad to find that the spinal support shown at the meeting could be successfully substituted in suitable cases for the unyielding plaster of Paris and felt jackets, also that there was an absence in the support of "iron crutches" in the axillæ and the adoption of a padded strap which was equally effective and far preferable. Mr. Clarke was to be congratulated on the good result of the cases he had brought before the society.

Mr. HUBERT PHILLIPS stated that he had, both as a student and in private practice, had excellent results from the application of Sayre's jacket, always in mild cases, however. He had invariably used extension in order to relieve pressure on the diseased portion of the spine and also to obtain good support from the armpits. The Sayre jackets were, however, at best uncomfortable appliances to wear, owing to the length of time patients were obliged to keep them on. Chance's splints certainly had many palpable advantages. He asked Mr. Clarke at what period of the disease Chance's splints should be applied and what was the earliest stage at which it was advisable to start using them?

Dr. WINSLOW HALL urged the value of prolonged recumbency and was surprised that in many cases Mr. Clarke allowed the patient to walk about.

Mr. JACKSON CLARKE replied that Sayre's jacket sometimes gave temporary relief, but it failed to check the progress of the disease. Prolonged recumbency was necessary in many cases but the benefit derived from it was sometimes lost by its being persevered in too long. The steel splint was the lightest form of apparatus and he used it for children from two years of age and upwards as well as for adults.

OBSTETRICAL SOCIETY OF LONDON.

The Menstruation and Ovulation of Monkeys and of the Human Female.—Exhibition of Specimens.

A MEETING of this society was held on April 6th, Dr. C. J. CULLINGWORTH, President, being in the chair.

Mr. WALTER HEAPE read a paper on the Menstruation and Ovulation of Monkeys and of the Human Female. 1. Menstruation.—Mr. Heape described the histological process of menstruation in Macacus rhesus as identical with that already described in the society's Transactions for Semnopithecus entellus—viz., a growth of stroma and increase of vessels, a breaking down of congested vessels and consequent formation of lacunæ, a degeneration of the superficial mucosa and rupture of lacunæ, and a denudation of the superficial portion of the mucosa with consequent formation of a menstrual clot—the only difference of moment being that in Macacus rhesus the mucosa is thicker, the protoplasmic network is denser, and the glands are more numerous and more branched than in Semnopithecus entellus. Sections of human and monkeys' uteri were shown to demonstrate these points and Mr. Heape was led to infer that in all probability the menstrual process is practically identical in women and in female monkeys. He pointed out that although monkeys menstruate all the year round they (at least some of them) only breed at certain times of the year and thus occupy an intermediate position between the lower mammals and the higher primates. He expressed the opinion that the histological homology of "heat" and menstruation would be established. 2. Ovulation.—With regard to the relation between ovulation and menstruation two divergent views were quoted, the one that ovulation occurs at each menstrual period and that the two processes are due to the same active cause; the other that ovulation and menstruation are independent of each other, that they are due to independent stimuli and are coincident only by accident. Out of 59 adult menstruating female monkeys only one was found with a recently discharged Graäfian follicle. Mr. Heape summarised his observations by stating that in women and female monkeys (1) ovulation and menstruation are not necessarily coincident; (2) menstruation may take place without ovulation; and in women (3) ovulation may occur without menstruation. Mr. Heape combated the views that in the lower animals "heat" is brought about by ovulation or that the ovary is the seat of the stimulus which induces heat; he urged that both menstruation and ovulation are closely connected with, and largely influenced by, congestion, and that in the primitive condition they were both due to the same cause.

Dr. PETER HORROCKS said that in women there was incontestable evidence that ovulation occurred without menstruation, for it was a well-known fact that a woman might conceive without menstruating. Girls in India not infrequently conceived before menstruation began and a woman during the amenorrhœa associated with lactation occasionally conceived again without menstruating. He did not, however, know any facts which proved that menstruation could take place without ovulation. It was well known that when the ovaries were removed, or if they became wholly degenerated, or if they ceased their function, then menstruation ceased. He could not help feeling that menstruation in women and rut in animals were not the same thing.

Dr. HERMAN thought that Mr. Heape's valuable paper went to show how very imperfect our knowledge was of the physiological changes that went on in the ovary. He still thought that menstruation depended, if not upon ovulation, yet upon some ovarian function; he based this opinion upon the broad clinical facts that when the ovaries were absent or ill-developed menstruation was never present and when both ovaries were removed menstruation always stopped.

Mr. HEAPE replied.

The following specimens were exhibited:—

Mr. DAWSON: A Uterus with Ruptured Tubal Gestation Sac in which the pregnancy had not advanced beyond the fifteenth day and which terminated fatally from hæmorrhage.

Dr. MACNAUGHTON JONES: A Uterine Fibroid with anomalous Solid Ovarian Tumour.

Dr. WALTER TATE: A Fibro-myoma of the Uterus removed by abdominal hysterectomy.

The PRESIDENT made reference to the recent death of Dr. Leonard Remfry, assistant obstetric physician to St. George's Hospital, and of Dr. Charles West, a past-president and an honorary Fellow of the society, and it was agreed that suitable letters of regret and condolence should be forwarded in the name of the society to Mrs. Remfry and to Mrs. West.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The Use and Abuse of Mydriatics.—Morphia in Cardiac Diseases.—Coley's Fluid in Sarcomata.

THE sixth meeting of the forty-second session of this society was held on April 1st at the Royal Kent Dispensary, Greenwich-road. The chair was occupied at first by Dr. MORGAN DOCKRELL and afterwards by the President, Mr. W. ARBUTHNOT LANE.

Mr. ERNEST CLARKE read a paper on the Use and Abuse of Mydriatics. He enumerated the various mydriatics in common use and after describing their physiological action and their individual peculiarities he specially drew attention to the great value of homatropine and cocaine as a paralyser of the ciliary muscle when used sufficiently strong. By experiments on himself and others he had obtained complete loss of accommodation in thirty-five minutes with a tabloid of homatropine and cocaine gr. $\frac{1}{10}$, and the great advantage of this drug was that all effects had passed off in twenty-four or twenty-six hours. He detailed the different uses of mydriatics and showed that the most important result of their use was "putting the eye into splints." He further showed why they were so dangerous in acute glaucoma and finally very strongly recommended the use of ophthalmic discs or tabloids, which on account of their accuracy, non-liability to decomposition, and the fact that toxic effects rarely, if ever, followed their careful use, rendered them far preferable to drops and lotions.

Dr. F. S. TOOGOOD, Medical Superintendent of Lewisham Infirmary, read a paper on the Use of Morphia in Cardiac Disease, and after describing the physiological effects of the drug upon the cardio-vascular system and upon the kidneys recounted a series of cases in which perfect compensation of the heart and entire cessation of all symptoms had been obtained after the failure of all other drugs, including digitalis and its allies, which had only excited persistent and uncontrollable vomiting. The paper drew special attention to the fact that scanty urine containing albumin was an indication for the administration of morphia and gave many instances where its use had been accompanied by the secretion of the normal amount of urine and by the total clearing up of the albumin.

Dr. MORGAN DOCKRELL read a short paper on the Use of Coley's Fluid in Sarcomata and described the results in a case under his care.

The several papers were discussed by the PRESIDENT, Dr. TAYLOR, Dr. SCHOLEFIELD, and Dr. DOCKRELL.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Clinical Report of the Rotunda Hospital.—Exhibition of Specimens.

A MEETING of this section was held on March 18th, Dr. F. W. KIDD, the President, being in the chair.

Dr. W. J. SMYLY read the Clinical Report of the Rotunda Hospital for three years, 1893-96.—The PRESIDENT said that the thanks of the section were due to Dr. Smyly and his collaborators, Dr. Wilson and Dr. Jellett, for the report. He thought such results were not likely to be eclipsed for a considerable time. He expressed surprise at the number of cases under the heading of Accidental Hæmorrhage. In 134 cases of abortion 50 were curetted, which seemed to be a very large proportion. He congratulated Dr. Smyly on there being no death from placenta prævia. He thought that severe post-partum hæmorrhage, not arising from the situation of the placenta at all, often occurred and that its origin was often overlooked. He thought that the case in which there was found a double uterus after removal of the uterus and the subsequent recovery of this patient was very remarkable.—Dr. TWEEDY observed that a great many of the deaths were in women brought into the hospital with fatal symptoms already marked. Three of the five septic cases had evidently become septic outside and nothing could have saved them. The cases of eclampsia seemed to have been very severe. The giving of morphia in eclampsia was an interesting point. Some observers say that its administration kills the child, but in one of Dr. Smyly's cases the child

was alive although the mother got more morphia than any other case.—Dr. LANE said that he could not quite agree with the President's opinion that the deaths from accidental hæmorrhage were above the average.—Dr. GLENN remarked that the use of the sharp curette in the treatment of abortions was in skilled hands quite safe, while for those not so self-confident the use of the blunt instrument was good practice. Dr. Smyly's three fatal cases of incomplete abortion would have died whether curetted or not. He thought that a serious omission in reference to forceps cases had been made in the report—viz., there was no record of mortality in regard to the children. He thought that a record of these deaths should also be kept as it would be of great interest to future generations.—Dr. SMYLY, in reply, said that if the suggestions made by Dr. Glenn were adopted by future reporters they would add to the value of future reports. He would himself suggest that in addition to noting the total number of cases in which the temperature rose above 100·8° F. it would be important to record the number of cases in which the patients were really ill and those in which it rose on one occasion only.

Specimens of Myomatous Uteri, Ovarian Cysts, and Ovarian Sarcoma were shown by Dr. SMYLY, Dr. J. H. GLENN, Dr. R. D. PUREFOY, and Dr. JELLETT.

ULSTER MEDICAL SOCIETY.

Management of Labour.—Life Insurance.—Exhibition of Specimens and Cases.

A MEETING of this society was held in Belfast on April 7th, the President, Dr. J. A. LINDSAY, being in the chair.

On the motion of the PRESIDENT, seconded by Professor BYERS, it was unanimously agreed to send a letter of condolence to the widow of Dr. Henry Bingham, a well-known member of the society, whose death had occurred since the previous meeting of the society.

Professor BYERS read a paper on the Management of the Third Stage of Labour. He said that there were two factors to be considered in the third stage of labour: (*a*) the separation and (*b*) the expulsion of the placenta and membranes, and it would be necessary to examine how nature herself managed this period. He then discussed the various theories put forward to account for the separation of the placenta—viz., the retro-placental hæmatoma view, the detrusion theory, and the view that separation of the after-birth is due to a disproportion in size between the placental site (where it is attached to the uterus) and the placental area (placenta itself). In the settlement of this question they must be guided by evidence afforded from two sources: clinical experience and sectional anatomy. Professor Byers pointed out the special value of the sectional anatomy of the third stage of labour and showed that the original observations in this direction made by Dr. Barbour of Edinburgh had been fully confirmed by Pestilozza of Milan, Stratz of Berlin, and Pinard and Varnier of Paris. It had thus been demonstrated that the placenta did not separate until the third stage of labour, that its area could contract to almost one-half its size without separation taking place, that there was no hæmorrhage behind the placenta, and that there was no cavity in the uterus beyond that occupied by the after-birth. In the management of the third stage of labour some had urged an expectant plan until nature herself expelled the placenta; others (Ahlfeld) advised waiting two hours. The objections to this treatment were stated and Credé's method and the "Dublin" plan were very fully described and contrasted. Professor Byers said they must try to allow the placenta to be separated by the uterus itself, and it was when this had occurred and when the upper, thick, active, contracting portion of the uterus had driven the placenta into the lower uterine segment (which was expansile and passive) or vagina that pressure from above the axis of the brim should be made to expel the afterbirth. He pointed out how they could ascertain clinically that there was separation of the placenta. In most cases the uterus by its retraction and contraction effected this itself; in a few cases gentle massage was necessary. In conclusion he recommended as the best way of conducting the third stage of labour: (*a*) following down the uterus when the fœtus was being expelled; (*b*) the constant control of the uterus by the hand; (*c*) the turning of the patient on her back after the birth of the child; (*d*) waiting, if possible, for nature to separate the placenta; (*e*) then expression of the afterbirth; and (*f*) the continued control of the uterus with the hand until the binder was applied.

Dr. W. CALWELL read a paper on Moot Points in the Medical Examination of Cases for Life Insurance. He discussed very fully the best methods of examination and some moot points in their bearing on life insurance, as heredity, hæmoptysis, proclivity to infectious diseases, intemperance, smoking, heart disease (murmurs, tension and rapidity of pulse), syphilis and gonorrhœa, appendicitis, and albuminuria.—The following members spoke on the above papers: Mr. MCFARLAND, Dr. KEVIN, Dr. STOREY, Dr. FULLERTON, Surgeon-Major PIKE, Professor BYERS, and the PRESIDENT.

The following specimens and cases were exhibited:—

Mr. T. S. KIRK: Two cases of Fractured Olecranon treated by immediate suture.

Mr. ROBERT CAMPBELL: Skiagram from a case of Club Hand with absence of the Radius.

Dr. W. CALWELL: A man who, as the result of an accident, had developed Heart Disease and wasting of the Muscles of one Thigh.

Reviews and Notices of Books.

Memory and its Cultivation. By F. W. EDRIDGE-GREEN, M.D. Durh., F.R.C.S. Eng. London: Kegan Paul, Trench, Trübner, and Co. 1897. Price 5*s*.

THIS book, which forms one of the volumes of the International Scientific Series, deals with a subject of considerable interest in a manner at once clear and reasonable. Dr. Edridge-Green employs a physiological basis for his analysis of memory, which he divides into "sensory" and "motor," whilst his discussion of the "faculties of the mind" based, as it avowedly is, on the phrenological systems is interesting but perhaps somewhat liable to misinterpretation. It may be questioned whether it is strictly correct to establish so many various "faculties" as is here done. Chapters on "Remembrance, Recognition, Recollection," "The Direct Connexion between the Motor and Sensory Memories," "Memory in the Lower Animals," "The Variations of Memory at Different Periods of Life," "Some Anomalous Conditions in which Memory plays an Important Part," "Pathological Conditions in which the Memory is Affected," and the "Localisation of Memory" lead up to the formulation of definite rules for the cultivation of memory, which constitute the second part of the book. We may quote his conclusion as to localisation which strikes us as being somewhat absolute. He says (p. 250): "All sensory impressions, whether elaborated by the faculties of the mind situate in the cerebral hemisphere or by the sensory nerves, are permanently stored up in the optic thalami and constitute the sensory memory. All voluntary motor impulses, whether discharged on account of information derived from the sensory memory or when the equilibrium has to be maintained in a large part through a special source, the cerebellum, leave a permanent modification of the cells and fibres of the corpora striata, constituting the motor memory. After the faculties have discharged their functions in establishing the sensory and motor memories and the latter have reached the necessary intensity, they become directly combined and act, in a large part, irrespective of the consciousness of the individual when the appropriate stimuli are applied."

As regards the "cultivation of memory" many a man now of middle age may recall the schoolday instructions by teachers of "mnemonics," with some degree of scepticism as to the value of such instruction in facilitating the learning of subjects, whilst in his later career as a student he may

have had many a "memoria technica" impressed upon him as an aid to the recollection of anatomical relations and facts. Dr. Edridge-Green proceeds on a more scientific method, and gives his readers much valuable advice in expounding the twenty-two rules which he here formulates as of value to the strengthening of the memory. We presume that as a matter of fact most of us pursue these paths in our daily reference to the storehouse of facts and ideas which are associated one with another in our minds; but it is nevertheless not superfluous to have the prescribed methods of recollection systematised and explained in the lucid manner of the author. Indeed, we can well believe that few can carefully read this part of the book without a sense of greater security in the use of that most treacherous of instruments, the memory. We can heartily commend this book for perusal, as being both profitable and stimulating.

The Royal London Ophthalmic Hospital Reports. Edited by WILLIAM LANG, F.R.C.S. Eng. London: J. & A. Churchill. December, 1897. Vol. xiv., Part iii.

THE establishment of the Ophthalmological Society and the publication of the reports of that society have acted prejudicially on the reports of the Royal London Ophthalmic Hospital, for whereas the earlier volumes contained accounts of most of the interesting cases which fell under the care of the surgeons of the Moorfields Hospital, of late years, as might naturally have been anticipated, the most striking forms of disease have gravitated to the Ophthalmological Society and have been shown or described at its meetings, whilst the reports upon them have been impounded by the active secretaries, and have contributed to the value of their yearly volume. Still there are gleanings to be obtained by diligent workers even in the most carefully raked field, and we have the outcome of such gleaning in the present part of the fourteenth volume. It contains the following articles: 1. An Account of a Case of Metastatic Carcinoma of the Eyeball, by the curator of the museum of the Hospital, Mr. C. Devereux Marshall. The author appends a brief history of other cases which have been recorded, making a total of 30 eyes in 24 persons. In the majority of instances the primary growth was in the breast. As a rule it is noted that the tension of the globe was increased, but in a large number of cases it was normal. Although other organs are almost always involved Mr. Devereux Marshall recommends removal of the eye. 2. Concomitant Strabismus, the Accessory Adductors and Abductors, by Mr. J. Herbert Fisher. Mr. Fisher suggests reasons for believing that the superior and inferior recti aid in adduction, whilst abduction is effected by the external rectus and the two oblique muscles. 3. Notes on Glioma Retinæ, by Mr. C. Devereux Marshall. The cases reported include all that have occurred since those contained in the article written in the Hospital Reports by Mr. Lawford and Mr. Collins in 1890. Several of them have lived more than six years after the operation. The duration of life in fatal cases is given, and in addition the interval of time between the discovery of the growth and operation in fatal cases and cases of recovery, the site of recurrent growth, the shrinking of eyes affected with glioma, and the family history. The statistics of this and of the other articles by Mr. Marshall are remarkably well worked up and are very creditable to his industry. 4. The Operative Treatment of Lamellar Cataract, by Dr. E. C. Fischer, late senior house surgeon, and Mr. C. Devereux Marshall. The classification made by the authors is into two groups—(1) extraction and (2) needling—which they sub-divide into simple needling, needling followed by curette evacuation, and needling followed by section. It is interesting to note that simple needlings are by no means free from risk of suppuration, 8 eyes suppurating out of 123 operations, whilst 1 eye was excised for slow suppurative iritis in a case of needling followed by curette evacuation and 1 eye suppurated in a needling followed by suction, making in all 10 lost eyes in 260 operations, or a percentage of 3·84, a larger percentage than in needling after cataract operations, which only equal 1·02 per cent. 5. An Historical Review and Criticism of the Bacteriological History of Trachoma, with Personal Observations of Fifteen Cases, by Mr. Arnold Lawson—a very interesting article, giving the various opinions on the nature of the disease which have been maintained since the introduction of bacteriological investigation. Lastly, Mr. Devereux Marshall contributes a Descriptive Catalogue of Specimens in the Hospital Museum. The part contains also a Supplementary Catalogue of the Library of the Hospital.

LIBRARY TABLE.

A Manual of Botany. By J. REYNOLDS GREEN, Sc.D., F.R.S., F.L.S. Vol. II. London: J. and A. Churchill. 1898. Price 10*s.*—This excellent text-book on botany is based upon the well-known manual of the late Professor Bentley and this the second volume deals with the classification and the physiology of plants. In the first chapter the general principles which underlie the natural and artificial methods of classification are discussed. A short chapter is also devoted to the consideration of the individual systems and some of the more important ones, including those of Linnæus, Lindley, Bentham and Hooker, and others, are sketched out in tabular forms. The main part of this volume is devoted to the characteristics of the various classes and their sub-divisions, but a considerable amount of space has also been found for an interesting account of the general physiology of plant life. The book is well illustrated and will continue to take a high place among the text-books on this subject.

Analytical Key to the Natural Orders of Flowering Plants. By FRANZ THONNER. London: Swan Sonnenschein and Co. 1895. Price 2*s.*—This little book describes the principal features of the different orders of the flowering plants. The author has preferably chosen those characters which are visible to the naked eye at the time of flowering. The book is one which will no doubt be found useful by practical workers and should aid them considerably in the identification of plants.

The Principles of Bacteriology. By A. C. ABBOTT, M.D., Director of the Laboratory of Hygiene, University of Pennsylvania. Fourth edition. London: H. K. Lewis. 1897.—Less than two years ago we had occasion to pass a favourable criticism on the third edition of this work. The appearance of a fourth edition at so short an interval is evidence that it continues to find acceptance at the hands of the public for whom it is written. In its new form the book is enlarged, improved, and revised throughout. Professor Abbott has shown wisdom in the course which he has adopted, for it may safely be asserted that in the present state of knowledge any text-book on bacteriology must be out of date in two years and constant revision is necessary if it is to maintain its place as a text-book. We find no reason for any modification of the opinions which we have previously expressed as to the value of the work. Many of the illustrations are new and good descriptions of the micro-organisms of bubonic plague, influenza, and gonorrhœa have been incorporated in the text. The more important recent additions to our knowledge about the bacilli of typhoid fever and diphtheria receive due consideration. We can again commend the book to anyone beginning the practical study of bacteriology as a sound and useful manual which suggests even more than it directly teaches.

Il Piede e la sua Razionale Calzatura. (*The Foot and the Proper Form of Shoe.*) By Dr. F. BRUNELLI. Milan: Pietro Agnelli. 1898. Pp. 23.—In this pamphlet, which is reprinted from the *Giornale della Reale Società Italiana d'Igiene*, and is perhaps the most recent addition to the literature of the subject, Dr. Brunelli points out the defects of the ordinary shapes of shoe and explains how they are accountable for flat-foot, corns, bunions, ingrowing toenails, neuralgic pains in the feet and legs, varix, &c. In the normally shaped foot, such as that of a child six or eight years old, the great toe seems to turn slightly inwards, and the axis of its phalangeal and metacarpal bones when prolonged backwards passes through the centre of the heel. On the other hand, everybody knows that in the average adult foot the great toe is directed outwards, an unnatural position due to the use of ill-fitting shoes, and Dr. Brunelli proposes to avoid this deformity by giving the soles of shoes such a shape that when they are placed side by side the heels and all of the part from the ball of the toe to the extreme front of the shoe may be in contact without any approach to divergence of the inner margins from one another. He also discusses the shape of the front and outer edge of the sole, the width, square and broad toes, length, flexibility of materials, heels, the disadvantages of turning out the toes, &c. Although it will probably be long before his various recommendations become fashionable, Dr. Brunelli's book contains many useful suggestions which deserve to be known to medical men, parents, and others having the care of children, for distortions of the feet are more easy to prevent than to cure.

JOURNALS AND REVIEWS.

Archives de Physiologie. Publiées par MM. BOUCHARD, CHAUVEAU, et MARCY. 5me Série, Tome x., No. 2, 1898. Paris: Masson et Cie.—The articles contained in this part are the following: 1. MM. A. Dastre et N. Floresco, Pigments Hépatiques chez les Vertébrés. These observers divide the hepatic pigments in all classes of vertebrates into aqueous and chloroformic pigments; the former is soluble in water, contains iron, and has a continuous spectrum; the latter is soluble in chloroform, alcohol, and ether, but is insoluble in water and contains no iron. 2. Ergometric Studies, an Account of Some Conditions of Muscular Work in Man, by MM. André Broca and Charles Richet. Their experiments show first that the maximum of circulatory activity in the muscles takes place when repose succeeds to work (vaso-dilatation of Chauveau), and secondly that contraction is proportionately more vigorous and less painful as the circulation is more active. 3. M. Nikita Chodschajew, Enzymes: Are they Dialysable? He thinks they do dialyse but with extreme slowness. 4. M. J. Lefèvre: On the Evolution of the Thermic Topography of Homoiothermal Animals. Part 4: The Laws of Cooling. 5. Dr. J. L. Hoorweg of Utrecht: On the Physiological Action of the Closure of a Galvanic Current. 6. M. J. P. Morat: On the Transforming Power of Nerve Cells in Regard to Stimuli. 7. MM. A. Dastre and N. Floresco: On the Hepatic Pigments of Invertebrata. In the higher molluscous forms the pigments seem to be similar to those of vertebrates. The lamellibranchs possess the aqueous and ferruginous pigment or ferrine and whilst the anodonts have a chloroformic pigment resembling that of vertebrates named cholechrome with continuous spectrum the great majority, such as the oyster, muscle, and pecten, have the pigment named hepatochlorophyll, with four bands in the spectrum. In crustacea the pigments resemble those of vertebrates. 8. M. P. Yvon: On the Elimination of Sulphur and Magnesia. 9. On the Limits of Absorption of Carbon Monoxide by the Blood, by M. N. Gréhant. 10. On Duodenal Digestion of Albumin, by MM. J. Gachet and V. Pachon. These observers find with Schiff that in the living and fasting dog the pancreatic juice is not able to digest albumin experimentally introduced into the duodenum, but after ligature of the pancreatic ducts albumin introduced into a loop of the duodenum ligatured above and below is in large part capable of being digested. 11. On the Re-absorption and Elimination of Bilirubin, by MM. E. Wertheimer and L. Lepage. 12. The Muscular Work and the Rhythm of the Heart, First Memoir, by MM. J. Athanasiu and J. Carvalho. 13. On the Internal Secretion of the Spleen, by MM. J. Gachet and V. Pachon. The Researches of these authors show that the spleen produces a kind of ferment which in traversing the pancreas converts protrypsin into trypsin. 14. The Action of Suprarenal Extract on the Heart of the Rabbit, by M. E. Bardier. 15. On a Partial Decomposition of Chloroform in the Organism, by MM. A. Desgrez and M. M. Nigloux. 16. Contribution to the Study of the Chemical Actions of Pathogenic Microbes, by MM. L. Hugounenq and M. Doyon. 17. Experimental Researches on Diphtheria Toxin, by MM. Enriquez and Hallion. 18. Contribution to the Study of Osseous Regeneration on the Internal Prothetic Apparatus, by MM. M. Doyon and Cl. Martin.

Analytical Records
FROM
THE LANCET LABORATORY.

VEJOS AND FLUID VEJOS.

(VEJOS LIMITED, 143, WEST HAM-LANE, WEST HAM, E.)

"VEJOS" is described as a new vegetable extract obtained by extracting the protoplasm and proteids of certain vegetable cells with a weak solution of lactic acid at a moderate temperature. It is said that this treatment results in the gradual solution of the nitrogenous constituent of the cell, so that the albumin combining with the lactic acid forms an albuminate. At the same time other substances are extracted resembling the crystalline nitrogenous extractives of muscle. Salts, of course, such as the phosphates, would also enter into the solution. Before considering further the merits of the preparation as a nutrient we may give at once the results of our own analysis of this compound. They are as follows: Insoluble organic matter (cellular fibre), 3·45 per cent.; alcohol coagulum (albumins), 1·76 per cent.; alcohol precipitate (peptones, &c.), 17·59 per cent.; soluble nitrogenous substances, 21·02 per cent.; carbo-hydrates, 17·09 per cent.; soluble mineral matter, 11·30 per cent.; insoluble mineral matter, 2·77 per cent.; moisture, 25·02 per cent. The total soluble matter in the moist extract amounts to about 69 per cent. To the taste "Vejos" is barely distinguishable from good meat extract and, as the foregoing analysis shows, it presents practically the same chemical composition, with the additional advantage of a notable proportion of easily-digested carbo-hydrates. There can be little doubt, therefore, that "Vejos" is physiologically as valuable as a good meat essence. The analysis indicates it to be a powerful nutrient because of the excellent relative proportions of nitrogenous, carbonaceous, and mineral matters, and the condition in which these exist should favour their assimilation. "Fluid Vejos" is said to have for its basis the "Vejos" extract with the addition of 15 per cent. of a cereal treated in the same way as "Vejos" itself. According to our analysis it presents *chemically* very little difference in composition. The results were as follows: Alcohol coagulum (albumins), 1·20 per cent.,

alcohol precipitate (peptones, &c.), 20·44 per cent.; soluble nitrogenous substances, 18·42 per cent.; carbohydrates, 18·15 per cent.; soluble mineral matter, 13·68 per cent.; insoluble mineral matter, 1·92 per cent.; moisture, 26·19 per cent. The proportion of total soluble matter is somewhat less than in the previous preparation. Both preparations are free from objectionable preservatives.

AERATED WATERS.

(THE DORSET SODA-WATER COMPANY, LOWER BOND-STREET, WEYMOUTH.)

A point of first importance in the preparation of aerated waters is, of course, the employment of water of irreproachable quality. In this respect the preparations submitted to us by the above manufacturers were satisfactory. In the mineral waters we found no evidence of organic impurity. Further, they are prepared on the lines laid down in the Pharmacopœia. Thus the lithia water was found to contain 9 grains of the carbonate per pint; potash water 36 grains of the bicarbonate per pint; the soda-water 16 grains per pint of the bicarbonate (in this instance half B.P. strength). The alkalinity of the seltzer water was equal to 4 grains per pint of bicarbonate of soda, and the common salt amounted to a little over 6 grains per pint. With these preparations were submitted to us also specimens of lemonade, ginger ale, and an effervescing beverage termed "ozonine." All were pleasantly sparkling and quite bright. These beverages are evidently prepared with care.

VOLINE.

(S. WHOHLE, 237, SHAFTESBURY-AVENUE.)

Voline is described as an extract of certain tropical herbs which, when added in definite proportion to crude whisky, effects the precipitation of the injurious "substances" therein. We have tried several experiments in the direction indicated, but we are quite unable to confirm the statement that this vegetable extract has any other influence than that of imparting a foreign flavour to the spirit.

HEALTH FOODS.

(THE SANITAS FOOD CO., BATTLE CREEK, MICHIGAN. AGENCY: THE LONDON FOOD CO., 451, HOLLOWAY-ROAD, N.)

There are some novel and interesting dietetic preparations in the list of this company. They consist chiefly of foods prepared from cereals and from nuts. "Granose flakes," for example, consist of light brown flakes resembling potato chips, which on analysis present the composition of wheaten flour of superior quality—that is, flour in which all the essential food constituents are retained. The nitrogen amounted to 2·14 per cent., which is equivalent to a total of 13·37 per cent. albuminoids. The moisture amounted to 12·02 per cent. and the mineral matter to 2·09 per cent. The microscope showed the presence of starch granules highly distorted by cooking, probably by steam. The preparation is undoubtedly nutritious, not merely on account of its composition, but also because the constituents are partially prepared for the digestive process. "Nuttose" is an oily looking compound prepared from nuts. The fat is in a finely divided state amounting to an emulsified condition, while the carbohydrates and nitrogenous matters are previously treated so as also to render them easy of digestion. "Bromose" exhibits a composition balanced in accordance with physiological requirements. It is prepared in the form of tablets resembling caramels. It possesses a pleasant nutty taste, and here, again, the constituents are in a state favourable for assimilation. Lastly, the preparations submitted to us included "Caramel Cereal," which is offered as a substitute for tea or coffee. It consists of carefully roasted wheat and resembles coffee in colour and appearance and in the size of the grain. It yields on steeping in boiling water a rich infusion with aromatic coffee-like taste, which contains the nutritious constituents of the wheat berry. The preparations are of interest as indicating the steps which are taken to produce on a commercial scale foods in which the nutritive value is increased by the processes adopted.

"PERFECTED" COD-LIVER OIL.

(ALLEN AND HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

According to our examination this preparation justly merits its title. It is quite free from nauseous flavour and smell and is evidently well tolerated, since no objectionable eructations occur after its ingestion. The oil is remarkably bright and clear and has a slightly acid reaction. It possesses as far as possible all the qualities which render cod-liver oil not disagreeable to take. This is the result of paying great attention and care to the process of refinement and preparation.

BENSOLYPTUS.

(SCHIEFFELIN AND CO., NEW YORK. LONDON: POTTER AND SACKER, 7, FOWKES-BUILDING, GREAT TOWER-STREET, E.C.)

Bensolyptus is an agreeable and effective combination of pleasant antiseptics. It is a clear, colourless liquid possessing the delicate aromatic smell of gaultheria. It is alkaline to test-paper. On adding hydrochloric acid and cooling, a crystalline precipitate separates consisting of benzoic and boric acids. It can be employed as an agreeable mouth wash, and also administered to check fermentation in the stomach and intestinal canal. It should be useful also in the treatment of catarrhal inflammations of the mucous membranes. In fine it may be considered to be a mild yet efficient and non-irritating antiseptic.

SPECIAL BLEND OLD SCOTCH WHISKY.

(ROBERT CAIN AND SONS, LIMITED., MERSEY BREWERY, LIVERPOOL.)

Judicious blending is largely responsible for the satisfactory character of whisky, and in addition, of course, the spirit should be matured. Some evidence, as in the present instance, of both steps being taken may be gained from the results of analysis, but a discriminating taste is probably the best guide. The analysis of the above whisky was as follows: Alcohol, by weight 40·05 per cent., by volume 47·40 per cent., equal to proof spirit 83·07 per cent.; extractives, 0·28 per cent.; mineral matter, 0·01 per cent.; acidity equal to acetic acid, 0·036 per cent. The whisky is free from excessive colouring matters and extractives. The taste was quite in accordance with the statement that the spirit had been matured, and it is therefore of a wholesome character.

New Inventions.

A NEW CLINICAL THERMOMETER.

WE have received from Messrs. Maw, Son, and Thompson a clinical thermometer which by a simple device permits of the rapid readjustment of the index after an observation is taken. A comparative trial with a thermometer of the ordinary pattern soon establishes the superiority of the new instrument in this respect, for whereas to procure the return of the index to the normal after the mercury has been raised only a few degrees requires in the case of the former many and repeated vigorous shakes of the thermometer, with the latter one slight shake, or at the most two, accomplishes the end desired. Nor does such facile return of the index in the least affect the accuracy of the instrument as a recorder of temperature—indeed, our personal observation shows that it is not only reliable in this respect, but delicate and rapid in record. The improvement consists simply in the formation of a sort of reservoir for the index by means of an expansion of the tube above the bulb. As many a thermometer has been sacrificed in ill-directed efforts to shake down the index, this new invention may prove to be as economical as it will doubtless be a saving of both time and temper.

THE LANCET.

LONDON: SATURDAY, APRIL 16, 1898.

Is it possible to hope that the General Medical Council has held its last discussion on the principles which should regulate the grave step of giving to midwives a legal status? Either at the instigation of the Government of the day or on its own initiative it has for the last twenty-five years spent a great deal of its time and of the money of the medical profession in such discussions. For a quarter of a century this question has been debated in one form or another by the Council till at last that body has with practical unanimity formulated a set of fundamental principles which, if accepted, should keep the council-chamber clear of this thorny subject for the future, save, perhaps, when it may be asked to say categorically whether a given Bill sufficiently embodies the principles on which alone such a measure could be enacted in the interest of the public health, which is the chief interest.

Close observers of what took place in the General Medical Council last week must have been very much struck with the course of procedure. Ostensibly the discussion was concerned with the report and recommendations of the committee on the Midwives Registration Bill, which laid down certain principles which our readers may study for themselves in the columns of THE LANCET. The chief of these principles were as follows:—That midwives should henceforth be registered and subject to rules of practice to be drawn up by a Midwives' Board consisting of medical men elected in England by the three medical corporations and a chairman appointed by the Lord President of the Council; that all the rules of the midwives' board should be subject to the approval of the General Medical Council; the claim to admission to the register was to be on the ground of previous practice as a midwife, or of a certain amount of training and examination to be determined by the midwives' board; that midwives were to be restricted to attendance on natural labour and that on the occurrence of anything unnatural or unsatisfactory in the mother or child they were to apply for the assistance of a registered medical practitioner; that the local sanitary authority should be required to appoint as many practitioners in every locality for this purpose as should agree to be so appointed and pay them a proper fee; and that no woman should be allowed to practise as a midwife, habitually and for gain, unless she were registered, such registration to be annual and for a nominal sum. An excellent clause providing that no woman or any association of persons founded for the purpose should, either habitually or for gain, attend or undertake to attend on a lying-in woman, unless the person attending and all the members of any association providing such attendance were registered according to the provisions of the Act was included in the recommendations of the committee as well as one to prohibit the employment of unregistered substitutes by registered midwives. A clause prohibiting the granting of certificates of stillbirth and other medical certificates was very properly one of the recommendations of the committee. The committee recommended the insertion of a clause forbidding the granting of certificates in midwifery by any person or body not legally authorised to grant them. It was also provided that as the time of the Council would be occupied, at first considerably, by its duties under any such Act it should be reimbursed for any expenditure on this account.

Such were the principal recommendations of the committee which the Council on Tuesday, April 5th, resolved to discuss *seriatim*. On the following day, after the passing of a resolution expressing sympathy with the family of the late President in their and the Council's loss and the acceptance of a slight amendment to the recommendation of the committee as to the definition of a midwife, Dr. MACALISTER asked that he should be allowed to make a statement and certain motions in substitution of the general considerations and recommendations of the committee and that those resolutions should constitute the reply to the Lord President. These resolutions were practically those of the committee, as he candidly admitted. There was, however, one important exception which constituted a veritable amendment. Basing the suggestion on a remark in a speech made by Sir WILLIAM GAIRDNER on the previous day he proposed that midwives instead of being *registered* should be *licensed* and that the licence should be issued by the local sanitary authority, should be renewable yearly, and should be revocable at any time in case it should be proved that the holder had infringed any of the prescribed regulations. This suggestion was immediately accepted both by the President and the Council together with the motions attached to it. As far as these latter went, as we have said, they were practically those of the committee. It was amazing to see the rapidity with which the substitution of licence for registration seemed to dissipate all other opposition and the motions in substitution of those proposed by the committee were quickly accepted even by members of the Council who had previously refused to entertain the similar proposals of the committee. Whatever the members of the committee may have felt in regard to the turn of the discussion they did not allow their feelings to affect their votes, and the reply, as formulated by Dr. MACALISTER, was adopted unanimously by the Council. Unfortunately one or two of the recommendations of the committee were left out in the cold, particularly the one requiring the local sanitary authority to appoint (and, of course, pay) medical practitioners to whom the midwives might apply. Mr. CARTER could see in this reasonable proposal nothing so much as a little trades' unionism which would excite offence in Parliament. Another rejected suggestion of the committee was the one intended to prevent illegal practice by association. It is certainly, we think, to be regretted that the Council dealt so vaguely with the vital question of the midwives' board as "some central body" without any suggestion as to its constitution, on which everything turns; and it seems a pity that in disregarding the lead of it committee the Council failed to express

itself on the subject of medical certificates and certificates of stillbirths.

It would seem therefore that some of these changes are not for the better and may cause much more trouble and loss of time on future occasions. But the discussion of 1898 should as far as it goes be considered final. It accepts the fact that there must for the present be midwives; it proposes to stop the deadly practice of untrained midwives by prohibiting practice as well as the false use of titles; it recognises the necessity for the practical supervision of midwives by the medical profession and the authoritative regulation and restriction of midwives' practice. It is impossible for the General Medical Council to approve of legislation on this subject except on such lines. The substitution of a licence for registration may not have the same magical effect on the profession that it had on the Council; but it does tend, and very properly tend, to minimise the recognition of a class of persons who ought in the evolution of society to disappear. The Council has defined its position and the Privy Council cannot be at any loss in the future to know the attitude of the General Medical Council towards this legislation. Under the circumstances we may confidently hope that Parliament, if the Bill should come to a second reading, will see its way to oppose it in its present form. If its promoters wish to stop puerperal mortality at the hands of midwives they, too, will accept the principles unanimously laid down by the General Medical Council or abandon attempts at legislation which would practically leave things where they are.

THE question regarding the Vaccination Bill raised by Mr. HUTCHINSON in a recent letter to us[1] is one which demands serious consideration. He recalls the fact that the Royal Commission on Vaccination advised that State payment for successful vaccination should no longer be made exclusively to those holding appointments, but that under certain conditions all medical men should have a right to claim such fees, and he points out that the Bill gives no effect to this advice.

It is well known that the Commission laid great stress on the comparative absence of friction or difficulty attending the administration of the Scottish Vaccination Act. The recently published report of the Registrar-General of Scotland for the year 1896 shows less than 3 per cent. of vaccination default, while in England in 1894 the cases not accounted for had risen to 19 per cent., and the percentage is now, no doubt, even higher. Clearly it is most desirable that whatever is good in the Scotch system should be adopted south of the Tweed. The Commission's recommendation of domiciliary vaccination is based on the fact that in Scotland, excepting in two or three of the largest cities, public vaccination stations are practically unknown. Mr. CHAPLIN has followed the Commission to a certain length here and then he has abruptly stopped. Nearly all vaccinations in Scotland are performed by the family medical attendant, and the absence of friction which distinguishes the whole procedure is probably in great measure due to that custom. Some time ago[2] we published a series of articles dealing with the relations of the medical officer of health to the private practitioner and we then took occasion to point out how judicious it is for the public official, especially when engaged in private practice, to avoid needless domiciliary visitation in houses where patients of his brethren in practice are suffering from infectious disease. With regard to vaccination the necessity would probably be even greater, for here there would be not merely an inspection of the house but the performance of a small operation on one of the inmates. The Bill takes no cognisance of this difficulty. It proposes domiciliary vaccination, but leaves out the private practitioner. The Scotch system, however, has defects of its own. The private medical attendant is not under that system paid by the State, his work is not supervised by the State, and he does as he pleases with regard to the amount of vaccination of every individual case. Whatever be the case in Scotland, where opposition to vaccination is much less keen, in England such a system would almost certainly result in some lowering of the efficiency of vaccination in consequence of frequent parental pressure towards diminution of the area or number of vesicles. We therefore appear to have arrived at this position, that if the advantages of the Scotch system are to be obtained for England the private practitioner should be very generally employed where domiciliary vaccination is in question, but that if its disadvantages are to be avoided his work should be State-paid and State-inspected. If the Local Government Board decides that a particular area and number of vesicles are necessary for reasonable efficiency and duration of protection, then it should have the right to refuse payment for any case which does not fulfil the required conditions. Here, however, an important practical difficulty arises. The work of perhaps 4000 public vaccinators may in some degree be supervised by the Board's inspectors, but if every medical man may claim fees how is his work to be supervised? At present the public vaccinator has usually a large number of cases in his books and sampling is comparatively easy, but if a practitioner performs only a dozen or two vaccinations in a year, and if in a given community there are to be, say, fifty practitioners sending in returns instead of one or two, the problem of inspection becomes at once a very difficult one. It seems to us that if the central authority cannot add sufficiently to its staff, then in many places the medical officer of health might be made the inspector of vaccinations—at least where he is not engaged in general practice. He is already in relation with the Local Government Board and the points of contact would only be increased, while he himself would be under supervision by the Board and its inspectors in this department of his work. It is not to be assumed that an undue amount of his time would be taken up in this way. Going about continually in his district he could do a great deal of casual inspection which would require special visits on the part of an officer having no other work in hand.

It may well be argued that if as a result of domiciliary vaccination any large transference of work were made from public vaccinators to private practitioners some slight loss of efficiency might follow and that, other things being equal, skill and dexterity go hand-in-hand with experience and that this holds good even in so simple an operation as

[1] THE LANCET, March 19th, 1898, p. 813.
[2] THE LANCET, Jan. 19th and 26th and Feb. 9th and 16th, 1895.

vaccination. Looking to the very high "insertion success" attained by some public vaccinators, it is probable that, taking a large average of cases, a private practitioner aiming to produce four vesicles will fall short of his endeavour somewhat more frequently than a public vaccinator. On the other hand, a large amount of the vaccination of the country is already done by non-official medical men, and here, under even a minimum of Government supervision, there would be an improvement in practice. A residuum of cases would still, no doubt, exist as to which no fee would be claimed or paid, the necessary standard of efficiency not having been reached, perhaps not even attempted or desired.

In what we have said here we do not for one moment suggest that there should in future be no difference between the position of the public vaccinator and that of the private practitioner. The work of the latter would be merely complementary or supplementary to that of the former. If we understand the purpose of the Government aright they do not intend to abolish vaccination stations but only to allow a choice on the part of parents. At the station the public vaccinator would have the sole control. Under Clause I. (2) of the Bill it would be only the public vaccinator whom the parent would have a right to call on for domiciliary vaccination, and under the succeeding sub-clause it would be the public vaccinator who would be supplied with lists of children reaching the age of nine months without having been vaccinated and whose homes it would be his duty to visit in order to offer vaccination with glycerinated calf lymph. For all such work he must, of course, be properly remunerated. If some scheme such as is sketched here were brought into operation it is not unlikely that the work of infantile vaccination would be largely accomplished within the first nine months of life, and that a not inconsiderable part of it would be done by private practitioners, either at the child's home or at the medical attendant's consulting-room. But this, we take it, is exactly what the Government and the Commission and the public desire. The whole question must be looked at primarily from the point of view of the public weal, and we see much force in Mr. HUTCHINSON'S contention that the total numbers of the vaccinated would in this way be increased and the reluctance of mothers to submit their children to vaccination be greatly diminished. One thing, however, should be kept clearly in view. No such system of infantile vaccination would obviate the necessity for the Government dealing with the question of revaccination. Systematic vaccination at twelve years of age is essential under whatever scheme the earlier protection may have been obtained. And the very fact that some diminution of "insertion success" may take place in primary vaccination forms another argument in favour of revaccination being regularly carried out as a duty of the State to the individual and to the community.

THE Ninth International Congress of Hygiene and Demography was opened at Madrid on Sunday, April 10th, in an extraordinary environment. Madrid is at the present moment the centre of the highest political and patriotic excitement, for whether or not the outcome of President MCKINLEY'S voluminous message be the declaration of war the prestige of Spain is seriously assailed by the fact that the United States should have thought well to level at her so direct a threat. The national characteristic of the Spaniard being the reverse of humility it is unlikely that Spain will accept dictation without remonstrance, so that whatever the eventual issue Madrid will be for some time, as it is now, a troublous place for the holding of a scientific Congress. Our Special Correspondent reports that the preliminary business of the Congress was transacted laudably under the circumstances and it is obvious that every attempt is being made by the sorely tried Government to welcome the international representatives of public health in a way befitting a great nation. For this gallantry under difficulties we are certain all our readers will share our sympathy.

It is sincerely to be hoped that the proceedings at the ninth Congress will be definite in their object and perhaps a little more limited in their scope than they have hitherto been. Such subjects as hygiene and demography are so all-engrossing that it is easier to allow the debates to become diffuse than to keep them concentrated upon useful points. If certain fixed questions of prime importance were to be made the subject of set discussion by accredited representatives, and if such debates had their outcome in resolutions which could afterwards be submitted to full Congress for voting, the cause of international sanitation would be really advanced. Hitherto the work done at these congresses has been too scattered in its aim to be of the first benefit to the world. The very large scope is not without advantages but the advantages were more solid in earlier days. When the congresses were first instituted it was necessary that the various nations who attended them should compare notes all along the line before attempting to draw conclusions. The plumbing of one nation, the bacteriology of another, the sewage disposal of a third—all required to be brought to the general knowledge of the delegates before it could be determined what was common property and what were the universal desiderata. But the earlier congresses have more or less settled these things and for the future leisure should certainly be found at these meetings to thoroughly discuss, by the mouthpiece of accredited delegates, a few questions of undoubtedly prime importance—subjects upon which all civilised nations desire enlightenment. The unanimous advice of a meeting of experts from all parts of the world might sway Cabinets in their international relations; a brilliant paper read to one section of an international congress—possibly in a language not familiar to the majority of the audience—runs a risk of falling stillborn from its author's lips.

In THE LANCET we have specially recognised the utility of congresses as a means of spreading a knowledge of sanitary laws, even when we have seen that this utility might be increased, and we have in particular from the very first appreciated the work of the International Congresses of Hygiene and Demography. The first of these was held at Brussels in September, 1876, and then, at a time when the importance of the movement was hardly recognised by all, we dispatched a

special correspondent with a mission to describe in these columns the scientific proceedings at the meeting and the exhibition of hygienic appliances. At all the subsequent congresses save one we have been represented by a correspondent who has frequently taken an active part in the debates and who has been on several occasions selected as the spokesman of the entire English delegation, while he has always been responsible for sending to us the longest and fullest descriptions published by any English journal. We have, in short, taken every pains to display our belief in the value of these congresses. We mention these things in spite of their egotistic appearance because it seems to us that some of the sanitarians of this country do not regard the International Congresses of Hygiene and Demography with sufficient seriousness. For how else are we to explain the absence from Madrid without notice of three English members of the Permanent Committee? These gentlemen must have thought that their abstention, with the loss to English organisation so entailed, was of no consequence. We think otherwise, and much regret that our country has been placed under a cloud on the very occasion of all others when we have a right to expect to shine—namely, at an international assembly concerning itself with public health.

Annotations.

"Ne quid nimis."

THE SMALL-POX EPIDEMIC AT MIDDLESBROUGH.

ALTHOUGH unhappily cases of small-pox continue to be notified at Middlesbrough at the rate of from 30 to 40 per week, this is so marked a diminution on the returns of a few weeks back that the epidemic may be said to be declining and it will, we hope, shortly be at an end. There has been issued by the Jenner Society an instructive pamphlet upon the outbreak prepared by Dr. F. T. Bond of Gloucester. In this he points out that the epidemic commenced towards the end of November and was of such magnitude that from Nov. 22nd, 1897, to March 21st, 1898, there had been 1200 cases with 153 deaths. Within the same period in 1895–1896 there were at Gloucester about 850 cases with 212 deaths. Observing that it is, of course, impossible to say what the precise fatality of the Middlesbrough epidemic will be, Dr. Bond, in order to carry out the comparison with the Gloucester outbreak as fairly as possible, deals statistically only with those cases which were notified up to the end of February—namely, 686—of which 97 were fatal, or 14·1 per cent. With the same number of cases (686) at the same stage of the Gloucester epidemic there were 172 deaths, a fatality of 25·0 per cent. He then proceeds to analyse this difference in fatality by reference to the condition as to vaccination of those attacked. At Middlesbrough 581, or 84·7 per cent., had been vaccinated in infancy; at Gloucester 368, or 55·5 per cent. But the fatality in this class was almost the same in the two places, the "vaccinated" deaths being 48 in Middlesbrough, or 8·2 per cent., and 32 at Gloucester, or 8·7 per cent. Similarly, of the 105 "unvaccinated" at Middlesbrough 49 died, or 46·6 per cent.; and of the 318 "unvaccinated" at Gloucester 140 died, or 44 per cent. Clearly, then, the excess of deaths in the Gloucester outbreak as contrasted with that of Middlesbrough was due to the greater number of unvaccinated subjects attacked by small-pox. The contrast is pushed still further by analysing each of these series in respect to age-incidence. In Middlesbrough 95 per cent. of the vaccinated who were attacked were over ten years of age (nearly 70 per cent. between twenty and sixty years), whilst less than 5 per cent. were under ten years. In Gloucester more than 98 per cent. of the "vaccinated" attacks were in subjects over ten years of age (73 per cent. between twenty and sixty years) and less than 2 per cent. were under ten years. As regards the unvaccinated, 90 per cent. of the attacks at Gloucester were in subjects under ten years of age; in Middlesbrough less than one-third of the unvaccinated were under ten years, but only 2·8 per cent. were between twenty and sixty years of age. The Middlesbrough epidemic is therefore analogous to that at Warrington in 1892–93, having been "mainly one of small-pox occurring in adolescents and adults who have been vaccinated in infancy, and have so far lost the full benefit of the protection they then received. But they were still sufficiently protected to make the mean fatality of the whole group only 8·2, which is mainly due to the high fatality amongst those who were attacked between twenty and sixty years of age." Dr. Bond points out that Middlesbrough has been wrongly styled a "well-vaccinated town," for although the latest vaccination returns (of 1896–97) showed a default of infantile vaccination of only 7·2 per cent., yet the census instituted by the board of guardians in February revealed out of an enumerated population of 69,525 as many as 653 unvaccinated children between the ages of three months and fourteen years, and therefore probably at the commencement of the epidemic as many as 1000 to 2000. Nor is there any evidence that as regards revaccination its adolescent and adult population were any whit better off than any other town. In truth this outbreak comes as it were to demonstrate once more the fact that small-pox is not to be warded off by infantile vaccination alone and that revaccination is just as much called for if the disease is to be kept in check once the infection has gained a footing. What has happened to Middlesbrough may happen to any town in the kingdom, provided that facilities for personal infection exist in like abundance; and if reliance were to be placed on isolation and "sanitary police measures" alone the cost to the community would be enormous, since no place is prepared to deal with small-pox without the aid of vaccination and revaccination.

THE VICTORY IN THE SOUDAN.

THE present Government has unquestionably had during its term of office its full share of trials, political perplexities, and anxious problems on all sides. The state of India, with its famine, plague and pestilence, and the war on the frontier, which was attributable to the fact not that we would not leave the tribes alone but that they would not leave us alone; the paralysis of China and the dismemberment of that vast Eastern Empire by the Western Powers, together with entanglements, wars and rumours of wars in Eastern, Western, and Northern Africa,—these have given the India and Foreign Offices but little rest of late. If our political difficulties and embarrassments have come together so have our successes. The promised termination of the war with the border tribes on our North-west Indian frontier, the successful result of our diplomacy in China and the far East, and the news of the great and brilliant victory in the Soudan, by which the Mahdist power in North Africa has been broken and a large portion of the Khalifa's army practically annihilated, have followed one another with dramatic rapidity to the great relief of the present Government. The campaign in the Soudan has been designed with great strategical, and carried out with equally great tactical, ability and success. The military situation in the

Soudan immediately prior to the successful attack of the Anglo-Egyptian force on Mahmud's entrenched position was one of unusual interest, because Mahmud could neither advance nor retreat without the gravest consequences to his force. The battle of Atbara has been attended with an estimated loss of some 3000, and all the important Emirs, except Osman Digna, have been slain or taken prisoners, including among the latter Mahmud himself. The loss on the Anglo-Egyptian side amounts to upwards of 500 killed and wounded. The medical arrangements appear to have been extremely good, and as there was ample time before the attack on the Khalifa's force took place everything had been well thought out and provided. The work of stripping the battlefield of its wounded was a hard one, but it was performed as expeditiously as possible. The sick and wounded were first of all cared for at Ras Hudi. There is excellent hospital accommodation at Atbara Fort and on the banks of the Nile, and the last convoys of sick and wounded arrived at Atbara on April 11th after a trying journey which was admirably conducted and borne. They will be transported thence by the best and easiest of all transport for wounded men—namely, along the Nile in large boats with sunproof coverings—to the base hospital at Gennanetti. The sick and wounded have received every comfort and attention which medical care and skill could devise and it is allowed on all hands that the arrangements for affording surgical succour and aid on the field and those for the hospital service generally were most satisfactory. The wounded, according to the latest accounts, are all doing as well as could be expected. We have only to add our congratulations to those which Sir Herbert Kitchener has already received for himself and the brave force under his command, supplemented by the congratulations which we have to offer to the medical officers of the British and Egyptian services for the hard and successful work which they have accomplished.

THE RIGHT TO PRACTISE IN NATAL.

THE *Transvaal Critic* of Feb. 11th is much exercised about what it calls a medical ring. After some cheap sneers about "butchers" and "doctors paying the funeral expenses of their 'clients,'" the writer proceeds to take to task the Medical Council of Natal, a body constituted by Act 35 of 1896, which Act gave the Medical Council the right to frame certain regulations for the practice of medicine and surgery in Natal. According to this Act, "no person shall be permitted to practise or be registered as a medical practitioner unless he would be entitled to be registered in Great Britain or shall have obtained a licence from the Colonial Secretary on the recommendation of the Council." The Act goes on to say that to get such a licence the person desiring it shall provide proof of identity, authenticity of diploma, and of his right to practise elsewhere under such diploma. Now, according to the *Transvaal Critic*, the Medical Council have in their regulations on this Act altered the words "right of the holder to practise elsewhere under such diploma" into "submit a declaration that they are entitled to practise as qualified medical practitioners in Great Britain." Apart from the view that in all probability a "regulation" of the Medical Council cannot and does not override the Act of the Colonial Government, such a regulation would not in the least prevent "any fully qualified French or German doctor who may not have also practised in Great Britain from practising in Natal." The *Transvaal Critic* says it will. Any qualified—or, for the matter of that, unqualified—person may practise in this happy land of England. Any person, however, may not be *registered*. If the Medical Council of Natal wish to prevent any one who has not a British registrable qualification from practising in Natal let it say so and take steps to gain its wish. It is, of course, a natural enough, though we think a mistaken, view. The Act quoted is narrow enough to keep out the quack, it is far more stringent than anything we have over here, and the Natal Medical Council might well bear in mind the objections raised when it was proposed to make all English-speaking practitioners in Italy undergo the same examination as their Italian *confrères*.

SCHOOL BOARDS AND MEDICAL CERTIFICATES.

THE West Bromwich School Board met on April 5th, when the question of medical certificates came to the front. Mr. N. L. U. Somers, a medical practitioner, moved the following resolution: "That having regard to the fact that the parents or guardians of a child unable to attend school through illness comply with their legal obligations by furnishing a certificate to that effect signed by any duly qualified medical practitioner this Board considers such certificate as sufficient evidence of a child's inability to attend." Mr. Somers cited a case where a medical man certified a child as suffering from scholiosis (*sic*). This child was then sent to the medical officer of the Board, who had previously examined her and reported in favour of her attending school. He said that he did not examine the child a second time, that he presumed the disease really was "scoliosis" but that he would examine her again if they wished. The resolution was carried eventually by six votes to three, two members not voting. This is as it should be. Every qualified medical man is not immaculate any more than every cleric or every lawyer, but in any case he knows better whether a child is able to attend school than does a layman, and we suppose that a layman is the one who decides whether a certificate shall be revised by the Board's medical officer or not; erratic spelling is not necessarily a proof of professional incompetency. School boards are curious bodies and seem to mistrust everyone with whom they come in contact unless they receive payment from funds administered by the Board and extracted from the pockets of the ratepayers.

AN ALLEGED OUTBREAK OF OYSTER-BORNE ILLNESS.

IN a leading article in THE LANCET of April 9th we insisted upon the fact that oyster-borne enteric fever was by no means the only danger to be feared from the consumption of sewage-polluted oysters, and we drew attention to an outburst which occurred in France, in which out of 14 persons who consumed polluted oysters obtained from Cette, 12 suffered from gastric disturbances and 2 from enteric fever. Curiously enough Mr. Edward Sharp, the medical officer of health of Truro, relates in his annual report, which we have just received, an instance involving 7 persons who sat down to a supper at which uncooked oysters were partaken of. Out of these 7 persons, all of whom ate oysters, 4 suffered from gastric symptoms of more or less severity, 2 subsequently developed enteric fever, and the remaining one, who by the way ate oysters freely, escaped unhurt. The evidence against the oysters is, as Mr. Sharp observes, very strong, though there would apparently remain the objection which has probably been discounted, but which is not referred to in the report before us, that the 6 persons attacked ate or drank of something which was not partaken of by the person who remained well. However, oysters derived from the same laying as were those under suspicion were sent to Dr. Kanthack for bacteriological examination and we are told that "they showed fair evidence of sewage and filth contamination." The oysters here in question were derived from near Malpas, in the Truro River, and we see by reference to the Local Government Board report on Oyster Culture in Relation to Disease that in the opinion of the inspector who conducted this part of the inquiry "there is no escape from

the conclusion that oyster layings near Malpas and in the upper waters of the reach below it must be liable to contamination" and that "at Malpas there are slop-water sewers from about twenty houses, and also a privy, discharging themselves dangerously near one of the ponds and some of the small layings to which reference has already been made." We note, however, with satisfaction that the sanitary committee of the Truro Corporation has recommended that the laying down of oysters on the Malpas foreshore, even for temporary purposes, should be prohibited; but it is to be regretted that the prohibition was not made and carried into effect when the Local Government Board report was issued and hence before the drastic experiment here referred to had been performed.

THE TREATMENT OF TETANUS.

OUR Rome correspondent writes, under date April 3rd "From Palermo I hear that Dr. Francesco Supino, on the veterinary staff of the cavalry regiment quartered at Monferrato, having got none but negative results from the Tizzoni antitoxin in treating a horse for tetanus, had recourse to serotherapy. He took the serum from a horse that had been cured of tetanus and on the 14th ult., at 4 P.M., he made a first injection of 100 grammes of the serum, introducing it subcutaneously at the neck and suspending all other treatment of the suffering animal. Next morning at 8 he noted a marked general improvement—facility in movement, deeper respiration, pronounced diminution of the trismus, and the eye more expressive. Continuing the practice at intervals of twenty-four hours, he made four other injections of 100 grammes each and always had occasion to note improvement—improvement, indeed, so uniform and progressive as to admit of the horse's lying down and raising himself (a thing he could not do at first) without external aid. The animal (I hear to-day) is in full convalescence and is led out by hand for an airing "senza preoccupazione" (without antecedent trouble). Dr. Supino adds that serotherapy has had previous trials in tetanus, but not with the above indicated means, of which a detailed report may shortly be looked for from his pen."

MEDICAL LECTURES TO LAY AUDIENCES.

WE learn from the *Nottingham Daily Guardian* that a deputation introduced by Alderman Mutch, M.D.Aberd., consisting of the President and several influential members of the Nottingham Medico-Chirurgical Society, recently had an interview with the Watch Committee of Nottingham on the subject of lectures on medical subjects to lay audiences. The deputation, representing a society consisting of over one hundred members, stated that their object was to record their opinion that certain lectures on medical subjects such as had recently been delivered in the city in places of public resort to promiscuous audiences were most undesirable and calculated to do a great deal of harm. They gave a great many facts in support of this view and explained that their action was taken on purely public grounds and not out of selfish regard for professional interests. They did not consider that any injury was done to regular practitioners by the visits of itinerant lecturers, but thought these public lectures tended to excite morbid curiosity and to disturb the minds of susceptible persons. The Watch Committee, we are glad to learn, undertook to use such powers as they possessed to prevent a recurrence of the practices objected to by the deputation. The recent lecturers who have undertaken to enlighten the lay mind of Nottingham on medical subjects were Mrs. Longshore Potts and a certain "Professor" Wells. We notice that the Nottingham Medico Chirurgical Society rightly base their objections to the methods of these people on the highest moral grounds, but we should like, in addition, a little information upon the narrower professional side of the matter. Do not these persons under the guise of imparting useful knowledge of the laws of health really aim at getting money from those who listen to them? Otherwise how do they live and who pays their railway fares?

ICHTHYOSIS AND ARTERIAL ATROPHY.

MM. GASTOU and EMERY furnish an interesting contribution to the pathology of ichthyosis in the *Journal de Clinique et de Thérapeutique Infantiles* of March 24th, 1898. The disease as observed by them occurred in two children aged respectively twelve and ten years and was of the granular variety, each hair being the centre of a minute horny plate. Their father was troubled with the same condition of skin and he, two years before the birth of the elder child, had syphilis. The most interesting feature about these cases, however, is that they exhibited a conjunction of ichthyosis with marked arterial attenuation as expressed in a hardly perceptible thready pulse in both radial arteries with cyanosis of the extremities. This peculiarity has also been noted in ichthyosis by M. Variot. MM. Gastou and Emery regard both the skin disease and the arterial shrinking as evidences of a common dystrophic change—possibly in these cases related to the parental syphilis but not necessarily dependent on this cause as a rule. They note another case in which the same condition of skin and blood-vessels was observed by them and in which the underlying hereditary taint was that of tubercle and they believe that alcoholism and other hereditary disorders exercise the same influence.

THE VACCINATION BILL AND THE JENNER SOCIETY.

THE Jenner Society—or rather its indefatigable secretary, Dr. F. T. Bond—has issued sundry leaflets upon the Vaccination Bill which may be commended to the notice of our legislators. In one of these the measure is critically examined and regret is expressed that children may be exempted from vaccination entirely if the parent pays a pecuniary fine—supposing, that is, that the law is enforced at all; and there are places where it may be doubted whether it wil be set in action in the future any more readily than it has been in the past. It is contended that a far more logical course would have been to suspend the operation of the law when objection is taken not indefinitely but perhaps until school age, when vaccination might be made an essential to admission to school. It is not unlikely, too, that objections to vaccination would be less strong when the child is older. Many cogent reasons are adduced in the pamphlet for transferring the vaccination authority from boards of guardians to the sanitary authorities—i e., the district and town councils—and as far as possible to combine the offices of medical officer of health and public vaccinator. As regards other provisions in the Bill it is feared that the extension of the statutory age to twelve months may increase rather than diminish the risks of septic infection and that difficulties are likely to arise in domiciliary vaccination as well as dangers of septic injuries in vaccinations performed in unhealthy homes. It is also urged that the Local Government Board should be empowered to define "sufficient" vaccination, to inspect all vaccinations (public or private), and to keep a register where all particulars of the vaccination should be entered from detailed certificates. Amongst other suggestions is one recommending the enforcement of vaccination and revaccination during the existence of small-pox in a neighbourhood on all occupants of houses who, being under fourteen years of age, have not been sufficiently vaccinated or re-vaccinated. There is a good deal to be said for most of the proposals which Dr. Bond makes in this able *brochure*

and we would welcome them as changes that could be affected without much reconstitution of existing machinery. Another leaflet issued by the Jenner Society contains excerpts from articles in the press on the Vaccination Bill. They indicate that public opinion is by no means unanimous as to the advantages likely to accrue from the proposed alterations in the law, and in reading them it is impossible to avoid the feeling that, in spite of the labours of the Royal Commission and the abundance of facts which it accumulated, the public is still but imperfectly instructed upon the question. Whether the House of Commons is any better informed may perhaps be seen in the debate which will arise on the second reading of the Bill. No doubt the situation is one of singular difficulty, since there is every reason to believe that so long as vaccination is attempted to be enforced by penalties there will be "vaccination authorities" determined to abstain from the use of the powers entrusted to them. The suggested substitution of "suspension" for the infliction of penalties made by Dr. Bond might provide a way out from an "impasse" which is rendering the English administration of Vaccination Acts somewhat ridiculous.

THE DANGERS OF IMPORTED MILK.

PUBLIC attention is very properly being directed to the possibilities of foreign milk being not only infected but also injurious owing to the addition of certain preservatives. We have long urged that the sharpest possible outlook should be kept upon all articles of food coming into this country from abroad. Not long ago we alluded to a report drawn up at the instigation of the (late) Commissioners of Sewers in which there was quite sufficient evidence to show that the milk imported into this country from several countries on the Continent was distinctly open to suspicion, since no precautions appeared to be taken in the care and management of the cattle supplying the milk intended to be sent out of the country. The quantity of foreign milk imported into this country is rapidly increasing, as is evident from a report recently issued by the British Consul at Cherbourg. Thus from this place no less than 76,383 gallons were sent to this country during the three months ending on Dec. 31st last year. And this importation goes on without any guarantee that the milk is free from infection or that it is produced under healthy environment. Further, a new practice is reported to have arisen, which consists in the adding of a vegetable extract which is said to serve as a preservative of the milk for several days. This addition is reported to be beyond chemical detection and the added substance is lost on evaporation. The preserving power of the vegetable extract was suggested from the fact that when cows had partaken of the plant from which the extract is prepared it was observed that the milk yielded remained sweet for an unusual time. The matter, it seems to us, is one which should receive the earliest possible attention, as such an addition may not unlikely prove to be a source of very serious mischief to consumers.

AFFECTION OF THE HEART IN CANCRUM ORIS

IN the *Edinburgh Medical Journal* of March, 1898, Dr. Thomas Oliver has published the following case. A domestic servant, aged seventeen years, who had a comfortable home and had always been well fed, began to suffer from faceache, attributed to a decayed tooth. A day or two later an ulcer formed behind the left upper incisor teeth, which was followed by swelling of the cheek and ulceration of its inner surface. The pain continued and was accompanied by frequent shiverings and prostration. When the patient was first seen, three weeks after the onset, the left cheek was considerably swollen, red, and indurated and the left half of the upper lip was swollen and protruding. There was a large brawny swelling below the chin and the breath was very offensive. The teeth were loose and the gums were red and ulcerated. There was a large ulcer on the floor of the mouth and another on the inside of the cheek, each covered with a slough. The heart was normal and the temperature was 102° F. Three days later friction sounds were detected over the right base and bronchial râles all over the lungs. On the following day the patient was very ill, the bronchitis was worse, and the pulse was 140 and rather irregular. The area of cardiac dulness had increased, the impulse was flapping and more diffused, the apex beat was felt in the fourth space ½ in. external to the left nipple. The area of dulness rapidly extended, the apex beating 1½ in. external to the nipple and over this area was a loud-blowing systolic murmur. At the end of the fourth week the cheek became perforated. By degrees the health improved and the heart became reduced in size, but the murmur could still be heard several months after recovery. The remarkable points in the case are the occurrence of the disease in a subject who had not passed through a previous illness or been exposed to any unfavourable influence, the age of the patient, and the heart complication. Dr. Oliver attributes the dilatation of the heart to malnutrition of the myocardium either from fever or toxæmia; a similar condition occurs not uncommonly in fevers. He thinks that the murmur was due to the dilatation and not to endocarditis. This view appears to us to be scarcely satisfactory. The persistence of the murmur after the dilatation had passed away is opposed to it. Moreover, cancrum oris, like other suppurative foci, would at least give an opportunity for pyogenic or other infection of the endocardium, and so long ago as 1878 Dr. A. E. Sansom described in the Transactions of the Royal Medical and Chirurgical Society an organism found in the blood and diseased tissues.

"PROFESSOR D'ODIARDI" AND HIS ELECTRICAL HOSPITAL.

MR. DREW, the coroner for West London, held an inquest at the Kensington Town Hall on April 12th concerning the death of a man, aged seventy-eight years, who was found dead in a house in Peel-street, Campden-hill, on Good Friday. The landlady of the deceased deposed that he had attended the Notting Hill-gate Free Hospital at 30, Silver-street, and had had the battery applied. Annie Bridge, a nurse, said she was engaged at the "Electrical Hospital," but had had no previous training. There was a staff of six nurses, and Dr. Walton of Swanage, the consulting physician, never saw patients. "Professor" D'Odiardi did. As, however, we are unable to find any medical man of the name of Walton in practice at Swanage in either the current Medical Register or the Medical Directory, perhaps this does not much matter. Mr. D'Odiardi in his evidence said that he had had no medical training nor had he any qualification. He had worked under well-known doctors, and his advice and instruments had been accepted by the Dean of the Medical Faculty at Belgium. He had founded the hospital and received no salary. Deceased had paid £3, but upon his saying he could not afford more he was treated for nothing afterwards. He was of opinion that deceased had catarrh of the stomach. Mr. A. K. Barrett of Peel-place said the post-mortem examination revealed old valvular disease and pericarditis with Bright's disease. There was no catarrh of the stomach. The coroner said that the "professor was absolutely unqualified to diagnose disease. He would advise him only to use his battery under the direction of a doctor." The jury returned a verdict in accordance with the medical evidence and added a rider embodying the coroner's remarks. This place, of course, is a quack institution pure and simple, but as in the present state of the law

such places are not illegal we have no more to say except that they should be made illegal and their owners or managers severely punished.

NATIONAL VACCINE ESTABLISHMENT.

THE National Vaccine Establishment, which is now located at the Local Government Board Offices at Whitehall, will on April 27th be removed to Room 140, St. Stephen's House, Cannon-row, Westminster. Supplies of lymph will be furnished to medical practitioners on personal application at the new premises between the hours of 12 and 2 P.M., or by letter directed to the Secretary at the new address.

THE DEGREE OF M.D. IN GERMAN UNIVERSITIES.

IN many of the German universities it has been usual to allow students who have not passed the State examination, which confers the right to practise, to take the degree of M.D. and it is by no means an unknown occurrence for a candidate possessing a university M.D. to be "plucked" at the State examination. Notwithstanding such failure, however, he is commonly addressed as "doctor" and is doubtless often taken for a qualified man. This ambiguous state of affairs is to be rendered impossible in future—at all events, in the Prussian universities, which will not after the commencement of next winter session permit candidates to obtain the M.D. degree until they are legally qualified. Leipsig and one or two other universities have a rule of this kind already.

SYMMETRICAL GANGRENE FROM EMBOLISM OF ONE ILIAC ARTERY.

AT a recent meeting of the Société Médicale des Hôpitaux M. Widal and M. Nobécourt brought forward a case of symmetrical gangrene produced by embolism of one iliac artery, a result which, though anticipated theoretically by some writers, does not appear to have been previously observed. A man, aged forty-five years, habitually in good health, suddenly felt in the night a sensation of numbness and coldness in the left leg. Two days later when he entered hospital the leg was absolutely cold and covered with purple patches which extended upwards as high as three fingers' breadth above the patella. There was slight tenderness in the course of the femoral artery in the triangle of Scarpa and no pulsation could be felt. The pulsations of the right femoral artery were quite distinct. Six days after the onset of the symptoms the right leg became affected. Suddenly the patient felt tingling and coldness in the leg, which became icy-cold and went through the same changes as the left. The pulsations of the right femoral artery became scarcely perceptible but did not disappear completely for three days. On the left side the patient began to experience acute pain especially in the great toe. The general condition gradually became worse, pyrexia, anorexia, diarrhœa, and nocturnal delirium appeared. There were no signs of visceral disease. Eighteen days after the onset of the symptoms pulsations returned in the femoral artery. The gangrenous changes progressed in the left limb but became arrested in the right a little below the patella. The patient died on the twenty-eighth day. The necropsy completely explained the clinical phenomena. In the left common iliac artery was an embolus adherent to the internal coat which appeared normal. Secondary but non-adherent clots were prolonged downwards into the internal and external iliac, the femoral, and the deep femoral, arteries. A secondary clot ascended to the bifurcation of the aorta and then descended in the right iliac and femoral, arteries. All the secondary clots were soft and non-adherent, those on the right side especially floated in the arteries which they did not fill. The left kidney and the spleen were full of infarcts of the same nature as the iliac embolus.

THE ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER.

WE had occasion last week to refer to the resignation by the honorary medical staff of this hospital of their appointments. We are glad to learn that the resignations have been withdrawn, under which circumstances we think it right to withhold further comment.

THE PROSECUTION OF MR. H. K. HUNTER.

THE questions involved in this case—a full report of which will be found on p. 1075—are of great importance; but we must await the decision of the High Court before making any comment. The Society of Apothecaries, whose position is seriously affected by the magistrates' decision, are taking active steps to get the conviction quashed, it having been arranged before the case was heard that in the event of a conviction a case should be stated.

TUBERCULOSIS IN FISHES.

THE frequency of tuberculosis in cattle, especially milch cows, the extreme susceptibility of rabbits and guinea-pigs among rodents to artificial inoculation with cultures of the bacilli, and the occurrence of the disease both spontaneously and by accidental infection among fowls, have all been well-known for many years, but that fishes were susceptible does not seem to have occurred to anyone. M. Dubar, M. Bataillon and M. Terre, however, reported to the Académie des Sciences an instance of this which is not only probably unique, but presents several points of great scientific interest. The sputa and dejecta of a woman in an advanced stage of pulmonary and intestinal tuberculosis having been thrown into a fishpond many of the carp were observed to swell and die, and on examination their livers and spleens were found to be filled with tubercle bacilli. Others experimentally fed with tuberculous matter from human subjects, rabbits, and fowls died with the same appearances in two to three weeks and the bacilli of the diseased fish were equally infective to others which devoured them. But when ingested by, or inoculated into, rabbits and fowls the results were negative, the explanation being obviously that they had been so attenuated by cultivation in the colder blood of the fish as to have lost their virulence to warm-blooded animals. Fish must therefore be more susceptible than even rodents, though the conditions under which they live offer few opportunities for infection, those of the carp in a confined pond being, in fact, artificial. Under any circumstances, however, the danger of the communication of tuberculosis from the use of such fish as food must be infinitesimally small should this attenuation of the virulence of the bacilli be a constant phenomenon.

THE HANWELL SCHOOLS.

THE managers of the Hanwell Schools have recently received a report from the medical superintendent of the Isolation Hospital, Mr. Sydney Stephenson, with reference to the admission of ophthalmic cases to which they attach considerable importance, as the figures show that in the hospital only six ophthalmic cases were derived during a year from the Main School at Hanwell as compared with 144 cases sent from a contributary Union. The figures contained in the report deal with admissions during the twelve months ended on March 14th last, and the comparison is between (*a*) the children coming from Newington and Southwark in the St. Saviour's Union, and (*b*) the children transferred from the district schools, Hanwell. Mr. Stephenson

reports that 269 children remain in the Ophthalmic School, made up of 113 boys, 94 girls, and 62 infants. These children belong to the following unions, parishes, &c.: City of London, 2; St. Saviour's, 49; Bethnal-green, 37; St. Pancras, 35; Lambeth, 5; Hackney, 38; Islington, 6; Mile-end, 6; Forest Gate, 13; Poplar, 30; South Metropolitan School District, 5; Greenwich, 2; Shoreditch, 1; Kensington, 15; Strand, 5; Wandsworth and Clapham, 9; St. George's, 1; St. George's-in-the-East, 4; Fulham, 5; Lewisham, 1. The subjoined table shows, in parallel columns, month by month for the past year (*a*) the number of patients sent direct from St. Saviour's Union, and (*b*) the number of children admitted to the Ophthalmic School from the Main School:—

Month.		From St Saviour's District.	From Main School.
March,	1897	—	1
April,	,,	—	—
May,	,,	17	3
June,	,,	5	—
July,	,,	16	—
August,	,,	9	1
September,	,,	—	—
October,	,,	17	—
November,	,,	12	—
December,	,,	3	—
January,	1898	19	1
February,	,,	29	—
March,	,,	17	—
Totals		144	6

THE MEDICAL AND DENTISTS' REGISTERS.

WE have just received the Medical Register for 1898, from which it appears that the total number of registered practitioners with British qualifications is 34,642. In 1897 the total number was 34,478, being an increase of 877 over the total for 1896. The increase for this year over 1897 is, however, only 164, a most notable decrease and one which we are very glad to see. To go more into particulars, the new registrations are as follows: England, 670; Scotland, 425; Ireland, 135; total, 1230. In 1897 the total was 1385. The restorations to the Register for 1897 were 25, while in 1896 they numbered 52. The names removed by death in 1897 were 582 under Section 14, 504 under the penal clause 5, while in 1896 the numbers were respectively 532, 25, and 3. The removals under section 14 comprise those removed for not giving notice of change of address. We think it would add to the value of the Medical Register if a detailed obituary table were published, and also if the names of those removed from the Register under the penal clause were published. If it "is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners," it is surely also expedient that the names of those removed from the Register should be made accessible to those who require medical aid. We have also received a copy of the Dentists' Register for 1898, by which it appears that the number of those dentists practising in the United Kingdom as Licentiates in Dental Surgery is as follows, compared with the numbers for last year:—Royal College of Surgeons of England, 843 in 1898, and 785 in 1897; Royal College of Surgeons of Edinburgh, 181 in 1898 and 159 in 1897; Faculty of Physicians and Surgeons of Glasgow, 139 in 1898 and 130 in 1897; Royal College of Surgeons in Ireland, 451 in 1898 and 445 in 1897. Total for 1898, 1614. Total for 1897, 1519. Of those in practice before 1878, now practising with additional surgical qualifications, there are 34 for the year 1898, while for 1897 the number was only 30. Of those practising without any additional qualifications there are 3265 for the year 1898, while for the year 1897 the number was 3287. Of foreign dentists the numbers are the same for both years—namely, Doctor of Dental Medicine of the University of Harvard, 9; and Doctor of Dental Surgery of the University of Michigan, 15. It will be seen from these figures that the number of qualified dentists is increasing and the number of unqualified dentists is going down. The total number on the register for 1898 is 4937, while for 1897 it was 4860.

THE annual meeting of the American Medical Association will open at Denver, Colorado, on June 7th. The President is Dr. George M. Sternberg of Washington and the Secretary is Dr. W. B. Atkinson, 1400, Pine-street, Philadelphia. Denver is editorially described as being "one of the few large cities where the consumptive can live and thrive almost forgetful of his ailment."

MR. J. C. UMNEY, of the firm of Messrs. Wright, Layman, and Umney, Southwark-street, S.E., has been prompt in bringing out a short Guide to the New British Pharmacopœia, which contains many points that will be of service to the medical man as well as to the retail pharmacist.

WE learn that Sir Richard Thorne, who has been absent from his official duties at the Local Government Board for the last four weeks, is still unwell and is not likely to resume his work this month.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE report of the first part of the sixteenth sitting of the Royal Commissioners was given in THE LANCET of March 26th. The latter part of the sitting was occupied by the examination of Mr. Whitmore.

Mr. WHITMORE said he had been a member of the London County Council for three years, but had not served on the Water Committee. Both in his capacity as a Member of Parliament and as a county councillor he had given his attention to the question of the London water-supply and the conclusion at which he had arrived was that the London County Council as at present constituted was not fit to undertake the duties of Water Authority for London. He thought, however, that if purchase of the present undertakings of the water companies were carried out and if they were subsequently managed by a public authority that the London County Council, either nominally or virtually, must necessarily become that authority. Two years ago the Government had desired to create a Water Board for the whole of London, including not only the County of London, but the area within the jurisdiction of the county councils which made up the area of "Water London." On this Board the Government felt it necessary to give a preponderating voting power to the London County Council. Whether judged by the test of population or of rateable value the County of London must always have a preponderating voice on a Water Board which had control of the supplies for London. In the case of the Government proposal so much opposition was made by the outside authorities that the Government had to drop the Bill. The demand for control of the water-supply by a public authority was, in Mr. Whitmore's opinion, to a great extent a sentimental demand. To satisfy this sentiment it would be useless to purchase the present water companies' undertakings unless the London County Council became the managing and controlling body.

In answer to Sir JOHN DORRINGTON the witness admitted that he thought that the feeling in favour of purchase of the water companies' undertakings was founded partly on the idea that the companies now distributed large dividends to their shareholders and that a public authority would either diminish the charges paid for water or that there would be a lowering of the municipal rates. The other sentiment was of a political and theoretical nature and was

to the effect that a monopoly should be controlled and managed by a public authority.

Mr. WHITMORE thought it would be unwise to add to the local bodies in London, for there were already enough of them. If another were added to the secondarily elected bodies public sentiment in London would not be satisfied. The old Metropolitan Board of Works died "with universal satisfaction"; the Thames Conservancy is not a popular body; the Metropolitan Asylums Board is always being abused. The two latter bodies are elected by secondary not by direct methods. If, on the other hand, the new body were not so elected another directly elected body would be called into existence. At the present time, however, there is great difficulty in getting electors to go to the poll, and a new directly elected body was not wanted. Again, if a nominated paid body were appointed it would not satisfy the sentimental feeling to which he had alluded. It seemed, therefore, clear, the witness said, that if purchase were undertaken the London County Council must be the controlling authority.

The witness then proceeded to point out the purely political and partisan nature of the constitution and working of the London County Council, so that on any question of water-rate the Council would be sharply divided, and the division would be between the representatives of the wealthier districts and those of the poorer districts. The representatives of the poorer districts would not think of the ratepayers' interests but would think of the water consumers' interests. On the other hand in the wealthier districts the representatives would think more of the rates and less of the water-charges. The chief point, however, was that on both sides the members, instead of considering the business merits of the matter, would think of the next election and they would try in some way or other in not purely business ways "to gratify the hopes of the electors." "Therefore I myself," said Mr. Whitmore, "a friend of the London County Council, am really most earnestly anxious that this great business should not be handed over to us." In illustration of the manner in which the interests of the ratepayers are sacrificed by members of the London County Council Mr. Whitmore instanced the management of the Labour Department of the Parks Committee of the London County Council. The amount spent every year in wages for the employés in the parks has, he pointed out, mounted in a most significant way, and he was ashamed to say that on the Committee his own side, just as much as the other side, was absolutely unable to take a business view of the question.

In answer to Sir JOHN DORRINGTON the witness said both sides thought more of the voter than of the administration.

In answer to Mr. DE BOCK PORTER the witness said that the financial control rested with the Council itself and not with the Committee.

In answer to the CHAIRMAN the witness said that politicians were very bad councillors. The kind of men they wanted were business men of high character. Such people, unfortunately, were afraid of the amount of work which they would have to do on the Council and they disliked the trouble of a contested election.

The witness having again emphasised the political nature of the London County Council's proceedings said that a few members of the Council had always been of opinion that the purchase of the water companies' undertakings would not be successful. The bulk of the Moderate party doubtless agreed that purchase would be a good thing but they disagreed with the Progressive party as to the control of the undertakings. A section of the Moderate party was in favour of the Bill which the Government introduced two years ago for the creation of a water trust. That Bill broke down because the outside authorities would not support it, the reason of their opposition being that a preponderance of voting power was to be given to the London County Council.

Major-General SCOTT asked some questions with regard to the formation of a statutory committee for the purpose of purchasing the undertakings and suggested that if the Welsh scheme were carried out it would be necessary to consider the interests of the counties from which the water was taken and that if an aqueduct were made from Wales to London going through 200 miles of country it would be necessary to consider the interests of the people who were passed *en route*. He asked the witness whether he did not think that a statutory committee under the control of Parliament which represented all those interests would be a good body for managing the whole business.

Mr. WHITMORE said he did not think that such a body would be satisfactory to those who desired the purchase of the water companies' undertakings.

Major-General SCOTT pointed out that the authorities outside London who now share with London the same water-supply will in time be in want of an increased supply and asked whether they would not therefore inevitably be ultimately drawn into some general undertaking with the people of London.

Mr. WHITMORE said he did not know about that, but as a practical Parliamentarian he thought that no Government could legislate on the lines which he understood Major-General Scott to suggest. In answer to Sir GEORGE BARCLAY BRUCE he would not admit that no legislation which did not satisfy the London County Council would be possible or desirable.

The CHAIRMAN said that surely a proper supply of water for London was a question of interest quite independent of party. He might say, "A plague on both your houses." The question of the water-supply was of such importance that the Government might well take it in hand whether it pleased Progressives or whether it pleased Moderates, or pleased neither.

The witness admitted that they might do so, but he did not know how they would get on with their policy, and he did not know how they would pass their Bill. Speaking for himself the witness said he did not wish to see the financial difficulties of purchase faced. In his opinion grievances against the water companies were much exaggerated. He thought that the amalgamation of the companies would be a good thing. He suggested that the President of the Local Government Board should "benevolently conduct negotiations" with the chairmen of the water companies.

The CHAIRMAN asked what birch rod the President of the Local Government Board should have up his sleeve.

Mr. WHITMORE replied, "threatened legislation," and that the legislation should have reference to control. He said, however, that he had never understood what was meant by control.

The CHAIRMAN suggested that the London County Council might have taught the witness what they meant by control, which consisted amongst other things of cutting down dividends and reducing the amount of capital that had to be reckoned for dividend.

The witness said that he did not think the existing rights of the companies should be thus departed from, and that in his opinion control was not much wanted. He had lived in a good many houses in London and he had never been able to find a grievance against the water companies.

The seventeenth sitting of the Royal Commissioners was held in the Council Chamber of the Town Hall, Westminster, on Monday, March 28th. All the Commissioners were present. The first part of the sitting was occupied by the continued cross-examination of Mr. Whitmore.

Mr. WHITMORE said that he thought that the Unionist members of the London County Council would support a scheme for the constitution of a statutory committee on which representatives of the ratepayers would have a majority and in which also the other bodies interested would be represented. He thought that the companies should be amalgamated and a general water rate fixed for the whole of London. He would not oppose a scheme of purchase by a representative statutory committee. In any scheme of purchase he thought that the water companies should be fairly treated with regard to price.

In answer to Major-General SCOTT he said that in his opinion the Thames Conservancy and the Metropolitan Asylums Board were out of harmony with the popular sentiment because they were not popularly elected.

In answer to Mr. DE BOCK PORTER he said that he was convinced that the London County Council alone was not a fit body to be entrusted with powers over the water-supply.

Mr. ROBERT LEWIS said that inquiries had been going on for almost a century with regard to the London water-supply and asked the witness whether he thought it would be possible that any permanent settlement could be made if the companies' undertakings were not purchased. Mr. DE BOCK PORTER also remarked that it seemed curious that in the metropolis of the Empire the principal governing body should not be able to do what was done in provincial municipalities.

With regard to the future management of the London water-supply Mr. WHITMORE said that he thought it would

be an advantage if the companies would amalgamate and if they would reduce their charges for water. He thought that it was likely that the companies would voluntarily reduce their charges all round to the lowest rate now charged by any company out of fear of oppressive control or of confiscatory purchase.

The CHAIRMAN suggested that this was hardly a fair method of treating them and Mr. PEMBER said the suggestion amounted to a proposal that the water companies should commit suicide to save themselves from slaughter.

Mr. Whitmore's evidence was then completed by his examination by Mr. Balfour Browne, Q.C., on behalf of the London County Council.

Mr. G. PRIOR GOLDNEY, the City Remembrancer, was the next witness. He said that the City of London paid one-eighth of the rates of the metropolis and pointed out that in case of purchase the City would have to provide one-eighth of the purchase money; and in case of increase of the cost of supply one-eighth of the increased water charges and rates would fall to their share. From this it followed that the ratepayers of the City of London would have to pay very dearly for their water. Some years ago the Corporation of the City of London had introduced a Bill for the payment of water by meter. The witness suggested that at that time it was thought that meters could be obtained at the price of £2 each.

Mr. BAGGALLAY said that the cost of supplying meters to the whole of London was estimated at £3,000,000. The Bill did not pass.

The CITY REMEMBRANCER said that at the present time arrangements were made between the water consumers in the City and the New River Company with regard to individual cases. The witness was unable to find out how much was paid for water by the citizens of London, or how much water was supplied to them. The New River Company had declined to give that information and had described the City of London as "their little plum." In the case of a new building an arrangement was made by the proprietor with the New River Company as to the amount he should pay for water. Each case was treated on its own merits. The witness thought that in some cases the consumer paid about three-fourths of the full water rent and in some cases not more than one-half. He could not give information as to the number of supplies in which a reduction of the charge was made.—The CHAIRMAN asked whether it was one in a hundred or one in five, and in reply the witness said that although he could not give an accurate opinion he thought that probably in more than half the cases a reduction was made.

The Commission then adjourned until April 18th.

THE BRITISH PHARMACOPŒIA.

We have received a copy of the new British Pharmacopœia from the Registrar of the General Medical Council, who advises us that some little time will elapse before the book is issued to the public. Before proceeding to the detailed consideration of the volume it may be well to recall to our readers the history of its construction. The British Pharmacopœia is the modern representative of the Pharmacopœias of England, Scotland, and Ireland, or more correctly, perhaps, of London, Edinburgh, and Dublin. These, under Act of Parliament, were fused by a committee appointed by the General Medical Council and formed the basis of the first British Pharmacopœia, which was published in 1864. This volume consisted of two parts and an appendix, the first part devoted to materia medica, the second part to preparations and compounds, after which followed the appendix which dealt with articles employed in the preparation of medicines, articles employed in chemical analysis, test solutions for qualitative analysis, and test solutions for volumetric analysis. It is perhaps needless to go into the history of the conditions which led to the publication of a second edition so soon as 1867, but it may be pointed out that in the latter under the heading of "The Pharmacopœia" all articles and preparations officially employed in medicine were arranged in alphabetical order. In this edition doses were for the first time introduced and they were intended to represent average doses in ordinary cases for adults. These doses were not authoritatively enjoined by the Council and practitioners were informed that they must rely upon their own judgment and act on their own responsibility in graduating the doses of any therapeutic agents administered to patients. This edition was prepared by Professor Redwood of the Pharmaceutical Society and Mr. Warrington of Apothecaries' Hall, under the direction of five members of the Council, including the late Sir Richard Quain (then Dr. Quain), who acted as honorary secretary. An Addendum to the Pharmacopœia of 1867 was issued in 1874. In this Addendum several important new medicines were introduced, including nitrite of amyl, chloral hydrate, and pepsin. No indication was given of the names of those concerned in the production of this Addendum, which was merely published by the authority of the General Medical Council. A third edition was prepared in 1885, when three editors—Professor Redwood, Professor Bentley, and Professor Attfield—acted under the supervision of a committee of eight members of the Council, Sir Richard Quain acting as chairman, and five years later an Addendum edited by Professor Attfield was prepared under the general supervision of a committee of nine members of the Council with the same chairman. On this occasion the Council acknowledged the assistance afforded by various medical authorities and by the committee of the Pharmaceutical Society of Great Britain.

The present volume of the Pharmacopœia has been compiled under somewhat different conditions. Important aid has again been rendered by a large number of medical authorities and inquiries have been addressed to medical and pharmaceutical authorities in India and the Colonies. A committee of the Pharmaceutical Society has given valuable assistance, while the following referees have been consulted: in Chemistry, Dr. T. E. Thorpe, Dr. W. A. Tilden, and Dr. Emerson Reynolds; in Botany, Dr. W. T. Thiselton-Dyer and Mr. E. M. Holmes; in Pharmacology and Therapeutics. Dr. Lauder Brunton, Dr. Walter Smith, and Dr. Ralph Stockman. The task of editing the work has again been entrusted to Professor John Attfield, whose labours have been supervised by the following committee of members of the General Medical Council: Sir Richard Quain, Bart., M.D., President (chairman), Dr. Atthill, Mr. Brudenell Carter, Sir Dyce Duckworth, Dr. Leech, Dr. MacAlister, Dr. D. C. McVail, Mr. Tichborne, and Dr. (now Sir) John Batty Tuke, and a further innovation has been made by the appointment of Dr. Nestor Tirard as secretary of this committee. It will be seen, therefore, that on this occasion special measures have been adopted to ensure accuracy, not only in pharmacy, but also in chemistry, botany, pharmacology, and therapeutics and that the needs of the profession have at the same time been carefully borne in mind.

At first sight the volume which has been issued curiously resembles previous editions; it is practically of the same size as the edition of 1885, and the alphabetical arrangement of the contents has been followed as before. On closer investigation, however, it is found that the actual space occupied by the Pharmacopœia is considerably less, being 389 pages as compared with 472 of the 1885 edition, and this result has been attained by making very numerous omissions and very few additions. With regard to the additions, of which a complete list will be found at the end of this article, it will be seen that relatively few new drugs are included, the principal being salol, salicylate of bismuth, hyoscine hydrobromide, hyoscyamine sulphate, terebene, naphthol, and two preparations of thyroid. Most of the other additions consist of pharmaceutical preparations and of these a series of concentrated solutions are perhaps those which will be most acceptable to the medical profession, inasmuch as this innovation appears to constitute an attempt to keep pace with the dispensing practice of late years and to establish a standard of purity for many preparations which have hitherto been much employed with no certainty of their composition. Considering the small number of additions it is somewhat curious to find that there are no less than seven new syrups, most of which appear to be intended to render medicines more palatable.

Many of the decoctions have been removed from the Pharmacopœia, some perhaps as not being used, while others are replaced to some extent by the concentrated solutions. The omission of the strong solutions of ammonium acetate and of ammonium citrate will probably be regarded with mixed feelings, since there can be no doubt that these preparations are very largely employed, and it is certainly more convenient to store a solution of ammonium

acetate in a concentrated form. The solution of dialysed iron and the solution of bimeconate of morphine share the distinction of having been introduced in the 1885 edition of the Pharmacopœia and found not worthy of retention. It is not improbable that one or more of these four preparations may find a place in future Pharmacopœias. It is possible that the schedules of examination are partly responsible for the many other omissions. Examination schedules are drawn up from time to time and, in the opinion of examiners, indicate the drugs of therapeutic value; hence it can scarcely be a matter of surprise to find that these schedules influence the frequency of the employment of various pharmacopœial substances. Both with regard to omissions and additions the committee appears to have consulted the various examining bodies throughout the kingdom and the advice received is likely to have reflected the opinions of various examiners.

Those engaged in the compilation of the work are to be congratulated upon the moderation shown in the alterations of the names of Pharmacopœial articles and preparations. These alterations generally are in favour of greater chemical and pharmaceutical accuracy. Thus the green extracts left in the Pharmacopœia have their green character indicated by the suffix "viride," and in very numerous instances, of which perhaps the tinctura chloroformi et morphinæ is the best example, the addition of the suffix "composita" indicates the presence of more active ingredients than were formerly included in the title. It is satisfactory to note that the misleading name "ergotin" has been replaced by the more correct term "extractum ergotæ."

The same moderation is shown in the list of substances of which the composition has been altered. This list, moreover, indicates that respect for antiquity has not been allowed to bar pharmaceutical progress. For example, the committee has thought fit to alter the composition of articles of such established reputation as black draught, compound calomel pill, compound rhubarb pill, compound soap pill, and many other pills which are commonly used, as well as that of the aromatic powder of chalk and opium. It may allay some anxiety to say that the alteration in the composition of the pills frequently consists only in the substitution of syrup of glucose or some excipient for glycerin and that these alterations are necessitated by the growth of pharmaceutical knowledge. The proportion of active ingredients has not been altered. In some cases, as in the three hypodermic injections, the changes are more important. The hypodermic injection of apomorphine now contains one gramme in 100 c.c., the hypodermic injection of ergot contains thirty-three grammes of extract of ergot in 100 c.c., while the hypodermic injection of morphine contains five grammes of morphine tartrate in 100 c.c.; the strength of the last, therefore, is slightly less than a half that of the corresponding preparation in the 1885 edition. Many of the lozenges have been altered and there now appear in one of the Appendices four preparations which may be utilised as bases for lozenges—namely, a fruit basis of black currant, a rose basis, a simple basis of gum acacia and sugar, and a basis similar to the last, but flavoured with tincture of balsam of tolu.

An extremely important change consists in the tests applied for estimating the purity of different Pharmacopœial substances. Formerly the tests were described with no indication of the impurity sought for; thus we were told that certain substances should not give reactions with certain tests, but we were not told what impurities were present if reactions were obtained. Hence former Pharmacopœias to some extent presented a series of riddles, and, although it was satisfactory to know that no precipitate was obtained with certain reagents, it might sometimes be a little puzzling to guess what we were looking for and yet hoping not to find. To a great extent a contrary plan has been adopted in the present Pharmacopœia. Probable impurities are definitely mentioned under the description of each substance and the chemical tests for their detection are described once for all in one of the Appendices, instead of being scattered and repeated throughout the book. The length of the Appendices is thus necessarily greatly increased, but this increase is far more than compensated by the saving of space in the body of the Pharmacopœia.

Many of the pages in the Appendix dealing with the tests for substances mentioned in the text of the Pharmacopœia read almost like extracts from a work on practical chemistry For example, on one page we find grouped together under the heading of "Mercury" "reactions common to mercurous and to mercuric salts," "reactions characteristic of mercurous salts and of mercuric salts." The value of the book as a work of reference is thus enormously increased.

Considering the volume as a whole one of the greatest changes both in appearance and in constitution has been made in the preparation of the index. On former occasions the index was printed in double columns; by the use of italics synonyms were indicated and by the prefix of an asterisk the articles included in the Appendix could be readily distinguished. In the present edition we find that the names of the drugs are arranged in a single column and that these names are followed by three columns giving respectively the page, the dose, and the strength of the chief preparations, and, further, we find that under the English name of the drug is placed a list of its chief preparations and derivatives. The only indication of references to the Appendices is afforded by italic figures in the page column. The index forms the only place in the Pharmacopœia in which groups of official preparations are enumerated, and when its intention and scope are appreciated it is likely to be employed for the purpose of study, as well as for simple reference to the pages of the book, where more detailed information is to be found. The compilation of this index must have been a work of enormous labour and it appears to have been very carefully performed.

We have yet to mention many alterations which will materially affect the practice of those who have employed the former Pharmacopœia in their daily professional work. These are alterations in the strengths of many of the preparations. Some of these alterations unfortunately affect drugs which are in every-day use; thus at the head of the list stands aqua chloroformi, which is so extensively used as a vehicle. This preparation in the new Pharmacopœia is reduced to one-half of its former strength, so that it no longer affords an indication of the degree of solubility. The alcoholic extract of belladonna now contains one-third the proportion of the alkaloids present in average samples of the former extract and is prepared from the new liquid extract, instead of from the root. The extract of nux vomica now contains 5 per cent. of strychnine, which is two-thirds of the alkaloidal strength of the extract of nux vomica of the British Pharmacopœia of 1885, and this also is prepared from a liquid extract, instead of being obtained as formerly from the seeds. In this case the dose is the same as before, but the dose of the alcoholic extract of belladonna has been increased. The phosphorus pill of the last Pharmacopœia contained $\frac{1}{50}$ of a grain of phosphorus in 3 grains, or about 1 grain in 90. The new pill is made so that it may contain 2 per cent. of phosphorus and the whole method of preparation has been completely altered, carbon bisulphide being now employed as a solvent. The strength of the morphine suppositories has been reduced, each containing now a quarter instead of half a grain.

In the last Pharmacopœia there were 70 tinctures, in the new Pharmacopœia we find 67, and of those which have been retained from the former edition no less than 40 have had alterations in their strength. This large proportion of alterations of drugs in common use will not probably cause much inconvenience in practice, as the alterations in many cases are comparatively slight and appear to have been necessitated by the desire of bringing the dose of tinctures into line; in the preface it is stated that in the preparation of tinctures two chief objects have been kept in view, first to arrange for greater uniformity of dose, and secondly, to select for each tincture the menstruum that is best adapted to extract the active constituent. In the volume before us important alterations in strength are mentioned in paragraphs printed in small type. Such paragraphs are to be found under Tinctura Aconiti, Tinctura Chloroformi et Morphinæ Composita, Tinctura Colchici Seminum, Tinctura Lobeliæ Ætherea, Tinctura Podophylli and Tinctura Strophanthi. The alteration in the last mentioned is perhaps the most important. This preparation is now made with half the proportion of strophanthus ordered for the corresponding preparation in the additions of 1890, and the result is that the average dose of tincture of strophanthus is now made equal to that of tincture of digitalis.

It will be remembered that the doses in former Pharmacopœias were intended to represent the average range of doses for adults and the volume has often been charged with not acting up to its intention in this respect, some doses having been much larger and others much smaller than those ordinarily employed. In general terms it appears that the doses in the new Pharmacopœia have been carefully

modified so as to represent more perfectly the practice of the profession and the result is that in most cases the doses are now smaller than before. At the same time it must be remembered that the doses are not officially enjoined and that they merely indicate the range of safety applicable to patients whose previous history is unknown, and they do not prevent the employment of much larger doses on the responsibility of the prescriber.

From the above account it will be seen that the compilers of the new Pharmacopœia have done their work with considerable boldness and that they have greatly enhanced the value of the book. They have deleted much that weighed down former volumes and lent an air of antiquity that was almost open to the charge of senility, and at the same time they have been careful to avoid giving the stamp of authority to those numerous substances which have scarcely yet established fair claims for recognition. The names of many drugs which might have been included will probably occur to our readers and a certain proportion even of those found in the present volume might yet have been deleted with advantage, but on the whole the work has been well done and as a standard of purity it presents a very great advance on former Pharmacopœias. The diction employed, more particularly in the description of botanical substances, still appears somewhat archaic, but these substances are described in terms which are more in accordance with good specimens which find their way into the market, while in indicating the botanical sources the committee has had the advantage of the advice of well-known experts. In all probability some of the details of methods of preparation may be found to require modification, since pharmaceutical methods proverbially do not always succeed in different hands; but we think that members of the profession have reason to be grateful for the careful work which has been put before them and that future practitioners will find that the range of their resources is largely increased by the simplification of dosage.

When dealing with such a work as the Pharmacopœia, issued by the authority of a council and prepared by an editor under the supervision of a committee, it would be invidious to attempt to congratulate individuals upon their labours; but where such great changes have been made in the book it is surely permissible to assume that some of the new workers are largely responsible for these alterations and it is worth noting that the new members of the committee are Dr. Leech, Dr. MacAlister, Dr McVail, and Mr. Tichborne and that another innovation consists in the employment of Dr. Tirard as secretary; it therefore seems possible, or even probable, that many of the fundamental changes above mentioned must be due to their labours.

LIST OF ADDITIONS.

Araroba.
Aurantii cortex recens.
Benzol.
Bismuthi salicylas.
Caffeinæ citras effervescens.
Caoutchouc.
Carbonis bisulphidum.
Cocaina.
Codeinæ phosphas.
Extractum belladonnæ liquidum.
Extractum ipecacuanhæ liquidum.
Extractum jaborandi liquidum.
Extractum nucis vomicæ liquidum.
Extractum strophanthi.
Glycerinum acidi borici.
Glycerinum pepsini.
Hydrargyri oleas.
Hyoscinæ hydrobromidum.
Hyoscyaminæ sulphas.
Infusum scoparii.
Kaolinum.
Lamellæ homatropinæ.
Liquor calumbæ concentratus.
Liquor caoutchouc.
Liquor chiratæ concentratus.
Liquor cusparіæ concentratus.
Liquor ethyli nitritis.
Liquor hamamelidis.
Liquor hydrogenii peroxidi.
Liquor kramerіæ concentratus.
Liquor morphinæ tartratis.
Liquor pancreatis.
Liquor picis carbonis.
Liquor quassiæ concentratus.
Liquor rhei concentratus.
Liquor sarsæ compositus concentratus.
Liquor senegæ concentratus.
Liquor sennæ concentratus.
Liquor thyroidei.
Lithii citras effervescens.
Morphinæ tartras.
Naphthol.
Oleum pini.
Oleum rosæ.
Paraffinum liquidum.
Physostigminæ sulphas.
Pilula quininæ sulphatis.
Pix carbonis præparata.
Pruni virginianæ cortex.
Quillaiæ cortex.
Quininæ hydrochloridum acidum.
Salol.
Spiritus anisi.
Strychninæ hydrochloridum.
Suppositoria acidi carbolici.
Suppositoria belladonnæ.
Syrupus aromaticus.
Syrupus calcii lactophosphatis.
Syrupus cascaræ aromaticus.
Syrupus codeinæ.
Syrupus ferri phosphatis cum quinina et strychnina.
Syrupus glucosi.
Syrupus pruni virginianæ.
Terebenum.
Thyroideum siccum.
Tinctura ergotæ ammoniata.
Tinctura pruni virginianæ.
Tinctura quillaiæ
Trochiscus acidi carbolici.
Trochiscus eucalypti gummi.
Trochiscus guaiaci resinæ.
Trochiscus krameriæ.
Trochiscus krameriæ et cocainæ.
Unguentum aquæ rosæ.
Unguentum capsici.
Unguentum cocainæ.
Unguentum hydrargyri oleatis.
Unguentum hydrargyri oxidi flavi.
Unguentum paraffini.

LIST OF OMISSIONS.

Acetum.
Acidum lacticum dilutum.
Acidum meconicum.
Aconiti folia.
Alcohol amylicum.
Ammonii nitras.
Anisi stellati fructus
Argentum purificatum.
Aurantii fructus.
Beberinæ sulphas.
Belæ fructus.
Bismuthi citras.
Bismuthi et ammonii citras.
Bismuthum.
Bismuthum purificatum.
Bromum.
Calamina præparata.
Canellæ cortex.
Carbo animalis.
Carbo animalis purificatus.
Cataplasma carbonis.
Cataplasma conii.
Cataplasma fermenti.
Cataplasma lini.
Cataplasma sinapis.
Cataplasma sodæ chlorinatæ.
Cerevisiæ fermentum.
Cetraria.
Charta epispastica.
Cinchonæ cortex.
Cinchonidinæ sulphas.
Cinchoninæ sulphas.
Confectio opii.
Confectio rosæ caninæ.
Confectio scammonii.
Confectio terebinthinæ.
Creta.
Cupri nitras.
Decoctum cetrariæ.
Decoctum cinchonæ.
Decoctum hordei.
Decoctum papaveris.
Decoctum pareiræ.
Decoctum quercus.
Decoctum sarsæ.
Decoctum sarsæ compositum.
Decoctum scoparii.
Decoctum taraxaci.
Ecballii fructus.
Elemi.
Emplastrum ferri.
Emplastrum galbani.
Emplastrum saponis fuscum.
Enema aloes.
Enema asafœtida.
Enema magnesii sulphatis.
Enema opii.
Enema terebinthinæ.
Essentia anisi.
Essentia menthæ piperitæ.
Extractum aconiti.
Extractum aloes socotrinæ.
Extractum belæ liquidum.
Extractum calumbæ.
Extractum colchici aceticum.
Extractum conii.
Extractum gelsemii alcoholicum.
Extractum hæmatoxyli.
Extractum jaborandi.
Extractum lactucæ.
Extractum lupuli.
Extractum mezerei æthereum.
Extractum papaveris.
Extractum pareiræ.
Extractum quassiæ.
Extractum rhamni frangulæ.
Extractum rhamni frangulæ liquidum.
Farini tritici.
Ferri peroxidum hydratum.
Ferri sulphas granulata.
Glycerinum acidi gallici.
Guttapercha.
Hordeum decorticatum.
Hydrargyri persulphas.
Infusum anthemidis.
Infusum catechu.
Infusum cusso.
Infusum jaborandi.
Infusum lini.
Infusum maticæ.
Infusum valerianæ.
Kamala.
Lac.
Lactuca.
Laricis cortex.
Liquor ammonii acetatis fortior.
Liquor ammonii citratis fortior.
Liquor antimonii chloridi.
Liquor ferri acetatis fortior.
Liquor ferri dialysatus.
Liquor guttapercha.
Liquor iodi.
Liquor lithiæ effervescens.
Liquor magnesii citratis.
Liquor morphinæ bimeconatis.
Liquor morphinæ sulphatis.
Liquor potassæ effervescens.
Liquor sodæ.
Liquor sodæ effervescens.
Manna.
Marmor album.
Mastiche.
Maticæ folia.
Mel.
Mica panis.
Mistura ferri aromatica.
Mistura scammonii
Mori succus.
Morphinæ sulphas.
Mucilago amyli.
Nectandræ cortex.
Oleatum hydrargyri.
Oleatum zinci.
Oleo-resina cubebæ.
Oleum myristicæ expressum.
Oleum pini sylvestris.
Oleum rutæ.
Oleum sabinæ.
Os ustum.
Ovi albumen.
Ovi vitellus.
Physostigmina.
Pilula conii composita.
Pilula ferri carbonatis.
Pilula ferri iodidi.
Plumbi nitras.
Potassii cyanidum.
Potassii ferrocyanidum.
Quercus cortex.
Rhamni frangulæ cortex.
Rosæ caninæ fructus.
Rosæ centifoliæ petala.
Sabadilla.
Sabinæ cacumina.
Santonica.
Sodii nitras.
Sodii valerianas.
Spiritus tenuior
Suppositoria acidi carbolici cum sapone.
Suppositoria acidi tannici cum sapone.
Suppositoria hydrargyri.
Suppositoria morphinæ cum sapone.
Syrupus ferri subchloridi.
Syrupus mori.
Syrupus papaveris.
Tabaci folia.
Theriaca.
Tinctura aurantii (Cort. sicc.)
Tinctura chloroformi composita.
Tinctura ergotæ.
Tinctura ferri acetatis.
Tinctura gallæ.
Tinctura laricis.
Tinctura lobeliæ.
Tinctura sabinæ.
Tinctura valerianæ.
Tinctura veratri viridis.
Tinctura zingiberis fortior.
Trochisci opii.
Unguentum antimonii tartarati.
Unguentum calaminæ.
Unguentum elemi.
Unguentum potassæ sulphuratæ.
Unguentum sabinæ.
Unguentum simplex.
Unguentum terebinthinæ.
Uvæ.
Vapor acidi hydrocyanici.
Vapor chlori.
Vapor coninæ.
Vapor creasoti.
Vapor iodi.
Vapor olei pini sylvestris.
Veratri viridis rhizoma.
Vinum aloes.
Vinum opii.
Vinum rhei.

CLIFTON GRAND SPA AND HYDROPATHIC ESTABLISHMENT.—The formal opening of the Clifton Grand Spa took place on March 30th. The building, which is probably one of the best of the kind in England, has been designed to compete with the Continental spas. At the public reception which followed Dr. Shingleton Smith replied for the medical profession.

THE GENERAL MEDICAL COUNCIL AND THE "L.S.A."

A PROSECUTION by the General Medical Council came before the Petty Sessional Court at Caxton, Cambridgeshire, on April 6th, in which a medical man was charged with wilfully and falsely pretending to use the name and title of physician and surgeon contrary to Act 21 Vict. c. 90, sect. 40, and Acts amending the same. The defendant was Mr. Herbert Kingsley Hunter, of Montague House, Gamlingay, Cambridgeshire, who a few years ago acquired the practice formerly carried on for many years by Dr. Trimmer.

Mr. Muir Mackenzie, barrister, instructed by Mr. H. Farrer, of Lincoln's Inn-fields, appeared for the General Medical Council, whose solicitor, Mr. F. W. Farrer, had laid the information, and Mr. Horace Condy, barrister, instructed by Messrs. Berkeley, Son, and Hains, of Lincoln's Inn-fields, appeared for the defendant.

Mr. MUIR MACKENZIE, in opening the case for the prosecution, said the facts were not in dispute. Mr. Hunter, the defendant, was an American citizen who came over to this country to practise, and in November, 1893, obtained the degree or qualification of a Licentiate of the Society of Apothecaries of London and was registered as such. That was the only English qualification which Mr. Hunter possessed, but he claimed to possess, and no doubt rightly, an American degree of Doctor of Medicine (Philadelphia). In his practice he assumed, and to do him justice he claimed the right to assume in this country, the title of "M.D." and also "physician and surgeon." The General Medical Council warned Mr. Hunter that he was practising under a title which he did not possess. In reply Mr. Hunter asserted that he had a right to do so and therefore this was not a case of assuming a title inadvertently or through ignorance. It had been decided by the courts of law, in the case of Regina *v.* Baker, that a medical practitioner who was a Licentiate of the Society of Apothecaries and had no other registered title had no right to practise under the title of "physician and surgeon" or "M.D.," but had the right to practise under the title only which he did possess—viz., that of "L.S.A." To show that Mr. Hunter took the course he had done in order to assert his right he (Mr. Mackenzie) read some letters which had passed between Mr. Hunter and the General Medical Council in the last of which the defendant wrote to the Council: "I shall not trouble you further with any questions, but as I am backed up I mean to fight now to the end." In conclusion he (Mr. Mackenzie) should call evidence to show that Mr. Hunter did use the titles of physician and surgeon when it was perfectly clear that he was not entitled to do so. If Mr. Hunter claimed to do it under the diploma of the Society of Apothecaries or the American degree, then the law had held by the decision in the Aston case that he was wrong, and he must ask the Bench to convict if they were satisfied that the defendant had used the titles of physician and surgeon. He then put in a copy of the Medical Register, which is made evidence by the statute, and called witnesses.

Mr. HERBERT WILLIAM FARRER, of Lincoln's Inn, son of Mr. F. W. Farrer, solicitor to the General Medical Council, formally proved the receipt of the letters from Mr. Hunter to the Council and said Mr. Hunter was first warned that he must not use the title "M.D." and he asked if he could use physician and surgeon and was informed that the Council could not advise him.

Witnesses were called as to paying accounts to Mr. Hunter, printing of bill-heads, &c., in which he described himself as "M.D.," and as "L.S.A., physician and surgeon."

Mr. CONDY, for the defence, said the title "M.D." had nothing to do with this case and the case of the Queen *v.* Baker was for using "M.D."

Mr. MACKENZIE said it was also for using "physician and surgeon."

Mr. CONDY said the defendant did not claim the right to use the title of "physician and surgeon" by virtue of the American degree but by virtue of the diploma which he held from the Society of Apothecaries, which he (Mr. Condy) handed to the Court. In 1886 the Society of Apothecaries was empowered to grant diplomas entitling their holders to practise in medicine, surgery, and midwifery and it was by virtue of that diploma, and by that alone, that Mr. Hunter claimed the right to use the title of "physician and surgeon." Upon his bill-heads he described himself as "L.S.A., physician and surgeon," and it was of this that the prosecution complained. The M.D. degree was not before them at all. He submitted that "L.S.A., physician and surgeon," was an accurate description which could deceive no one, because "physician and surgeon" being prefixed by "Licentiate of the Society of Apothecaries" showed the right upon which he practised. The case of the Queen *v.* Baker turned chiefly upon the M.D. degree and he referred to the case of Ellis *v.* Kelly in support of his view that the diploma gave the defendant the right to use "physician and surgeon" in connexion therewith. The correspondence put in showed that when Mr. Hunter was told that he could not use M.D. he ceased to use it; that he asked the General Medical Council if he could call himself "physician and surgeon," and when they replied, "We cannot advise you," he did the reasonable thing of applying to the body under the diploma of which he was entitled to practise—the Society of Apothecaries. Their answer was that a "L.S.A." could call himself by any title or titles denoting the right to practise in medicine, surgery, and midwifery providing that he did not assume titles conferred by another governing body or university. He therefore submitted that the defendant had the right to describe himself as he had done. If the magistrates were against him on that point then he submitted that before they could convict the defendant they must also make up their minds that he not only called himself that which in fact the law would not allow him to do, but that he did so wilfully and in violation of the law and knowing that he had no right to do so. Lord Bramwell had held that the statute did not impose a penalty for incorrectness merely, but for assuming a title wilfully and falsely. The Act was intended to apply to unregistered men and he submitted that his client had a right to describe himself as he did and that they could not convict him of wilfully or falsely pretending to be that which he was not.

The Bench decided to convict upon the information for styling himself a "physician" and imposed a fine of £5 and costs. The second information for calling himself a "surgeon" was not proceeded with.

Mr. CONDY asked the magistrates to state a case. It was important that this should be done both for the Society of Apothecaries and the General Medical Council. The matter must be fought out because the Society of Apothecaries must defend their diploma.

The magistrates saw no objection to a case being granted and it was understood that the necessary steps would be taken for carrying the case to a superior court.

THIRD REPORT TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—The brief session of the General Medical Council which has just closed has been to a very gratifying extent productive of much good to the profession at large, not only in regard to the subject laid before the Council for its discussion—viz., the midwives registration question—but also in establishing more firmly the principles of defensive medical legislation.

In the session of November last year the Council appointed a committee composed as follows: Sir Richard Thorne Thorne (chairman), Dr. Atthill, Dr. Glover, Dr. Cameron, Mr. Carter, Mr. Brown, and myself, to report upon any Bill bearing on the subject of midwives' registration that might be brought before Parliament and referred for criticism to the Council by the Government (Privy Council).

When Mr. J. B. Balfour's Bill was introduced and immediately obtained an early place in the ballot I wrote to the chairman and urged that the committee should be called together. After considerable opposition my request was acceded to. The committee met on three occasions and drew up a report, which has just been published *in extenso* in the medical journals. This report was practically based upon the general principles formulated two years ago by the Midwives Bill Sub-committee of the Parliamentary Bills Committee of the British Medical Association.

Of these principles the first and most fundamental is that the only possible method of arresting the notorious evils committed by midwives at the present time is to provide that an ignorant person who practises as a midwife for gain shall be punished. The second principle is that the trained midwife shall be limited to the attendance of cases of natural labour only, and shall tend as a nurse the mother and child during the lying-in period.

The third principle is that there shall be instituted a proper system of supervision and teaching of midwives or midwifery nurses by the medical profession. The report of the committee to the Council naturally met with obstruction in the committee from those members who are opposed to medical reforms but who did not venture in the Council itself to give expression to their antagonism.

All the principles of the committee's report were unanimously adopted by the Council and cast in the form of a memorandum (with wording adopted from the committee's report). This memorandum was directed to be sent to the President of the Privy Council as the Council's answer to a letter which had been received from him requesting the observations and opinions of the Council upon Mr. J. B. Balfour's Bill.

Inasmuch as this memorandum of the opinions of the Council is, like the committee's report, a categorical condemnation of Mr. J. B. Balfour's Bill, nothing can be more satisfactory to the profession than the obtaining from the Council of a unanimous denunciation of a Bill which not only afforded no protection to the public, but seriously threatened the lawful rights of the registered medical practitioner. At the same time I wish to particularly draw the attention of the profession to a very important point involved in this decision—viz., that now the General Medical Council has officially accepted the principle laid down by the committee that no unqualified person should practise with impunity for gain. It necessarily follows as a logical sequence that this step in advance involves the support of the Council to future legislation which may be brought forward for the strengthening of the Medical Acts in this direction, and the earnestness of the feeling of the Council upon the matter was displayed in so unmistakeable a manner that the opposite view to which such strong expression has recently been given in the medical press, found upon this occasion absolutely no exponent.

April 12th, 1898. VICTOR HORSLEY.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6197 births and 4352 deaths were registered during the week ending April 9th. The annual rate of mortality in these towns, which had been 20·2 and 21·5 per 1000 in the two preceding weeks, declined again last week to 20·2. In London the rate was 19·6 per 1000, while it averaged 20·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·6 in Portsmouth, 14·1 in Oldham, 14·7 in West Ham, and 15·3 in Cardiff; the highest rates were 23·4 in Derby, 23·5 in Leeds, 23·7 in Plymouth, 25·6 in Salford, and 27·7 in Liverpool. The 4352 deaths in these towns included 516 which were referred to the principal zymotic diseases, against 550 and 538 in the two preceding weeks; of these, 234 resulted from measles, 125 from whooping-cough, 57 from diphtheria, 34 from "fever" (principally enteric), 33 from scarlet fever, and 31 from diarrhœa. The lowest death-rates from these diseases were recorded in Blackburn, Preston, Norwich, and Derby; and the highest rates in Sheffield, Brighton, Bristol, Swansea, and Leicester. The greatest mortality from measles occurred in Brighton, Swansea, Bristol, Leicester, Oldham, Halifax, and Sheffield; from whooping-cough in West Ham, Bolton, and Salford; and from "fever" in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 57 deaths from diphtheria included 29 in London, 3 in Cardiff, 3 in Bristol, 3 in Birmingham, and 3 in Leicester. One fatal case of small-pox was registered last week in Leeds and 1 in Gateshead, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals on Saturday last, April 9th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2419, 2371, and 2377 at the end of the three preceding weeks, had further risen to 2421 on Saturday last; 234 new cases were admitted during the week, against 255, 191, and 239 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 402 and 451 in the two preceding weeks, declined again to 372 last week, and were 10 below the corrected average. The causes of 59, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Salford, Bradford, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Blackburn, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·9 and 24·2 per 1000 in the two preceding weeks, declined to 24·1 during the week ending April 9th, but was 3·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·0 in Perth and 17·6 in Edinburgh to 26·3 in Glasgow and 31·9 in Dundee. The 728 deaths in these towns included 44 which were referred to whooping-cough, 24 to measles, 20 to diarrhœa, 9 to diphtheria, 4 to "fever," and 4 to scarlet fever. In all, 105 deaths resulted from these principal zymotic diseases, against 73 and 82 in the two preceding weeks. These 105 deaths were equal to an annual rate of 3·5 per 1000, which was 1·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 25 and 21 in the two preceding weeks, rose again to 44 last week, of which 31 occurred in Glasgow, 4 in Paisley, 3 in Aberdeen, and 3 in Edinburgh. The 24 deaths referred to measles exceeded by 1 the number in the preceding week, and included 21 in Glasgow. The fatal cases of diphtheria, which had been 3 and 4 in the two preceding weeks, further rose to 9 last week, of which 2 occurred in Glasgow, 2 in Aberdeen, and 2 in Greenock. The 4 deaths referred to different forms of "fever" included 2 in Glasgow and 2 in Edinburgh; and of the 4 fatal cases of scarlet fever 3 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 175 and 178 in the two preceding weeks, declined to 157 last week, but slightly exceeded the number in the corresponding period of last year. The causes of 36, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·5 and 35·1 per 1000 in the two preceding weeks, declined again to 24·3 during the week ending April 9th. During the thirteen weeks of last quarter the death-rate in the city averaged 32·4 per 1000, the rate during the same period being 21·7 in London and 20·3 in Edinburgh. The 163 deaths registered in Dublin during the week under notice showed a decline of 72 from the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 11 and 20 in the two preceding weeks; of these, 3 resulted from different forms of "fever," 2 from diphtheria, 2 from whooping-cough, and 2 from diarrhœa, but not one from measles, scarlet fever, or small-pox. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 2·8 in London and 1·8 in Edinburgh. The deaths referred to "fever," which had declined from 7 to 4 in the three preceding weeks, further fell to 3 last week. The fatal cases of whooping-cough, which had been 3 and 5 in the two preceding weeks, declined again to 2 last week. The mortality from diphtheria and from diarrhœa also showed a decline from that recorded in the preceding week. The 163 deaths in Dublin last week included 21 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons were below those recorded in any recent week. No inquest cases or deaths from violence were registered; and 58, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL LEWIS A. IRVING retires on retired pay. Brigade-Surgeon-Lieutenant-Colonel Andrew A. Macrobin retires on retired pay. Surgeon-Lieutenant Browne-Mason and Surgeon-Lieutenant Penny join at Woolwich for duty. Surgeon-Major McCormack embarks for West Africa. Surgeon-Major O. E. P. Lloyd, V.C., is posted to Maryhill, Glasgow, in charge of the Station Hospital. Surgeon-Lieutenant-Colonel Fenn is ordered to Dover for duty. Surgeon-Major James has left the Home District for duty at Aldershot.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following officers have been transferred: Surgeon-Major Barry, Civil Surgeon, from Mussorie to Gorakhpur, and Surgeon-Lieutenant-Colonel Moran, Civil Surgeon, from Gorakhpur to Mussorie. The services of the under-mentioned officers are placed permanently at the disposal of the Government of Bengal: Surgeon-Captain Deare, Surgeon-Captain Oldham, and Surgeon-Captain Bird. The services of Surgeon-Colonel Hay (Bombay) are replaced at the disposal of the Military Department. Surgeon-Major Quayle, Civil Surgeon, Nimar, is placed in Visiting Medical Charge of Hoshangabad until further orders.

YEOMANRY CAVALRY.

Royal 1st Devon: Surgeon-Captain F. Morgan resigns his commission. Herts: John Andrew Turner, M.B. Edin., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Newcastle-on-Tyne (Western Division, Royal Artillery): Surgeon-Captain A. T. Wear, M.D. Durh., to be Surgeon-Major. 1st Northumberland (Western Division) Royal Artillery: Surgeon-Lieutenant J. Wreford to be Surgeon-Captain. *Rifle:* 1st Volunteer Battalion the Northamptonshire Regiment: Surgeon-Captain R. Greene resigns his commission.

CASUALTIES IN MODERN SEA FIGHTS.

The report which was read at the Moscow Congress by Mr. S. Suzuki, fleet-surgeon in the Imperial Japanese Navy, and which was printed at length in THE LANCET of Oct. 16th, 1897, contains a great deal of interesting information about Wei-hai-wei which now becomes topical and to which we refer our readers. When Wei-hai-wei (pronounced *way-high-way*) was taken in February, 1895, 12 ships of the attacking fleet, which consisted of 25 large vessels besides 15 torpedo boats, were struck by 28 projectiles, but the resulting loss was not very great, only 20 of the Japanese having been killed and 46 wounded. The percentage of casualties in each grade was as follows:—Officers, 10·0; non-commissioned officers, 1·0; engineers and stokers, 0·6; bluejackets, 1·2; non-combatants, 0·6. During the Yalu engagement 125 missiles of various kinds reached the Japanese ships, the percentage of killed and wounded in this case being officers, 7·8; non-commissioned officers, 8·7; engineers and stokers, 2·6; bluejackets, 9·4; non-combatants, 9·8. At the beginning of the fight a single projectile, 30 centimetres in diameter, killed 30 men on board the *Matsushima* and wounded 70 more. On board the *Hiyei* a shot of similar dimensions killed 14 men and wounded 27, without reckoning 10 more who were injured by splinters. On board the *Itsukushima* 8 men were killed and 3 wounded by a projectile of 21 centimetres; 5 stokers were severely wounded by a 15-centimetre shell which penetrated the starboard coal-bunker 3 ft. above the water line; and a smaller shell, only 5 centimetres in diameter, sufficed to place 10 sailors *hors de combat*, 4 of them with mortal wounds. On board the *Akitsushima* 5 men were killed and 9 wounded by a 21-centimetre projectile; and on the *Fusoo* 10 men were disabled by the fragments of a shattered chimney-stack. The *Saikyo* was more fortunate than the above-mentioned vessels, for although her hull was penetrated several times by the largest-sized missiles she nevertheless suffered comparatively little damage as none of them exploded. The torpedo-boats seem to have gone through both engagements without injury from the enemy with the exception of No. 9, which was hit no fewer than thirteen times at Wei-hai-Wei on Feb. 5th. Most of the shots were harmless, but one shell exploded in her boiler and caused the death of eight men by scalding. The Japanese surgeons one and all treated their wounded antiseptically in the most enlightened fashion and with the happiest results. One man died from erysipelas, but this was the only preventable complication which occurred. They also practised the most strict conservatism in their operations, amputations being performed solely as a last resource in cases where the larger blood-vessels were implicated or where articulations were entirely disorganised. In many instances joints that had been penetrated were preserved at the expense of more or less complete ankylosis; 21 per cent. of the total injuries were situated on the head; and in the next place the parts affected were the upper and the lower extremities. Then in their order came wounds of the abdomen, the chest, the back, and finally the neck. Several cases of ruptured tympanum were due to the heavy ordnance.

PUBLIC HEALTH OF GIBRALTAR.

We have received a copy of the Annual Report on the Public Health of Gibraltar for 1897 by Surgeon-Major H. P. G. Elkington, M.R.C.S. Eng., D.P.H., of the Army Medical Staff, who is acting as medical officer of health at that station. Although the military population and the non-residents and persons entering Gibraltar on daily permit are not included in this report there are several matters of more or less interest to all. The nature and amount of the water-supply, for example, will always have an interest for the garrison of a place liable to be attacked and besieged. The civil community in Gibraltar exists under peculiar conditions which make it difficult to form an accurate estimate of the population, but the Census returns for 1891 show a total civil population of 19,100, composed of a "fixed" and "resident alien." The death-rate in 1897 was 23·56 per 1000 of the total population and 25·43 per 1000 of the "fixed" population. These rates were in excess of those of the past two years and of the previous quinquennial period. The infantile mortality (under one year of age) is high—it was 184·9 per 1000 in 1897—and the death-rate among children under five years of age was equal to 108·11 per 1000. The principal causes of death were zymotic and respiratory diseases. Measles, small-pox, diphtheria, diarrhœa, fevers, and respiratory and tuberculous affections appear to be the main prevailing diseases at Gibraltar. The sanitary condition of Gibraltar is improving but much still remains to be done. There is a good deal of overcrowding and this still continues to be the great problem to be dealt with. A bacteriological laboratory was opened at Gibraltar in 1896 and has done good work.

HOSPITAL STOPPAGES.

The *Broad Arrow* states that "in the case of soldiers (including boys) admitted into hospital on account of injuries received when in the execution of their duty or sickness, certified by the medical officer to have been contracted as a direct result of their military service, the circumstances being beyond the soldier's own control, one half of the hospital stoppage may be remitted by the general officer commanding. If any injury has been received when on duty at drill or manœuvres under circumstances beyond the soldier's own control the whole stoppage may be remitted."

DEATHS IN THE SERVICES.

Surgeon-Captain Edward Corcoran, A.M.S., on March 23rd, at Okuta, in the Hinterland of Lagos, aged twenty-five years. He contracted malarial fever while on field service. He joined the Army in the month of February, 1887, and served in the Ashanti Expedition of 1895–96 (star).

THE QUEEN'S BIRTHDAY.

It is notified in the *London Gazette* that "the Queen's Birthday will be celebrated in London alone on Saturday, May 21st next, and at all other stations, naval and military, on Tuesday, May 24th next."

BRISTOL ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The annual meeting of this institution was held on April 4th, under the presidency of the Bishop of Bristol. The report showed that during 1897 there had been 709 children treated as in-patients, and 1069 women and 2602 children were attended as out-patients. The financial statement showed an adverse balance of £994. Sir W. H. Wills Bart, M.P., had given £250 for the convalescent home at Weston-super-Mare in connexion with the hospital.

Correspondence.

"Audi alteram partem."

THE CROWN VACANCY IN THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—I feel I am asking a great favour to be allowed to add a few words to the leading article on the above subject in your last issue, but our case is urgent, and therefore beg to be allowed to point out its urgency. Everybody must agree that the two classes needing representation are the dentists and the general practitioners, but I venture to think the former have the greater claim, and for the following reasons. The general practitioner is already ably represented in the person of Dr. Glover, while the dentist has nobody to speak with authority on his behalf. No period of time can add to the dentists' claim, because it is as urgent now as it has always been.

In 1878 when the Dentists Act was passed Sir John Tomes advocated the appointment of a dentist, and yet in twenty years one has not been appointed. At the present time the question of the dental curriculum is under consideration and the advice of a dentist would be of inestimable value in arriving at a conclusion. That one-sixth of the cost of the office is borne by the Dental Fund appears to be an additional reason for such an appointment. A careful search through the Medical and Dental Acts shows that without an additional Act of Parliament the number of the General Medical Council cannot be increased and it is therefore only possible for a dentist to be nominated by the Crown. It surely is not justice for the Dentists Act to be administered by the General Medical Council when there is nobody on the Council able to speak with authority and experience on behalf of its interpretation. The gentleman suggested by the British Dental Association as the Dental Representative would certainly add lustre to that already distinguished body, the General Medical Council.

I am, Sirs, your obedient servant,

MORTON SMALE.

April 12th, 1898. Dean, Dental Hospital of London.

NEW DRUGS AND PREPARATIONS.

To the Editors of THE LANCET.

SIRS,—It is a remarkable fact that sixty years ago, when we had great faith in drugs and used them largely, they were very few and simple and that now, when we trust much more to nature, hygiene, and nursing, we are inundated with them so that samples of new drugs and preparations are becoming quite a nuisance. Almost every day the post brings me one or more of them, with pamphlets and testimonials, and a request that I will test them by prescribing them for my patients. I must have received hundreds of samples in the last few years and have never prescribed one of them, but I have quite a museum of these curiosities at the Surrey Dispensary, where they are kept unopened. As interesting specimens of nomenclature I may mention cotoine, migrainin, amydol, lycetol, nosophen, neboline, gelanthe, terrol, coumarin, eikonogen, eugenol, gallonal, glutol, loretin, terpinol, cosmoline, ozokerine, kreachyle, urecide, psonal, and seng. As these things are very seldom prescribed of course the dispensing chemist does not *stock* them, so that when they *are* prescribed he has to purchase them in quantities much larger than he requires and, as many of them are never prescribed a second time, the surplus represents so much money lost. For example, I know a chemist who had a prescription in which cotoine was ordered; he had to pay 30*s.* for an ounce of it, used about a shilling's worth, and lost 29*s.* by this one prescription. When physicians prescribe such things I think they should supply the chemist with the samples they have received from the wholesale houses, otherwise they are impoverishing a class of men already poor enough and who are very much underpaid for their education, skill, time, and trouble. Then, as I said, we are asked to test all these new preparations. Now, to test any one of them fairly and scientifically we should require a ward of at least 20 beds and 20 typical cases of the disease it is said to cure; we should then give the preparation to 10 patients, treat the other 10 without it, and compare results. If all the samples we receive were thus tested we should have to give up practice and devote every hour of our lives to the work. I hope the new Pharmacopœia will give us all the drugs and preparations new and old that we can possibly require so that we need never prescribe anything outside of it. Physicians' prescriptions would then be simple and intelligible and chemists would not lose money by dispensing them.—I am, Sirs, yours faithfully,

D. HOOPER, B.A., M.B.Lond.,
Physician to the Surrey Dispensary.

Trinity-square, S.E., April 1st, 1898.

"SICK AND OBSTETRIC NURSES BILL."

To the Editors of THE LANCET.

SIRS,—In your review of this Bill on page 953 of THE LANCET of April 2nd, 1898, you ask: "Suppose a voluntary nursing association were to adopt this Bill, would such an association obtain the assistance of the relieving officers and would the relieving officers investigate cases and make reports to the voluntary association as they would to their board of guardians?" My reply to both queries is an emphatic negative. It is distinctly laid down in Clause 5, sub-clause *c*, "that in order to make due provision for the sick and parturient poor and their children it shall be incumbent upon boards of guardians, *in default of other authority*, to adopt and carry out the provisions of this Act in their respective unions and to vote the necessary funds or to make grants in aid to voluntary nursing associations to meet the expenses of the provisions of this Act." And this provision is worked out in Schedule D on the basis of the local nursing association to which the Richmond board of guardians already contribute with the sanction of the Local Government Board. Under Clause 8 relieving officers would, of course, report to their boards, who would issue "the orders" to the three classes of poor persons specified therein, and under this clause the fees would be the same as under the consolidated orders, with mileage extra, but the fees and contributions under a nursing association would be as contained in Schedule D.

I may repeat that the intention throughout the Bill is the establishment of voluntary nursing associations on the lines of those already existing in various parts of the country. Assistance by way of subsidy is only claimed for those that would not be self-supporting. You may not have noticed that Mr. Gerald Balfour announced in the House of Commons recently that he hoped to be able to introduce "a Bill to enable boards of guardians in Ireland to subscribe to nursing institutions for the benefit of the sick poor in their districts." This is a direct and opportune acknowledgment of the principles of my Bill from an unexpected quarter.

The Bill, as you say, may not "wholly meet the case," but of the Bills now before the profession it is the *only* one that attempts to provide for the needs of the "sick and parturient poor," the others being taken up with the registration of midwives, which, according to the promoters, is quite a different question and by no means intended to meet the urgent wants of "the poor."

I am, Sirs, yours faithfully,

East Sheen, April 9th, 1898. ALEXANDER MCCOOK WEIR.

THE EPIDEMIC OF MEASLES.

To the Editors of THE LANCET.

SIRS,—The hope that the public will learn from the present epidemic of measles the gravity of the disease so well expressed in your leading article of March 26th I can fully endorse from an epidemic I experienced in 1894. In November and December of that year an outbreak occurred in this town. The power of it can be readily understood from the following facts. My practice was one of three, and I attended, independently of the other practitioners, 157 cases, and I had 13 deaths in the two months, the population of the entire parochial area being only just outside 3000. The Christmas was a most melancholy one, and one not easily forgotten, 7 children had been buried the Sunday before Christmas day and several were lying dead then. Every day, and nearly all day, the church bell was tolling for deaths or funerals. I attribute the high mortality of this

epidemic to two chief factors: first, the presence of lumbricoides in about 90 per cent. of the cases, as verified by their escape; and, secondly, that in about half the number of cases the houses were devoid of fireplaces in the bedrooms. With regard to the worms I found that an infant of ten months voided *eight* of them, all measuring over 6 in. in length. They seemed unable to remain comfortably in their host when the initial rise of temperature occurred and escaped either from the mouth or per anum. If all escaped the case generally did well, but if some remained they died, decomposed, and set up a toxæmic condition with a secondary rise of temperature to 104°, 105°, or even 107°, accompanied by rapid, shallow breathing and some delirium. The breath developed a characteristic and peculiar putrid smell and the tongue was covered with a white fur with prominent reddened papillæ. Sleeping in a fireless room at this period of the disease would be a menace to the child's life, but many did so even in frosty nights; broncho-pneumonia usually supervened. Among the lower classes the child had been treated up to this point, generally speaking, by the parents, the rural mind having a strong belief in the internal administration of "sum hot zyder" and piling weighty clothes upon their victim in order "to keep 'un hot," the room being usually fireless, cold, more or less damp, whitewashed, and draughty. Under these circumstances a high mortality is not to be wondered at, for a complication of measles, toxæmia, obstinate constipation (sometimes putrid diarrhœa), broncho-pneumonia, or, worst still, capillary bronchitis, had to be combated—no easy task. How to warm the room was a knotty point to settle. Paraffin stoves did it well for some cases, but at great expense of oxygen and gave a bad odour—either being positively harmful to capillary bronchitis. The only other place for a fire was in the kitchen where logs eight feet long could be burnt on the hearth in the huge chimney built 200 years or more ago. To bring the child here would be impracticable, for the air drawn up the great chimney by combustion would freeze one side of the bed even if the other were roasted. To quote from your leading article, "no disease seems to admit of beneficial guidance and control more than measles," and conversely, as I have shown, rough-and-ready guidance is disastrous, for I can think of no case that died among those which I treated from the very beginning. Those cases which had been left long without skilful treatment either died within a few days or survived only after a severe hand-to-hand combat. There is no doubt that, unless in an exceptionally malignant form, scarlet fever is a much less formidable disease than that which is often regarded as "mere measles."

I am, Sirs, yours faithfully,

G. G. GIDLEY, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.

Cullompton, March 28th, 1898.

"VENESECTION IN APOPLEXY."

To the Editors of THE LANCET.

SIRS,—The case reported by Mr. Colin Campbell in THE LANCET of April 9th, 1898, is of great interest and one that should not remain imperfectly recorded. It would be well to know, if possible, the cause of the apoplexy—whether it was due to embolism (as the very conspicuous but temporary mitral systolic murmur would suggest) or to hæmorrhage; also, what was the probable location of the cerebral lesion. No mention is made, either, of any paralysis following the attack. If such particulars could be added while the case is still fresh in the memory of your readers it would make the story more complete and might help to determine the important point—viz., which cases of apoplexy are benefited by venesection and which are not.

I am, Sirs, yours faithfully,

F. LUCAS BENHAM, M.D., M.R.C.P. Lond.

Elizabeth-street, S.W., April 9th, 1898.

THE VACCINATION BILL.

To the Editors of THE LANCET.

SIRS,—As a public vaccinator I think we should make strenuous efforts to induce the Government to alter the time for compulsory vaccination from the age of twelve months to that of six months, to retain the public stations, and to make provision for medical attendance on children after vaccination whenever it is found necessary. You are aware that under the present system a very large number of children (over 156,000 in the year 1894) escape the vigilance of the vaccination officers and remain on their books as unaccounted for. With the proposed extension of time the chances are that that number would be increased threefold. It must also be remembered that the Royal Commissioners suggested that the period for primary vaccination should in future be the age of *six* months. My experience of over twenty years as a public vaccinator has taught me that, provided the children are in good health, the safest time to vaccinate them is at the age of from two to four months, and also that a very considerable proportion of parents do, in fact, prefer to have them done before they attain the age of three months. The reasons generally assigned for this early performance of the operation are (1) that the infants at that period do not suffer so much from the effects of the vaccination and (2) that there is much less danger of having the marks injured.

It has been stated that there is nothing in the new Bill indicating that it is intended to dispense with the public vaccination stations. But, Sirs, it must be inferred from the fact that domiciliary visits are to be made at a certain time by the public vaccinators. If my view is correct, then those parents who have hitherto preferred to have their children vaccinated at an early age will not have an opportunity of having them done except at their own expense. In case of an epidemic of small-pox breaking out in a populous town like Cardiff there would of necessity be a large number of children totally unprotected, and I cannot help saying that this is a very serious question and one which I hope will be duly considered by the sanitary authorities of all our large towns. Should the Government resolve to adhere to the time proposed in their Bill, then I hope some provision will be made for the inspection of children before they are allowed to enter any school whatever.

I am, Sirs, yours truly,

Cardiff, April 9th, 1898. T. GARRETT HORDER.

THE INCUBATION PERIOD OF SMALL-POX AND THE INFLUENCE OF VACCINATION ON THE SAME.

To the Editors of THE LANCET.

SIRS,—The letter of Mr. Collinson in your issue of April 9th in reference to "Some Points relating to Vaccination as Illustrated by Observations during the Present Epidemic in Middlesbrough" would seem to prove that the *incubation* period of small-pox is more than twelve or fourteen days; also that vaccination has no influence on the course of the disease even when practised in the incubation period. The cases (excepting one) quoted by Mr. Collinson show a period of something like fourteen days as the incubation period if we may assume that the patient received the infection from the first case that occurred in the house. This period, however, I am convinced is not sufficiently long to allow for quarantine purposes. During an experience of small-pox I had early in 1896 I soon found that fourteen days did not allow sufficient time for the occurrence of fresh cases, but found eighteen days to be apparently the period for some of the cases. One case, however, turned up after nineteen days. I then came to the conclusion that it was safer to have a period of twenty-one days, for after this period had elapsed no fresh case occurred. I find in Allbutt's System of Medicine that nineteen, twenty, or twenty-three days may be the period of incubation. Dr. Armstrong of Newcastle relates a case where twenty-one days was the incubation period.[1] With regard to vaccination running its usual course during the incubation period of small-pox there is no doubt. Whether it will do so after the eruption of small-pox has appeared I cannot say; but in THE LANCET of 1873[2] Mr. Furley of Edinburgh advocated the treatment of small-pox by vaccination and he seemed to think it modified the course of the disease. In my experience vaccination has no influence on the disease if performed in the incubation stage. I was unaware of this fact till the experience I had in 1896 or I had forgotten it. It goes to show that vaccinia and variola are two distinct diseases. I find in an old edition, 1873, of

[1] THE LANCET, April 10th, 1886, p. 715.
[2] THE LANCET, July 19th, 1873.

Practical Medicine, by Niemeyer, that he states on pp. 555 and 556: "During an epidemic (small-pox) persons who have been vaccinated but in whom the vaccination has not yet taken are attacked by small-pox and the two diseases run their course at the same time without modifying each other. These cases show that vaccination during the period of incubation of small-pox cannot cut short the disease and also that susceptibility to vaccination is not lost during the period of incubation." He goes on to say that vaccination and revaccination should be performed without delay as soon as small-pox is known in a neighbourhood.

I am, Sirs, yours faithfully,

WM. BERRY, F.R C S.Irel., D.P.H.F.P.S.Glasg.,
Medical Officer of Health of Wigan.

Wigan, April 11th, 1898.

"AN UNKNOWN LARVAL PARASITE."

To the Editors of THE LANCET.

SIRS,—Cases similar to the one so ably described under the above heading [1] by Dr. Frank Arnold are by no means rare on the West Coast of Lake Nyasa and in the country beyond. The worms are generally attributed by the natives to a fly of a mottled-brown colour, similar in shape to, but larger than, a big horse-fly, which is known by them as the "tshizeti." Some believe that the fly lays its eggs directly beneath the skin of the affected person; others that the eggs are deposited in large numbers upon blankets and other articles of clothing, and that the resultant maggots or "fusi" are able, while yet quite small, to penetrate the epidermis of the host.

I am, Sirs, yours faithfully,

Liverpool. STANLEY KELLETT SMITH.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Sudden Abandonment of Plague Operations in Bombay.—The New Measures.—Increase of Plague in the Punjab.—The Wounded Europeans.

THE work of the Plague Committee in Bombay has for all practical purposes suddenly ceased. Not that the plague is decreasing—rather the reverse; but a new policy has been adopted by the Government. This change was contemplated before the riots on March 9th, but a proclamation issued on March 15th states that general searching of houses for plague cases will be wholly given up. There will be no inspection of corpses and consequently no delay of funerals. The plague authorities will only take action against houses where undoubted cases of plague occur and there will be a relaxation of the pass systems, allowing free exit and ingress to *bonâ-fide* traders. This change is not only sudden but complete. It is stated that the operations of the Plague Committee were conducted in such a way as to create much discontent among, and hardships to, the native population, to very seriously hamper and injure the trade interests of Bombay, and to alienate all help from the natives themselves for the extermination of the disease. It is admitted that the results achieved have been far from satisfactory, but it is urged that a modification of the measures, which were based on general sanitary regulations, was all that was required. The new *régime* amounts to a distinct abdication of powers hitherto exercised by officers directly under Government to a collection of caste leaders with little or no sympathy in any sanitary measures for plague control, bearing little or no responsibility and undeterred by any consequences which may ensue. In truth, however, there are no recognised native leaders and no native committees have been formed. It is now left to the natives themselves to take their sick to their own native hospitals if they choose, to report houses where cases of plague have occurred, also if they choose, and to vacate their houses and go into the health camps of their own accord. With the general dislike to hospitals it is almost certain that the sick will be left to die in their own homes. No kind of isolation whatsoever will be practised. The "contacts" will be free to move about undisturbed and a small proportion of infected tenements only will come under notice for disinfection. There will, in short, be no measures whatever adopted to check the spread of the contagion. From previous experience it is impossible to place any reliance whatever upon the natives themselves for following up any of the sanitary measures hitherto adopted for their benefit. Moreover, they have no organisation, and their efforts, even if reliable, are entirely voluntary. While the number of plague cases reported daily has probably fallen very far short of the correct number it is reasonable to assume that a much larger proportion will now fail to be registered. The total mortality will alone give any indication of the ravages of the disease. Whether or not other considerations have determined the adoption of this new policy it is almost certain that the results from a sanitary point of view must be disastrous.

The Europeans injured in the recent riots are all progressing favourably. It is reported that a very much larger number of natives were killed and wounded than the figures officially published would seem to indicate. The plague is reported to be rapidly on the increase in the Punjab and many places in the Nizam's dominions have also been attacked. Preparations are being made to carry out Haffkine's prophylactic inoculations on a large scale in the latter territory. Among the 6000 Khojas of Bombay who have been inoculated only three cases of plague have occurred, which speaks highly for the protective value of this preparation. Some recent experiments with electrolysis of buboes have been attended with satisfactory results. Not only have the swellings rapidly diminished, but almost immediate improvement has been recognised in the general symptoms. From 10 to 15 milliampères is the strength used, which is kept up for ten minutes, and in most of the cases one operation has sufficed. This treatment is still being followed up and some results will be able to be published shortly.

The modified measures recently adopted by the Government appeared at first sight to have appeased popular feeling, but there are evidences of considerable discontent with even the very mild steps now taken. The following rules just promulgated contrast very strongly with the regular house-to-house visitation which was formerly carried out together with the compulsory segregation of all cases found into hospital, of many of the contacts to the observation camps, the emptying of crowded and insanitary houses, and the disinfection of plague-stricken premises on a large scale. It is now ordered that house-to-house visitation be carried on by the people themselves—i.e., by committees appointed from among them. Plague officials will search only those houses where cases or deaths have recently occurred or where there is a reasonable suspicion of a plague case.

No patient will be removed to a plague hospital unless an approved and fully qualified medical officer certifies it to be a plague case. If such a medical officer pronounces a case to be hopeless—i.e., only expected to live a few hours—such patient will not be removed to a hospital without the consent of the relatives. In the event of a case of plague occurring in the family of a well-known and well-to-do or respectable person the patient will be allowed to remain in the house and can be attended there by his own doctor and by one or two members of his family, provided the house is a detached one and the patient can be isolated and the family agree to remove themselves to one of the Plague Committee's health camps, or to dwell at a detached place where they can be placed under supervision. Where disinfection will suffice no destruction of property is now allowed. If, to diminish risk of infection, destruction of property is found to be necessary, compensation will, in the case of the poor, be paid on the spot. Infected houses will continue to be disinfected as heretofore. The owners or occupiers will be given the option of disinfecting their houses themselves to the satisfaction of the district plague officer. Contacts will continue to be removed as before.

The policy of depending upon the natives to notify cases of plague has not yet shown any improvement in the number detected. It is estimated that 600 cases of plague occur weekly which escape discovery by the staff of the Plague Committee. This is about half the mortality from plague. Large numbers die in their own homes, and large numbers are taken to the hospitals in the last stage of the disease and die there within a few hours. There is no reduction in the general mortality, and plague has now gradually spread to every quarter of the city in a very similar manner to what was observed last year. Fresh orders, still further in the

[1] THE LANCET, April 2nd, 1898, p. 960.

direction of leniency, have just been issued by the Government. They are as follows: 1. Persons are only to be compulsorily removed by order of a plague authority to a health or segregation camp when their house is known to be infected with plague and when they are unable to satisfy the plague authority that they will remain under observation in a sufficiently isolated and convenient place. 2. Voluntary removal to a health camp or other place of safety should be encouraged by all means possible. 3. If a plague case can be suitably treated and isolated in a house of sanitary situation, free from the danger of spreading infection, the patient may be allowed to remain, provided that the other occupants (save the immediate attendants) remove themselves elsewhere as above stated.

This week's mortality is the highest recorded during the present epidemic—the death-rate is at the high figure of 142·25 per 1000 per annum—2268 deaths having been registered. Four Europeans have died from plague. Relapsing fever is not quite so prevalent.

March 26th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Birmingham Medical Institute.

THE Medical Institute has never been a plant of vigorous growth. It has fulfilled in the abstract the indications for which it was founded in 1874; that is, it has provided a library and a place of meeting worthy of the profession. The library now contains more than 12,000 volumes; the reading-room is well supplied with periodicals and works of reference; the library hall affords a capital room for the meetings of societies; there are a lavatory and smoking-room, electric light, and most modern conveniences conducive to comfort. Yet the place does not thrive with all its advantages. The endowment is £6600, which, brings in an income of £238 a year, but the necessary annual expenditure exceeds over £490. At present there are only 166 subscribers of one guinea a year out of a large number of medical men in the town and district around. The report given at the annual meeting held on March 30th showed that the year ended with a deficit of £71 11*s.* 8*d.*, a sum which has since been wiped off by the generous contributions of a few leading members. Some suggestions have been made for selling the present site, building a new institute with the proceeds, and living within the income. It would be a matter of regret should such a proposal be carried out. The infusion of some enthusiasm and energy would probably form a better basis for future progress and save the ignominy of breaking up the existing institution.

The Athletic Institute.

The annual meeting was held on the evening of March 30th. The credit balance was stated to be £346 2*s.* 1*d.* The health lectures were popular and the cycling teaching had brought a distinct gain to the funds. The attendance at the classes was regular and the training had caused the majority of the members to attain a high standard of excellence. It was pointed out that the institute was the only one of the kind in the county outside London which was vested by the Education Department with authority to issue certificates of proficiency in teaching physical exercises in elementary schools and that it was growing in favour and importance. Open spaces and playing-grounds had done much to make the opportunities for recreation and exercise more within reach, full advantage having been taken of the various sports and games during the year.

Coroner's Duties.

During the month of March the city coroner has held 114 inquests. This is not the record number, but many of the inquiries have been protracted and important. It is enough to indicate the amount of work done by this official and to show that the office is one of great responsibility and involving much hard work.

April 11th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Rivers Committee and the Local Government Board.

AT the meeting of the Manchester City Council on April 6th a long discussion took place as to the present position of the corporation, the Mersey and Irwell Joint Committee and the Local Government Board in relation to the never-ending sewage difficulty. The last-named body insists on the purchase of land, apparently not caring much whether it is fit for the satisfactory treatment of sewage or not if only there are so many acres to so much population, and clings to its ancient dictum that irrigation is the proper way to purify sewage. The standard of purity required by the Joint Committee is difficult of attainment and the land at Davyhulme has been proved unsuitable for irrigation notwithstanding that in 1888 evidence was given by Dr. Frankland, Dr. Tidy, Mr. Estcourt, and others to prove that it was "loose, porous, and admirably adapted in every respect for the purpose of sewage filtration." Now, on the other hand, it is stated by Sir Bosdin Leech, the present chairman of the Rivers Committee, that it is unsuitable, that on the surface it became choked, while below the sand, instead of filtering, became a quicksand; and, further, the chemicals in the water were damaging to vegetation. Driven then to tank filtration this also failed to give a sufficiently pure effluent, so under the advice of Sir Henry Roscoe experimental filters were put down which gave satisfactory results but at an extravagant cost. The culvert scheme was next brought forward but rejected by the citizens. Now it is wished to give the biological system a careful trial on a large scale, but the Local Government Board blocks the way by insisting practically that whatever else they do land for irrigation shall be bought. Very shortly the corporation will be liable to a fine of £50 a day for not properly treating their sewage, so that there are difficulties all round. The discussion was long, many curious things were said, and if the truth must be told some who might have known better displayed unexpected ignorance. In the end, to the discredit of the council, members began to leave and there was a count out and the meeting was adjourned for a fortnight. It must be said, however, that such an occurrence is rare and that the council usually exhibits great patience during tedious discussions. The fortnight's adjournment may be profitably employed by some in obtaining clearer ideas and some additional knowledge, for one of the opponents of the bacterial scheme argued that it must fail as bacteria must have time for rest which was impossible as the flow of sewage is continuous. He advocated a good system of precipitation as the only one practicable for a place like Manchester and looked upon the other plan as "bacterial humbug." But he is really unjust to his own intelligence and that of the council. The chemist of the Rivers Committee, Mr. G. J. Fowler, has prepared a report on the experimental filters at Davyhulme which concludes as follows: "While it cannot be guaranteed that under no circumstances will a filtrate be obtained which is above the Joint Committee's numerical standard, yet with very few exceptions it has been shown that a filtrate which is incapable of undergoing putrefactive change can be constantly obtained from the cinder filter. With increased knowledge of the conditions of successful filtration of such a tank effluent as is produced in Manchester it is likely that even more satisfactory results, both as to quantity filtered and quality of the filtrate obtained, may be looked for in the future."

Manchester Literary and Philosophical Society.

An interesting ceremony took place at a special meeting of the Manchester Literary and Philosophical Society, held on March 29th, when the Wilde medal was presented to Sir Joseph Dalton Hooker. In his acknowledgment of "the great honour which the society had conferred upon him" Sir Joseph Hooker said that "Manchester held a place among his earliest botanical reminiscences." He was a collector of mosses in the first decade of the 80 years that had passed over him and was stimulated by a book with the title "Musci Britannici," by Edward Hobson of Manchester. He recalled the names of Nowell and Buxton, two of the band of working-men botanists who have for

generations served as a scientific leaven among their fellows in Manchester and South Lancashire, and said that when his friend Mr. Glover, an excellent botanist and entomologist, invited him to see his collection of insects and rare garden plants at Smedley-hill, "though this was sixty-five years ago he noticed that the latter suffered a good deal from the city smoke." But there was none to whose friendship and correspondence he looked back with greater pleasure than to that of the late Professor Williamson, who was a remarkable instance of the successful cultivation of natural history, and especially of the organisation of the fossil plants of the coal measures, while he was busily engaged in general practice. Sir Joseph Hooker "accepted the medal as a tribute to his father's memory as much as to his own exertions." The Dalton medal was then presented to Dr. Schunk, F.R.S., who is its first recipient, for the life-long services he had given for the advancement of science. Lastly, the Wilde premium of 15 guineas was presented to Mr. John Butterworth of Shaw, who has done excellent work, particularly in regard to the flora of the coal measures. He is one of the band of Lancashire working men imbued with the love of science for its own sake. In thanking the society he said he had worked for nearly 30 years with the late Professor Williamson. In his early days he had not the advantage of systematic instruction; it was "a case of the night school and solitary candle. He had pursued the study of geology purely for the love of it and had found great enjoyment among the flora of the coal measures." Will the teaching now given in our public, elementary, and other schools increase the proportion of these humbly born lovers of knowledge?

Seats for Shop Girls.

A well-attended meeting of the local branch of the National Union of Women Workers was held on March 29th at the Manchester Town-hall. In the absence of the Lord Mayor the chair was occupied by the Hon. Mrs. A. T. Lyttleton, president of the branch. The question of "seats in shops" was one of the subjects considered and a statement was circulated among the audience setting forth the evils and the cruelty of continuous standing, often resulting in serious injury to the women and girls employed in shops and restaurants. Dr. Sinclair moved a resolution strongly supporting "the Bill to amend the Law relating to Shops, and especially Clause 9, which is before the House of Commons this year." It was seconded by Dr. Wilkinson and both gentlemen spoke from the medical aspect on the evils of prolonged standing, advocating strongly more humane treatment as regards the provision of seats. Mrs. William Crossley said there were thousands who had to stand from 8.30 in the morning to 6.30 in the evening. She suggested a conference with the employers and said she had little doubt of a good result. A letter was read from one of the principal firms in Manchester saying they had for some years provided seats and expressed the wish that they should be made use of. Mrs. Lyttleton pointed out that the chief evil arose not in the shops frequented by the well-to-do but in those of a lower class, and that to deal with them legislation was necessary. The crusade in favour of seats in shops, with permission to use them, has been carried on for many years, but it would seem with little actual success. Legislation ought not to be necessary for the carrying out of so obviously humane a practice, but it seems to be. Who can say precisely where the fault lies? It probably should be pretty evenly distributed, but if the countless host of well-to-do women customers were in earnest and brought their influence to bear on the employers seats would be provided in the shops as rapidly as they could be fixed by the joiners.

April 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Glasgow University.

AT a meeting of the Senate on April 4th the commission from the Crown appointing Dr. John Glaister to the chair of Forensic Medicine was submitted and Dr. Glaister having been introduced to the Senate and having signed the declaration *de fideli* was admitted to office in the usual form. During the past week a number of students under the direction of Dr. Gemmill, lecturer on embryology, and Dr. Rankin, demonstrator of zoology, have taken advantage of the recess to prosecute the study of practical biology at the new marine institute at Millport. The excursion has proved in every way a great success. By dredging and netting an ample supply of material has been readily obtained and the facilities and equipment offered by the laboratory have given every satisfaction. This new departure in practical work for the university students has demonstrated the excellent opportunities offered by the Millport district and institute and there can be no doubt that an increasing recognition of these will promptly follow.

The Aerial Transmission of Enteric Fever.

A paper on this subject was read before the Glasgow Philosophical Society on April 6th by Dr. John Brownlee of the Belvidere Fever Hospital. The lecturer regarded it as proved that the enteric bacillus could live in arable and other soils and he described an experiment in which he proved the same possibility in regard to ordinary dust. He also gave details of an outbreak of enteric fever which occurred in one of the city hospitals. Some few cases of the fever had been admitted and when subsequently the drains were under repair a considerable number of cases developed in all parts of the hospital. Dr. Brownlee regarded these and other instances as proofs of the theory that the germ of the disease may be transmitted through the air and advocated the pursuit of sanitary measures based on this assumption.

April 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Medical Association.

A SPECIAL general meeting of the Irish Medical Association was held at the Royal College of Surgeons in Ireland on March 29th. The committee of council afterwards held a conference in order to consider communications received in reference to the Local Government Bill. The meeting adjourned until April 7th, when the Bill was considered in the interests of Poor-law medical officers. The Council has addressed a letter to the Chief Secretary for Ireland with particular reference to clause 58 and it is hoped that he will accede to the request made. Poor-law medical officers in Ireland were requested to take the necessary steps to obtain the assistance of their Parliamentary representative in support of certain amendments to the Bill. At the meeting of the council held on March 16th it was decided that an appeal should be made—on the advice of its law agent and the opinion of senior counsel—against the decision of the Court of Queen's Bench relative to the fee claimed by the medical officer of health of Midleton Union for evidence in a sanitary prosecution.

Dispensary Medical Officers' Substitutes.

The vexed question as to the payment of a dispensary medical man's substitute has recently been adjudicated upon in Limerick. Dr. Graham of that city required a substitute to act for him during a recent illness and he, with the sanction of the board of guardians, appointed another medical practitioner—Mr. Humphries—to act in his stead. At a meeting of the Dispensary Committee, held on March 30th and convened for the purpose of considering an application of Dr. Graham for a further extension of his sick leave, a letter was read from the Local Government Board suggesting that in future in appointments of this nature it would be wise for the committee in the interests of the sick poor to see their way to the selection of an officer who could devote his entire attention to the work. The committee recognised the wisdom of the suggestion and instead of re-appointing Mr. Humphries, who is a dispensary medical officer in large private practice, appointed to the temporary post a medical man free from public duties in the district.

The Feeling in Dublin in reference to the Army Medical Department.

The interest which is felt here in reference to the Army Medical Service has been increased rather than diminished by the strangely conflicting replies of the Royal Colleges of Physicians and Surgeons respectively to the request of the Director-General. The Council of the Royal College of Surgeons met on March 29th for the special purpose of considering the matter and after an exciting debate decided

to accept the suggestion and to nominate two surgeons for temporary service in the Army Medical Department in reliance on the pledge given by the Government that the newer reforms would be carried out. At a largely attended meeting of the President and Fellows of the Royal College of Physicians held on April 1st the following carefully considered resolution was unanimously adopted:—

Pending the issue of a warrant in accordance with the statement recently made in the House of Commons by Mr. Powell Williams, M.P., Financial Secretary to the War Office, as to prospective arrangements for improvements in the Army Medical Department, which arrangements, if carried out as indicated, would, it is believed, at once secure a competition by a sufficient number of high-class candidates to fill the vacancies that now exist in the service by competitive examination in the ordinary manner, the College is of opinion that, in the interests of its Licentiates and of the Army Medical Staff, it is not advisable that any recommendations for the temporary employment of civil surgeons for duty with Her Majesty's troops in the United Kingdom should be made by the President in accordance with the request made to him by the Director-General.

The College of Surgeons considered the somewhat vague statements as to the new warrant which emanated from Lord Lansdowne to constitute the beginning of a new era for the army surgeon and acted on that perfectly natural assumption. The other College decided on not moving until the document itself appears. The resolution of the latter—the College of Physicians—was quoted in full in the columns of the *Irish Times* of April 2nd and formed the subject of one of the numerous leading articles on the matter which have recently appeared in that journal. The general feeling in Dublin seems to be very much what is embodied in the leading article in THE LANCET of April 2nd—namely, that the Army Medical Staff and the profession are to be congratulated on the very successful issue of their controversy with the Government.

Decision of the Local Government Board with Reference to the Medical Officer of the Cashel Union Infirmary.

At the last meeting of the Cashel board of guardians held on April 7th a letter was read from the Local Government Board containing the decision of the board on the sworn inquiry held some weeks ago into the conduct of the medical officer of the workhouse in relation to trained nurses recently employed there. The letter criticised the action of the medical officer in very strong terms on the grounds, firstly, that he permitted the dispensary midwife, who was in attendance on a case of puerperal fever, to leave the workhouse and attend cases outside; secondly, when acute cases of typhus fever were admitted to the fever hospital he took no steps whatever to have the trained nurse who was in attendance on the puerperal case removed from the fever hospital although she herself called his attention to the matter, while he tacitly sanctioned her sleeping in the same room with the nurse in charge of the typhus fever case; and thirdly, the action of the medical officer in instigating the nurses to write a highly objectionable letter to the guardians was quite unjustifiable. The document goes on to say: "Under all the circumstances the Local Government Board have reluctantly come to the conclusion that the medical officer has by his conduct forfeited the confidence of the board of guardians and they (the Local Government Board) entertain serious doubts whether he should be permitted to retain his position in connexion with the workhouse." In conclusion the board suggest that on this point the guardians should convene a special meeting of themselves in order to consider the matter and intimate that in the event of their feeling justified in giving the medical officer an opportunity of retrieving his position they (the Local Government Board) will be prepared to consider the propriety of acceding to their wishes after the officer has apologised for his conduct and promised an amendment for the future. The friction and trouble which have existed between the guardians of the Cashel Union and their union medical officer have been the subject of local public interest for very many months—even years—and have occupied many columns of the local journals in the shape of letters and leading articles. Nobody seems to doubt the ability of the medical officer in question, but it is at the same time clear to everyone that he has failed to recognise the fact that he is, however able and independent, the salaried officer of the board of guardians whom he has taken pleasure in defying.

Visit of Professor Schäfer, F.R.S., to Belfast.

Dr. J. A. Lindsay, President of the Ulster Medical Society, invited the members of that society as well as several leading men of the medical profession in Ulster to a reception in the Museum, Belfast, on April 5th, to meet Professor Schäfer, F.R.S., of London, who has been spending a short holiday in Belfast. A very large number accepted Dr. Lindsay's hospitality and the entertainment was in every respect a success. Those present subsequently adjourned to the lecture-hall of the Museum, where Dr. Lindsay took the chair, and in very complimentary terms introduced Professor Schäfer, who gave an interesting address on the Causes of Glycosuria. He believed there were many causes of sugar appearing in the urine and he gave an interesting account of glycosuria caused in animals by a vegetable drug, phloridizin. The causes of glycosuria which he specially dwelt on were (1) the alimentary, (2) the nervous, (3) the renal, and (4) the pancreatic. His remarks on the kidney form were of great interest and he described certain experiments made by himself and an old Belfast student, Mr. Benjamin Moore, M.A. (who is now assistant Professor of Physiology at University College, London), to elucidate the question of pancreatic diabetes. The results are not yet completed. At the conclusion of his address Professor Schäfer was awarded a hearty vote of thanks on the motion of Dr. Redfern, seconded by Professor Cuming, M.D.

Belfast Board of Guardians.

As a result of the Poor-law elections in Belfast just declared the two lady candidates are elected and one of them is successful in two of the wards. This will necessitate another election and it is expected that another lady will come forward.

Belfast Corporation (Hospitals) Bill.

The Roman Catholic ratepayers and inhabitants of Belfast have deposited in the Private Bill Office of the House of Lords a petition asking to be heard by counsel in opposition to the Belfast Corporation (Hospitals) Bill when it is reached. The second reading in the House of Commons on April 4th was postponed until Tuesday, April 26th. The representatives of the Mater Infirmorum (the Roman Catholic) Hospital have issued in pamphlet form (27 pages) their claim, a copy of which has been sent to each Member of Parliament. They say that as the Royal Victoria Hospital has been granted a free site their hospital should be freed from ground-rent. Their ground-rent is £100 per annum and they suggest that the Belfast corporation should either pay this or provide a fund to be invested in trust for the purpose of producing the necessary annuity.

April 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Sequel to the Laporte Case.

AN account has already been given in the columns of THE LANCET of the meeting of the Society of Legal Medicine when the expert witnesses in the Laporte case, who were so violently attacked by M. Varnier on account of their report, were honoured by the passing of a resolution declaring that the documents upon which M. Varnier founded his attack were inaccurate copies of the official documents. A controversy has since been raging in the medical press between M. Varnier and M. Socquet, one of the impugned experts. M. Varnier argues that the discrepancies between the version of the evidence on which he based the attack and the official copies were merely due to a copyist's error. At the meeting of the Society of Legal Medicine held on April 4th M. Pinard read a long memorandum in which he took upon himself the responsibility for M. Varnier's charges and attempted to sustain the theory, in the face of the remarkable declaration of M. Maygrier and the evidence offered by the latter at the last meeting of the society, that the perforations found at the post-mortem examination could have been spontaneous. He also argued that the resolution passed by the society at its last meeting was too general and implied that all the documents used by M. Varnier were incorrect, whereas there was only one which had any error in it. M. Socquet took up the discussion and in a moving speech complained that he had been most violently attacked as to his skill as an expert by M. Varnier and that he had been accused by him of having been the cause of the arrest of Dr. Laporte by having sent in to the examining magistrate a summary report of only

seven lines in length which had been discussed word by word but in fact had no real existence. He demanded from M. Pinard that he should give the name of the copyist by whose error M. Varnier was deceived. The society passed another resolution declaring for the second time that what M. Varnier had called the summary report of M. Socquet was not exact.

A Loan of 1,700,000 Francs.

The University of Paris, the reconstitution of which is of so recent a date, has just accomplished the most important act of its new life—that is to say, it has taken up a loan amounting in all to 1,700,000 francs. The law, in fact, which has reconstituted the universities has given to them a civil personality: they have their own budget and their own sources of income, which are definite and assured, and they are able to contract loans on the security of these sources of income. The 1,700,000 francs which the university has borrowed will be devoted to carrying out two schemes. The greater part of this sum will be devoted to the construction of buildings for the accommodation of first year students in medicine. Up to this time the schools for these students had been housed in the most defective manner in the Rue Rataud, close to the schools of physics and chemistry. The city of Paris, to which these latter buildings belong, has courteously lent them to the university, but the city wishes to realise its property, and, besides, the students are very badly housed in their present quarters. Therefore very much more suitable buildings will be erected in the Rue Cuvier. The other portion of the loan will be devoted to the keeping-up of a laboratory of natural history at Fontainebleau. Anyway, some resolution must be definitely come to, for both the work at Fontainebleau and that in the Rue Cuvier ought to be commenced during fine weather. At the last meeting of the council of the university M. Gréard said that the negotiations relative to this loan were far advanced and the contract would be submitted without delay for the ratification of the Minister of Public Instruction.

L'Assistance Publique.

The governing body of the Assistance Publique has just held its annual meeting. The retiring board, the members of which were M. Théophile Roussel (senator and president), M. Sabran, and Dr. Thulié (vice-presidents) were re-elected with acclamation. The council entered on the discussion of the first question on the orders of the day—namely, a project for the internal regulation of hospitals and infirmaries. At the third meeting, held under the presidency of M. Sabran, the vice-president, M. Henri Monod, Home Office representative on the Assistance Publique, laid before the board the reports upon which the Home Office wished to consult the board. The following questions were submitted: 1. Are there exceptional cases where hospital physicians and surgeons can be authorised to receive fees directly from hospital patients? This question was remitted to the second and third sections. 2. Is there any room for making in public lunatic asylums special wards for the observation of those who are getting better by means of trial discharge, so that a period shall elapse between the time of their admission and their regaining full liberty? This was referred to the fourth section. 3. What is the best way of organising the Assistance Publique in the case of young discharged prisoners so as to carry out Article 19 of the Decree of Aug. 12th, 1890? This was remitted to the first section. 4. Methods of organising public assistance for legitimate children under the care of mothers who are either widows or divorced or deserted. This was referred to the first section. At the sixth meeting the chief subject of discussion was a report of Inspector-General Napias on the providing of subordinate officials for the charitable establishments. Dr. Napias considered it would be well to ask the administrative committees of hospitals that they should make it necessary that their subordinate staff should have had some professional education. M. Henry Michel, who agreed entirely with Dr. Napias, said that the professional instruction of nurses of both sexes and the examinations which establish the competence of candidates should be very simple, very practical, and as little theoretical as possible. The meeting passed two resolutions, the second one of which, proposed by M. Hebrard de Villeneuve and backed by most of his colleagues, was couched in the following terms: "That this council considers that women ought to be called to take part in all committees charged with the duty of administering public charities."

The Antitoxic Action of Nervous Tissue and Various Inert Substances upon Strychnia.

M. Toinot and M. Georges Brouardel communicated to the meeting of the Hospitals Medical Society held on March 29th some observations of M. Widal and M. Nobécourt upon the Antitoxic Action of Pulped Nervous Tissue upon Morphia and Strychnia. If a mixture of one gramme of nerve substance and a mortal dose, or even twice a mortal dose, of sulphate of strychnia is injected into a guinea-pig M. Toinot and M. Brouardel found that the animals in question invariably lived. The observers made researches into the cause of this interesting fact and found that strychnia was really present in the mixture, that it had not lost its toxic properties, that dilution of the poison made no difference, and, finally, that guinea-pigs thus experimented on, if treated with a fatal dose of strychnia forty-eight hours afterwards, always died, showing that they were neither refractory nor immune. M. Toinot and M. Brouardel also tried the effect of fatal doses of strychnia mixed with various inert substances such as charcoal, talc, potato starch, and spinach, and they found that an admixture of these substances had the same preservative effect as nerve pulp if used in the same proportion and doses. Results were just the same whether the mixture was made twenty-four or forty-eight hours previously to the injection or immediately before. The explanation of these results apparently so mysterious is in reality very simple and is easily verified by a chemical experiment. Mixtures of carbon, talc, or nerve pulp with strychnia give a filtrate which is absolutely non-poisonous to guinea pigs and which, when tested, shows not the least trace of poison, which, however, can be extracted from the material left behind on the filter. It is obvious, then, that in an injection of this mixture the poison is so fixed and held that it cannot act as a whole but is only set at liberty very gradually, and the very slowness of this action prevents a mortal dose being set at liberty at one time in the organism. Chemists know well that a solution will give up to inert bodies in certain cases that which it holds in solution and organic pulps have the same inherent properties and play the same part as inert bodies, as is evident by these experiments. These facts show, moreover, that we must not be too hasty in ascribing antitoxic properties to animal tissues.

Obituary.

The death of Dr. Worms, member of the Academy of Medicine, is just announced. He has left behind him several important works upon gout, diabetes, and the disorders of nutrition. He held the post of chief medical officer to the Chemin de Fer du Nord.—Dr. W. Martin Dürr has just died in the Hôpital de la Pitié at the age of thirty-two years. He formerly held the appointments of resident medical officer to the hospitals and head of the clinic at the Faculty of Medicine, while at the time of his death he was histologist to that body, so that he seemed destined for a brilliant future. Some years ago he was put in charge at Brest and Manbeuge of the various organisations for prophylaxis against cholera. He died in the hospital in a state of utter destitution and the resident medical officers of that establishment have published a strong protest in the daily press because the director and the financial staff of the hospital have refused to give even a shroud for his burial, while in addition the Assistance Publique, which he had served for four years as resident medical officer, have refused to pay any part of the expenses of his funeral.

April 12th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Tragic Death of a distinguished Medico-Psychologist.

BY one of those explosions of homicidal mania so frequent in Latin countries Dr. G. B. Ermacora, joint editor with Dr. Finzi of the Milanese *Rivisti di Studi Psichici*, has lost his life at the early age of thirty-eight years. Dr. Ermacora had, it seems, incurred the enmity of his cousin, the engineer Signor Piva, nephew of the well-known general officer of that name, by his having become entitled by will to a considerable fortune on which young Piva had been counting as in great part his own. The doctor on a visit to Rovigo had called on his cousin and was in the act of holding out to him the right hand of conciliation when

the latter seized a revolver lying beside him and shot Dr. Ermacora dead. Immediately thereafter Signor Piva committed suicide by blowing out his brains with a loaded carbine. The consternation and grief of the two families well known in the Alta Italia—Piva and Ermacora—may be imagined. "Among the cultivators of the physio-psychological sciences," writes a medical friend, "Dr. Ermacora excelled in acuteness of thinking power and in the austere scientific rigour of his investigation. He had recently brought to a close a series of studies on 'Telepathy' and 'Premonition,' which, in published form, attracted much attention in France, in Germany, and in Austria-Hungary." He had also an unusual command of the literature of his subject and was often appealed to by colleagues and fellow-students for the best sources of information on medico-psychological themes. He had latterly been giving much attention to the English school of "Psychical Research" and was himself the author in his *Rivista* of "annotations" on the subject which (says the writer above quoted) "will remain a model of scientific integrity and unbiased judgment." The tragic incident occurred on March 23rd.

"*Pro Montibus.*"

Following up the crusade "Pro Silvis" started by the late Professor Cantani of Naples, the Turin school has initiated a movement equally devoted to arresting the destruction of forests and to the promotion of re-planting. Under the title "Pro Montibus" a company of nature-students and medical men, most of them members of the Alpine Club, and now numbering 300, held their first meeting in the Subalpine Capital on March 26th, and set forth their programme for the protection of plants, the re-afforesting of the denuded hillsides, the regulation of the water-courses and the rehabilitation of the flood-visited tracts of upper Italy. The movement deserves all the success provisionally assured by the scientific and philanthropic distinction of its president, the senator, Count Luigi Sormani, the vice-presidents, Dr. F. Vallino and Count Cibrario, and its general secretary, Dr. L. G. Bonelli.

"*A Lurid Industry.*"

Poverty is a bad counsellor, said the Anarchist Acciarito when, just a year ago,[1] he attempted King Humbert's life; and the remark holds true in other directions than those affected by the self-styled tyrannicide or the amateur saviour of society. It is constantly suggesting and practising devices for the rehabilitation of the individual at the expense of the public and for a little private gain compromising the welfare of the community. Italy, as an exceptionally poor country, abounds in such devices, the latest of which, reported from Naples, has acquired the proportions of what a contemporary stigmatises as "una lurida industria." It is neither more nor less than this—the wholesale purchase by ragmen of the wadding or charpie used for surgical dressings in hospital and the sale of the commodity (after superficial washing) to tailors and upholsterers for the lining of mantles or overcoats and for the padding of sofas and easy-chairs. The "industry" had for some time been in full operation when Dr. Vincenzo Gauthier (professor of materia medica and therapeutics in Naples University and sanitary assessor, I believe, to the municipal authorities) was apprised of its existence and, as the result of investigations conducted by his officers, discovered and identified its chief promoters. These parties have been denounced to the "autorità giudiziaria" and will shortly be placed on their defence by the Public Prosecutor in terms of Article 320 of the Codice Penale. Meanwhile the Ufficio d'Igiene has established a vigilance service, relieved day and night, at the various hospitals and ambulances to collect and destroy by burning all the dressings and "avanzi di medicature" (medico-chirurgical appliances which have served their purpose), the great sanitary furnace at Pasconcello being the immediate destination of such refuse. Professor Gauthier's intervention comes not an hour too early. Not only wearing apparel and household furniture must have been made positively dangerous by the disgusting industry which he has just suppressed, but the fittings of cabs and railway carriages, into which padding enters so largely, would be not less open to the same sanitary objection. Thirty-six years ago THE LANCET'S commission on certain evils of railway travelling from the medical point of view dwelt emphatically on the effects of the exhalation from the woollen-stuffed seats of first- and second-class compartments when closed windows and crowded occupancy sent up the temperature. The headache and pallor and general discomfort so often complained of after a day or night's travelling under these circumstances were thus accounted for. But the "lurida industria" referred to imparts elements of mischief yet more serious. Infective diseases may become readily transmissible from the imperfectly purified or sterilised dressings employed for cab seats or railway cushions—all the more in a country where the inmates of first-class compartments have yet to be warned against "spitting outside the pocket-handkerchief," and where the standard of personal cleanliness is still at the level indicated by that tentative and perfunctorily respected "bye-law."

April 9th.

[1] THE LANCET, May 1st, 1897, pp. 1224–25.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Typhoid Fever in Victoria.

TYPHOID fever is still increasing in prevalence in Victoria. For the fortnight ending Feb. 19th the number of cases reported was: for the whole colony 427, with 43 deaths; for the metropolitan area 174 cases, with 15 deaths. For the corresponding period of 1897 the figures were: for the whole colony 220 cases, with 13 deaths; for the metropolitan area 108 cases, with 7 deaths. In some districts the disease is a perfect scourge. At a little country village named Lexton, with a population of about 140 all told, 44 cases of typhoid fever have occurred in six weeks. In this, as in most of the other instances, the water-supply appears to be the source of infection, the arrangement for the disposal of excreta and for the supply of drinking-water being as primitive and as insanitary as possible. In the metropolitan area, also, the infection is ascribed to pollution of the water-supply through the fire plugs when the pressure is low. The summer has been unique in respect of long continuance of excessive heat and drought, favouring contamination of water. The Board of Health have issued circulars for the information of the public pointing out how the water-supply became contaminated and urging all householders to boil all their drinking water and effectually filter it. The circular also deals with contamination of milk and the precautions to be taken to prevent it.

Infantile Mortality and the Milk-Supply in Melbourne.

Not only has typhoid fever been so exceedingly prevalent but the infantile mortality of the metropolitan area has gone up by leaps and bounds this summer and appears to be unquestionably due to the microbic developments in the milk which occur in the hot weather. In 1897 the Government passed a Factories and Shops Act which provided *inter alia* that in all trades the employés must be given a half-holiday once a week. The effect of giving the milkmen a half-holiday on Wednesdays is that people only get one delivery of milk early in the morning to last till the next morning and in the hot weather it will not keep. The increase in the cases of diarrhœa at the Children's Hospital on the days following the half-holiday has been most striking. When the Bill was before Parliament one of the honorary medical officers of the Children's Hospital wrote to the press prophesying what the result of the half-holiday for milkmen would be in causing infantile disease and his prediction has been completely verified.

Retirement of Dr. Manning.

As previously mentioned Dr. Norton Manning has resigned the position of Inspector-General of Insane for New South Wales. Before he retired the officers and staffs of the various asylums presented him with a very handsome address. It was illustrated with views of the various asylums and expressed the advantages the staff had enjoyed under his control, the efficiency to which the department had been raised during his long term of office and the deep regard, affection, and esteem in which he was held. Dr. Manning was also entertained at dinner by the medical profession of New South Wales. In replying to his health the guest of the evening referred to the changes which had taken place in the asylums of the colony during the thirty years

he had been connected with them. When he first took charge the buildings were prisons, the overcrowding was alarming, and the medical staff was inadequate—three medical officers for over 1000 patients in two asylums; now a competent staff of twelve has charge of nearly 4000 patients in five large, well-equipped and suitable hospitals. Dr. Manning attributed the success that has attended his work mainly to three causes—(1) that the Government allowed him to nominate and select all the members of the staff; (2) the energy, loyalty, and self-sacrifice of the members of the staff from medical officer to charge attendants; and (3) the generous help and appreciation of the medical profession. Looking to the future Dr. Manning said there was plenty of work for his successor in promoting asylums for the inebriate and for the more scientific study of insanity, especially by modern pathological methods. Dr. Eric Sinclair, superintendent of the Gladesville Asylum, has been appointed Inspector-General of the Insane in place of Dr. Manning.

The Sydney Hospital.

At a meeting of the board of directors of the Sydney Hospital on Feb. 1st Mr. Foreman called attention to the abuse of the charity and said that patients were admitted who had no right to the institution. He moved that a subcommittee be appointed to inquire into the subject. Some discussion followed pointing out the difficulties and the motion was lost. On Feb. 23rd the annual meeting of the hospital was held, his Excellency the Governor presiding. Previously to the meeting his Excellency formally opened the new pathological and bacteriological department attached to the hospital. The buildings and appliances are most complete and modern. The total cost was £3000, defrayed by a special Government grant. According to the annual report there were in the hospital on Dec. 31st, 1896, 271 patients and the admissions in 1897 were 3819. In the year those discharged cured numbered 2055; relieved, 1138; unrelieved, 266; died, 345; remaining Dec. 31st, 1897, 286; percentage of mortality on admissions, 11·8; average number of admissions per week, 73·4; largest number admitted in one week, 91; smallest ditto, 56; average number of beds occupied, 291; largest ditto, 314; smallest ditto, 268; average duration of stay in days, 24·3; number of accident and urgent cases admitted without recommendations, 1324; number of cases admitted on Government orders, 1341; number of cases admitted on subscribers' orders, 321; number of cases admitted who contributed to their maintenance, 833. Of the 345 deaths 73 died within twenty-four hours of admission. Of the deaths among medical cases 36 died from phthisis, 31 from other lung diseases, 8 from typhoid fever, and 24 from cardiac disease. Of the deaths among surgical cases 40 died from injuries and the remainder were due to diseases apart from accident. The attendances in the casualty department were 23,286; in the medical department, 22,033; in the surgical department, 12,569; in the eye department, 7040; in the ear, nose, and throat department, 5229; diseases peculiar to women, 6619; diseases of the skin department, 2897; and in the dental department, 3723. The operations performed during the year numbered 1954. The average cost per bed for 1897, including the expenditure of the Moorcliff branch, was £61 15*s.* 10*d.* The income for the year was £22,808 1*s.* 3*d.*, towards which the Government contributed £15,261 18*s.* 6*d.*—viz., £5398 16*s.* 8*d.* as subsidy on the £ for £ principle, £8813 1*s.* 10*d.* for the maintenance of pauper patients, £700 as subsidy for the Regent-street Dispensary, and £350 for rent of Moorcliff Branch Hospital. The attendance of out-patients had fallen by nearly 20 per cent. since 1895, when they numbered 123,000, and last year only 83,000.

The Medical Defence Association of Victoria.

The annual meeting of the Medical Defence Association of Victoria, Limited, was held on Feb. 24th. The report showed that a great deal of work had been done by the Council during the past year. No action at law had been defended, but assistance had been given in one case where the cause of action arose before the defendant in the case joined the association. A scale of fees had been drawn up and adopted as the recognised standard for the colony. The relations of the profession to friendly societies had been considered and in one case some concessions to medical officers were obtained. As a result of the action of the Council the fees paid for reporting infectious diseases to the Board of Health will probably be raised. The membership of the association had increased from 89 to 196. The association had a credit balance of £106. Dr. James Jamieson and Mr. Hall Owen were re-elected and Dr. P. B. Bennie was elected to the Council. The office-bearers were all re-elected.

Case of Hydatid of the Brain.

In the *Australasian Medical Gazette* for February is recorded a case of hydatid of the brain successfully operated on by Mr. O'Hara at the Alfred Hospital, Melbourne. The patient, aged thirty-six years, was admitted with aphasia and loss of power in the right arm, leg, and face. Illness began six months previously with twitching of the tongue and arm and epileptic fits. The fits lasted four months and then ceased. There was no optic neuritis at first, but this subsequently developed while under observation. The patient was trephined over the lower part of the Rolandic area. A needle drew off clear fluid. A cavity of the size of a bantam's egg was incised and drained. The evening after operation the patient had an epileptic fit. The tube was withdrawn. The wound healed and some improvement has occurred in the motion of the arm.

Case of Congenital Diaphragmatic Hernia diagnosed during Life.

At the February meeting of the Medical Society of Victoria Dr. Jeffreys Wood read notes of a case of congenital diaphragmatic hernia. The patient was aged fourteen months. The temperature at night was 97·6° F. and in the morning 95°. The pulse was 114 and the respirations were 48; the heart's apex was below the right nipple in the fourth right intercostal space. The percussion was dull on the left side of the chest and vesicular murmur was absent; posteriorly on the left side interstitial gurgling could be heard at times. When the child was inverted the lower part of the left chest became tympanitic and the note on percussion varied between tympanitic and dull, with variations in positions at different times. In consequence of the development of vomiting, constipation, and collapse it was thought that some strangulation had possibly occurred and abdominal section was performed. All the intestines were found in the left chest, but were not strangulated. The child died. There was a semi-circular deficiency in the posterior part of the left leaflet of the diaphragm 2 in. long. The spleen was in the left pleural cavity; the left lung was completely undeveloped. The peritoneum was continuous with the pleura round the opening. Death was probably due to ptomaine poisoning from impure milk.

March 2nd.

Obituary.

WILLIAM GROSVENOR, L.R.C.S., L.R.C.P. EDIN.

MR. W. GROSVENOR, of Churchdown, Gloucestershire, died suddenly from syncope on March 29th. Mr. Grosvenor was educated at Edinburgh University and also studied at Paris, taking the qualifications of L.R.C.S., L.M. Edin., in 1857, and L.R.C.P. Edin. three years later. Previously to going to Churchdown he had practised for twenty-five years in London. Mr. Grosvenor, who was in his sixty-first year at the time of his death, was held in high esteem in the neighbourhood. He leaves four sons—two of them are members of the medical profession—and three daughters. The funeral took place at Kensal-green on April 1st.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Rudolf Schneider, Extraordinary Professor of Surgery in the University of Königsberg.—Dr. S. Stricker, Professor of General and Experimental Pathology in the University of Vienna.

THE *Maryland Medical Journal* of March 26th states that the Cuvier Prize of the Paris Academy of Sciences, 1500 francs (£60) in value, has been awarded to Professor Marsh of Yale University. This prize is awarded every three years for the most noteworthy work published during that period on geology or zoology.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, APRIL 6TH.

THE first day's proceedings of the special session of the General Council of Medical Education and Registration were reported in THE LANCET of last week, and we now report the proceedings of the second and final meeting of the session.

The late Sir Richard Quain.

The President (Sir William Turner) submitted to the Council the following minute with regard to the late Sir Richard Quain, viz.:—

That the Council convey to the family of their late President an expression of sincere sympathy and personal sorrow at the great loss which they have sustained by his decease. Appointed for five years as a Crown Representative on Nov. 17th, 1863, Sir Richard Quain was re-appointed by successive Governments for the same period of time on six successive occasions. In 1864 he was elected by the Council as one of its treasurers and held that office uninterruptedly for twenty-seven years or until his election as President in 1891. Throughout his long and unbroken membership of the Council he was conspicuous for the zeal and devotion with which he applied himself to its affairs, no less than for the sagacity and moderation with which he took part in, and ultimately guided its debates. As treasurer he was a watchful guardian of its financial position and interests and as member or chairman of successive committees he was largely concerned in the preparation of all the issues of the British Pharmacopœia and in securing for that work the position which it has deservedly attained. In every capacity he endeared himself to his colleagues by a courtesy and geniality which never failed, by an equanimity which no differences of opinion could disturb, by a dignity and graciousness befitting the holder of a representative office in a great and learned profession, and by a warmth and kindliness of heart which were never for a moment obscured. The Council has not only to offer to his family an expression of the sorrow of the entire body, but also of its sense of the personal loss which each member has individually sustained by the death of so worthy and so beloved a colleague, and of so able and so excellent a president.

The minute was approved by the Council and it was agreed that a copy of it should be sent to Miss Quain.

The Midwives Question.

The Council then went into committee on this question and resumed the debate on the motion of Dr. Glover and Dr. Atthill—

That the term "midwife" shall be defined as meaning a woman who is registered under this Act and undertakes to attend only cases of natural labour.

Dr. MACALISTER said that this was the first time that they had admitted the word "registered" into their resolutions. He could not help thinking that much of the agitation which had taken place upon this question had arisen from the adoption of the word and of the ideas that it usually connoted. Registration had been adopted in the case of the medical practitioner and in that of the dental practitioner and it was thought that if midwives were registered they would become an inferior order of medical practitioner and would in some way ally themselves to the medical or dental professions now registered and assume a position which many medical men at least thought they were not entitled to assume. There was a suggestion made by Sir William Gairdner which might do a great deal to turn the force of this objection; he suggested that midwives should be licensed. He should therefore like in speaking against the proposal in its present form to speak against the introduction of the word "registered" and to suggest that in anything they did they should substitute "licensed." It might seem only a change of words, but in fact it was something very much more than a change of words. He would move as an amendment:—

That the term "midwife" shall be defined as meaning a woman who undertakes for gain to attend cases of natural labour and who is not registered under the Medical Acts.

While moving this amendment he wished to express the opinion that it was not for this Council to attempt to draft in detail the clauses of a Bill but rather to lay down certain general propositions.

Dr. LEECH seconded the amendment.

Dr. ATTHILL said that the suggestion about licensing was in entire accordance with his views. He had all along held that the word "registered" should not be applied to women who were not fully qualified practitioners.

Dr. GLOVER said that he had no hesitation in accepting the amendment, though he did not think there was much in it. He thought that whether these women were registered or licensed they would have the same authority to do what they had got to do. They spoke of a licentiate of the Royal College of Surgeons or the Royal College of Physicians or the Apothecaries' Hall. But to save time he agreed at once to the amendment. He wished to take this opportunity of saying that he thought it very important that at this meeting they should come to a decision of a final character upon this question. He wished to tell the Council that the subject had been considered by the Council in the following years: 1872, 1877, 1878, 1879, 1882, 1884, 1889, 1890, 1894, 1895, 1897, and 1898. This was a very grave matter, and in the form in which it was presented to them now and the speciality of this meeting made their deliberations peculiarly responsible and open to public criticism. He thought that every member would agree in thinking that whether they shut the subject up altogether or whether they agreed to some form of recognition of midwives they should at any rate give a final report, which would render it unnecessary and unreasonable for them to be asked to discuss it again. He estimated that the mere money loss to which the Council had been subjected by this subject had amounted to between £1500 and £2000, and therefore it was high time that they closed the matter by coming to some very definite propositions with regard to it.

The motion of Dr. Glover and Dr. Atthill was then with drawn and the amendment of Dr. MacAlister and Dr. Leech became the substantive motion.

Dr. MCVAIL pointed out that in its present form the motion excluded the unqualified assistant, and he suggested that instead of "woman" they should use the word "person." There could be no doubt that if legislation took place and the unqualified assistant were excluded there would soon be an agitation for his inclusion.

Mr. BROWN expressed approval of this view of the case, though he said he had no wish to press an amendment.

The motion as proposed by Dr. MACALISTER was then put and adopted.

Dr. MACALISTER said he had a plan to suggest which he thought would be better than going further into the details of the Bill and the committee's report, and that was to send up to the Lord President of the Council their views as to the general principles which ought to guide any legislation in regard to midwives. With this object he had drawn up a series of resolutions and these he would submit one by one to the Council for their consideration.

The Council decided to adopt this method of procedure.

Dr. MACALISTER moved:—

That the Council adheres to its previous resolutions that it is desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risks which they now incur from the unregulated practice of midwives, many of whom are ignorant and unskilled and most of whom pursue their calling without due medical supervision.

Dr. LEECH seconded this resolution.

Dr. GLOVER said that he could not very well object to it because it was esentially the report of the committee in another form.

Mr. HORSLEY concurred in what Dr. Glover had said, and pointed out that all the propositions which Dr. MacAlister was going to put forward would be found in the report of the committee. He would like to know whether the general description of the Bill, the narration of the facts, would be put before the President of the Privy Council.

Dr. MACALISTER said he did not think this would be necessary, because the President knew perfectly well what the Bill was.

Mr. HORSLEY said the President was no doubt aware of what the Bill contained but he might not be aware of the omissions, and in this narrative the committee pointed out the omissions.

The resolution was then agreed to.

Dr. MACALISTER moved and Dr. LEECH seconded the following resolution, which was adopted by the Council:—

That to this end it is desirable that every woman who not being a registered medical practitioner engages for gain in the practice of midwifery should be subjected to legal regulation and control.

Dr. MACALISTER, seconded by Dr. LEECH, next moved:—

That any measure which proposes merely to protect the title of midwife, however defined, and does not make illegal and penal the unlicensed practice of midwifery for gain cannot be regarded as satisfactory in the interests of the public health.

Dr. GLOVER said he desired to support this proposition. It was the strong feeling of the committee that without this provision they could not recommend the adoption of any Bill. It was said that Parliament was reluctant to restrict personal liberty and was against the establishment of a monopoly, but this was not a question of monopoly, it was a question of mortality; it was a case of the death of 1000 women and perhaps 1500 children every year. It was not a question of monopoly, it was a question of the earnestness of Parliament in wishing to stop this mortality.

Mr. HORSLEY thought the words "cannot be regarded as satisfactory" were hardly strong enough.

It was agreed to substitute "cannot be regarded as offering a satisfactory safeguard," and thus amended the resolution was adopted.

It was next agreed:—

That some central body should be established by Parliament whose functions should include the framing of the conditions under which midwives may be licensed and the regulations under which alone they should be allowed to practise.

Dr. MACALISTER, seconded by Dr. LEECH, then moved:—

That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued under the authority of the State department which is concerned with the public health.

Dr. MACALISTER said that he thought the Council should have a final voice in the matter and that the conditions and regulations should be uniform throughout the country.

Dr. GLOVER called attention to the following paragraph in the report of the committee, viz.,

That since the duties proposed to be cast under the Bill on the General Medical Council could not be carried out unless a considerable portion of each sitting of the Council were devoted to that purpose, which would involve a large increase of expense, and since the funds of the Council consist solely of fees paid by medical practitioners for admission to the Medical Register in Scotland and Ireland, as well as in England and Wales, such additional duties ought not to be imposed upon the Council unless a grant be made by the Treasury to meet the expenses involved.

He thought that some stipulation of this kind should be inserted.

Dr. MACALISTER said he was afraid that the paragraph read by Dr. Glover was rather too strong if the Council had only to approve rules framed by somebody else.

The Council agreed to the resolution moved by Dr. MacAlister with this addition, moved by Dr. GLOVER and seconded by Mr. HORSLEY:—

And that provision should be made by Parliament for reimbursing the Council for any expenditure which it may have to incur in performing the duty hereinbefore referred to.

The next resolution was adopted in this form:—

That every woman before beginning to practise as a midwife in any district should be required to take out a licence to be granted by the local sanitary authority of the district, issued under the prescribed conditions and regulations, and that such licences should be subject to annual renewal and should be revocable at any time in case the holder is proved to have infringed any of the prescribed regulations.

The next two resolutions adopted were to this effect:—

That any unlicensed woman, whether calling herself midwife or not, who not being registered under the Medical Acts practises as a midwife for gain in any district, should be made liable to a substantial penalty. And, That the conditions under which licences are granted should include the production of satisfactory evidence of character and of training and experience in the conduct of natural labour and the after-care of lying-in women and new-born infants.

Dr. MACALISTER moved and Dr. LEECH seconded:—

That the regulations under which licensed women are required to practice should include provisions securing that the midwife shall immediately seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the new-born infant.

Dr. GLOVER said he thought it should be the duty of the local sanitary authority to appoint medical practitioners to whom midwives might refer.

Dr. MACALISTER submitted that if the midwife found a person in danger she should be free to send for the nearest medical practitioner whom she could get.

Dr. GLOVER read to the Council the following recommendation of the committee:—

That it shall be the duty of the local sanitary authority of every district to appoint such registered medical practitioners as are willing to be so appointed, to whom midwives shall be required to apply for assistance and advice in all cases other than cases of natural labour, and under all circumstances which may be laid down by the Midwives' Board as calling for medical intervention. The local authority shall pay to every registered medical practitioner so consulted a sum of not less than one guinea and not more than two guineas; provided always that when the patient is able to pay for such medical services the local sanitary authority shall recover the fees for the same from the patient or other responsible person by ordinary process of law.

The committee, he said, attached great importance to this paragraph. The only condition under which they could consent to this new class of recognised persons was that they should be obliged to put themselves in communication with the medical profession on the occurrence of the slightest irregularity. Every medical man would not be willing to be at the beck and call of a midwife and therefore it should be laid down distinctly that it was the duty of the local sanitary authority to appoint one or more practitioners in their district.

Dr. MACALISTER said that Dr. Glover was proposing some local machinery which had nothing to do with the midwife.

Dr. GLOVER replied that the midwife must know where to look to for assistance.

The Council decided in the meantime to accept the resolution as moved by Dr. MacAlister.

Dr. GLOVER then moved:—

That it be stipulated in the Bill that it should be the duty of the local sanitary authority of every district to appoint such registered medical practitioners as are willing to be so appointed, to whom midwives shall be required to apply for assistance.

Mr. HORSLEY seconded this proposition.

Sir WILLIAM THOMSON asked whether the midwife would be able to apply for assistance to a person who was not appointed by the local sanitary authority.

Dr. GLOVER replied that this difficulty could be met. What he wished to make clear was that the midwife was not only required to apply for assistance but that her position was facilitated by a permanent appointment.

Dr. LEECH, seconded by Dr. ATTHILL, moved as an amendment:—

That it should be the duty of the local sanitary authority of every district to appoint such registered practitioners who are willing to be appointed to give assistance in those cases of labour as may necessitate by the regulation of the central board the attendance of a registered medical practitioner.

Mr. BROWN took the view that no particular person should be appointed, but that the midwife should be free to call in the medical man who was easiest reached. He thought they should make the assistance as wide and general as possible.

Dr. BRUCE asked whether it was necessary to go into all this detail. He had had considerable experience of midwifery and midwives and he had never heard of a medical man who showed any hesitation in giving assistance in a case of difficulty. He did not think that a regulation of this kind was necessary.

Dr. MACALISTER took the same view. He felt quite sure, he said, that in practice there would be no difficulty in getting the assistance of the nearest medical man.

Mr. CARTER reminded the Council that the midwife could not leave her patient and must therefore instruct someone to go for assistance. For himself he had never heard of there being any difficulty in obtaining a medical man when he was wanted.

Dr. GLOVER said that what he had in view was not the payment of medical men but the protection of lying-in women, and he would remind the Council that there were many public provisions for emergencies. There were police provisions by which a policeman was entitled to call in anyone he could get hold of to assist him, and in other countries—in France, for instance—there were emergency practitioners. Therefore he proposed that the Council should make it clear that this duty should be faced by the local sanitary authority.

After some further discussion Dr. Leech's amendment was withdrawn and the motion of Dr. Glover was defeated by a large majority.

Dr. MACALISTER said that the last resolution he had to propose was this:—

That in so far as the Bill submitted to the Council is not in accordance with the general principles above laid down the Council do not regard it as offering an adequate solution of the question under consideration and would earnestly deprecate its passing into law in its present orm.

Dr. LEECH seconded the resolution, which was also adopted.

The business in committee having been concluded the Council, on the motion of Dr. MACALISTER, seconded by Mr. BRYANT, resumed.

Dr. MACALISTER then brought up the report of the proceedings in committee on that day and the day preceding. He moved that that part of the report beginning with the words, "that the answer of the Council be to the following effect," be adopted.

Mr. BROWN seconded. He thought they had followed the more commendable course in proceeding as they had done that day. It was obvious that within the time at their command it would have been absurd to have attempted to draft a Bill which would meet the case, but they had passed this series of general resolutions and he was sure it would meet with the approval of the profession outside the Council. There was no objection to women being licensed to practise as midwives. They did not wish to throw obstacles in their way, but they did wish to prevent ignorant people from practising and the point was met very well by the resolutions.

In answer to Dr. MCVAIL Dr. MACALISTER admitted that in 1895 the Council had approved of a Midwives Registration Bill, but the resolution to that effect was not brought in in the present instance. Only those previous resolutions affirming the desirability of measures being taken to protect lying-in women of the poorer classes were included.

Dr. MCVAIL doubted if the registration resolution was not included. They should make it plain to the Privy Council if it was not included. He rather thought that the first of Dr. MacAlister's series was a resolution in which the word "registration" was used.

The PRESIDENT said that the resolution in question did not refer to registration but to the protection of lying-in women.

Dr. MCVAIL: Yes: but it does not stop there. It asks us to approve of what has formerly been passed.

The PRESIDENT: I think the Council is quite safeguarded in that.

Dr. GLOVER: We are quite in the lines of our fundamental intentions and whether it is a question as between licensing and registration we are acting quite consistently.

Dr. MCVAIL wished to make a remark or two. The Council, he said, knew that he had withdrawn his proposed resolution declaring that the Bill should not be passed by Parliament because the public safety required that any person who was to be recognised by law as a practitioner in midwifery should have a knowledge of midwifery, medicine, and surgery not less that was required for admission to the medical registration at present open to men and women equally. It was perfectly clear from the manner in which the Council had received the resolutions so ably proposed by Dr. MacAlister that afternoon that the Council had decided to send these resolutions to the Privy Council as their answer to the Lord President's request for an opinion on the Bill, but he thought it might be said that the resolutions were not the findings of the Council's committee on the Midwives Bill. There was nobody in that room who did not know that Dr. MacAlister had entirely overthrown the report of the Council's committee on the Bill. The series of resolutions proposed in committee of Council was quite a new thing. So far as he was personally concerned it did not meet his view in essence, but he would not stand in the way of its transmission to the Privy Council as the answer of the General Medical Council. It was quite true that it asked that women should be licensed annually, but it was still open for the Government and for Parliament to take the half of the recommendation and while resolving to create a new legal body of practitioners to determine at the same time that it was not necessary that they should be licensed. Parliament might say, "We shall not license them annually; we object to that." And he was quite certain of this, that when the decision of the General Medical Council reached the House of Commons the people who were promoting the Bill of which Mr. Balfour had charge would strenuously object to this licensing system, for it left a door open to all kinds of allegations being made against a licence-holder and, moreover, it was unfair to these women, who might be out at work, who were poor, or were ill, that unless they personally applied for license they should lose it or, in the case of new applicants, would not get it. In saying this he was only wishing to show what might be the possible action of Parliament. After the action taken by the Council the Bill concerning midwives would no longer be a Bill for the registration, but a Bill for the licensing, of midwives. The practically unanimous manner in which the resolutions were supported showed the very decided opinion of the Council in favour of licensing as against registration, and he thought that one effect of that would be that there would be no Midwives Act passed by Parliament this year and that they would again have an opportunity of saying whether they were parties to the creation of a new order of practitioners.

Sir CHRISTOPHER NIXON said that in seconding the proposal that Dr. MCVAIL had withdrawn the strong objection he had urged against the Midwives Bill as presented was that by registration they created a new sort of practitioner. That was completely got rid of by the proposal that there should be an annual licensing of midwives in a way similar to that in which cabdrivers and others were licensed annually. The Council had acted in a wise manner in determining to make the change, and he trusted that the proper measures would be taken to see that women practising as midwives were thoroughly trained. But the most important point of the resolutions was the penalty provided for in the case of unlicensed women practising as midwives. That was a matter that was left out of sight in the Bill presented to them. He should be glad indeed if a Bill drawn on the lines of Dr. MacAlister's resolutions were passed into law. While speaking on the previous night to a Member of Parliament he was assured that Mr. Balfour's Bill had not the slightest chance of passing this session.

Mr. HORSLEY thought it would be a great mistake if the General Medical Council were to put themselves under the Local Government Board. They were already under one Government department and that, he thought, was enough. The regulations for midwives should, in his opinion, be issued by the Midwives' Board. If the words were these: "Issued by the State Department as approved of by the General Medical Council," he should be satisfied.

The PRESIDENT said that that could be easily adjusted.

Dr. BRUCE reminded the Council that there certainly was an advantage to be obtained by the issuing of the regulations by the Local Government Board, because that Board was the one which was in communication with the medical officers of health.

Dr. MACALISTER, in order to meet Mr. Horsley's objection, moved that his fifth resolution should read as follows:—

That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued to the local sanitary authorities by the State department which is concerned with the public health.

Mr. BROWN seconded the proposal, which was agreed to.

Mr. HORSLEY, raising another question, said that the resolutions certainly touched ordinary quackery, but quackery of an extraordinary sort was growing up because a man who took into association with himself various members of his family or several friends and formed a company might legally practise. The Council should endeavour to put an end to evasion of the spirit of the law in this way and he ventured to propose that they should adopt their own committee's recommendation:—

That no woman or any association of persons formed for the purpose shall either habitually or for gain attend, or undertake to attend, a lying-in woman unless the person attending and all the members of any association providing such attendance be licensed according to the provisions of the Act.

Mr. BROWN was quite at one with Mr. Horsley with reference to this matter, but he pointed out that it was not the subject with which the Council were now dealing. What they were dealing with were general principles on which future legislation might be based.

Dr. GLOVER: Surely there can be no harm in anticipating a possible clause in a future Bill.

Dr. MACALISTER looked upon the suggested words of Mr. Horsley as unnecessary because under the resolutions every woman practising as a midwife must be licensed.

After some conversation Mr. HORSLEY said he would not press the proposal.

The PRESIDENT: I do not think it is required. Has any other member of the Council any motion to make?

On the suggestion of Mr. BRUDENELL CARTER the word "adequate" before the phrase "safeguard in the interest of the public health" in the third resolution of the series was omitted, as was also the word "adequate" before the word "solution" in the last of the series.

The report from the committee of the Council, as amended, was then adopted unanimously and it was agreed that the President should transmit it to the Lord President as the General Medical Council's answer to the Privy Council's request for an opinion on Mr. Balfour's Bill.

The PRESIDENT, in closing the session, said that the special business for which the Council had been summoned had now been disposed of and he thought the members would

agree with him that for the resolutions they had adopted in connexion with the Midwives Registration Bill they were greatly indebted to Dr. MacAlister.

The members signified their agreement with the President by applause.

The Council rose and will meet again in regular session at the end of May next.

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE Ninth International Congress of Hygiene and Demography was formally opened on Easter-day, April 10th, at Madrid, under the patronage of His Majesty Alfonso XIII. and the Queen Regent.

It was never hoped that the numbers attending the Congress at Madrid would equal the numbers that attended the Seventh Congress in London in 1891, or that attended the unexpectedly popular Eighth Congress in Budapest in 1894; but our Special Correspondent at Madrid informs us that the number of persons enrolled as members did not at the opening fall far short of 2000. Only 43 English delegates were announced as present.

There is reason to fear that some of the British delegates have been disappointed with regard to the promised 50 per cent. reduction on the French railways. On reaching the Spanish frontier it sufficed to show the card of identity at the booking office and the 50 per cent. reduction was at once granted so far as the Spanish lines were concerned. This was not the case at Paris. The application had to be made at the general management or offices of the Orleans Railway Company and not at the station booking offices and the application was followed by a delay of twenty-four hours. The safest course was to call on Dr. Brouardel, Dean of the Paris Faculty of Medicine and chairman of the Permanent International Committee, who obtained the tickets for all the French delegates without any difficulty; but this advice reached our office too late for us to warn those who were desirous of assisting at the opening of the Congress.

On Saturday evening there was a preliminary reception at the Conservatory of Music. Close upon 1000 delegates were present in full dress or in uniform and many were presented to the Minister of the Interior and the Governor of Madrid who were there to receive them. The orchestra of the Conservatory of Music played some selections and there was a well-supplied buffet where light refreshments were served. A great number of Germans were present, some in military uniforms, and in spite of the political tension there were also some American delegates.

On Sunday evening a gala representation was given in honour of the members of the Congress at the Spanish Theatre, an institution which corresponds in design to the *Comédie Française*.

On Monday afternoon the formal opening ceremony took place in the National Library under the presidency of the Minister of the Interior.

A soirée was held at the Athenæum on the evening of Monday, April 11th, and was well attended.

To-day (Friday) there will be a reception of the members of the Congress at the house of the Prime Minister, while on Saturday certain delegates are to have the honour of presentation at Court.

The proposed excursion to Andalusia more or less broke down. For a week before the opening of Congress the hotels of Madrid were full to overflowing with excursionists from all parts of the kingdom on their road to Seville for the Easter festivals. Fortunately these excursionists had left Madrid by the time the members of the Congress arrived. On the other hand, the prices at Seville went up from 200 to 300 per cent., so that it soon became impossible to guarantee accommodation to members of the Congress at any reasonable terms. The 50 per cent. reduction on the railway fares from Madrid to Andalusia held good excepting for the Algeciras-Bobadilla line, but most exorbitant charges are being made at the Seville hotels, and will be made up to April 25th. There is, however, another excursion which offers itself to the members of the Congress under much more favourable conditions. For the modest sum of ninety pesetas they may travel to Lisbon and back and thus see something of Portugal on easy terms. This will not be a joint excursion, but each delegate may go on any day he chooses.

Our Special Correspondent to the Congress speaks strongly of the absence of organisation on the part of the British delegates which, indeed, seems to us to require explanation. Great Britain is admittedly a pioneer country in matters of sanitation and it is wilfully lowering our position among nations that no proper precaution should be taken for Great Britain to speak with unanimous voice on some of the great topics of international interest that may be discussed at Madrid.

(FROM OUR SPECIAL CORRESPONDENT.)

PRELIMINARY ORGANISATION.

It is only too obvious that the Congress does not open under auspicious circumstances. Postponed for a year in consequence of the colonial wars in Cuba and the Philippine Islands, Spain is now threatened with a still greater contest against the United States. But not only are the foreign relations of the country strained to the utmost, internal politics also interfere with the Congress. An unforeseen combination of circumstances has resulted in the Senatorial elections taking place on the very day that the Congress holds its inaugural meeting. Now it so happens that the General Secretary, Dr. Amalio Gimeno, and the technical or acting president of the Congress, Dr. Julián Calleja, are both candidates for the Senate. The latter feels safe and can, without much risk, afford to absent himself from the contest; but it is within my knowledge that Dr. Gimeno has received some pressing telegrams from his electoral committee at Valencia, for which town he is candidate, urging him to be present on the day of the election. Dr. Gimeno has, however, determined to remain with the Congress, where his presence is absolutely necessary, though by so doing he weakens his chances of election to the Senate. Apart, also, from these special and personal considerations it will be readily imagined that the minds of all the organisers of the Congress are more or less distracted by the terrible crisis through which Spain is now passing. I have spoken to most of the secretaries of the Congress and I found them all of opinion that war with the United States was almost inevitable, and they naturally felt far more inclined to discuss the political events of the day than to devote themselves to the dull routine work of the Congress.

On Monday, April 4th, the secretaries and organisers were still in the occupation of two large rooms at the Ministry of the Interior overlooking the Puerta del Sol, which is the very centre—the heart, so to speak—of Madrid. On the Tuesday they removed to the *locale* of the Congress, the National Library and Museum, a majestic building on the Paseo de Recoletos, which is a continuation of the celebrated Prado, the fashionable strolling ground of Madrid. Large rooms surrounded by glass book-cases, where the national library is gradually accumulating, serve for the meetings of the sections, and other similar rooms for the offices of the secretaries, &c. There is no lack of space, even though all the basement is taken up by the Sanitary Exhibition.

Many of the delegates have arrived in advance, notably

Dr. Brouardel, Dr. Vallin, Dr. A. J. Martin, and the representatives of the Paris Municipal Council. The English delegates, on the contrary, are arriving late and Dr. Corfield, Dr. Poore, and Sir Douglas Galton have notified at the eleventh hour that they will not be able to attend. Thus three out of the four British representatives on the Permanent International Committee will not be present. This, of course, will greatly cripple the action of Dr. Arthur Newsholme (Brighton). The latter is on the Demographical International Permanent Committee. Surgeon-General Macpherson, delegate of the War Office, and Dr. Michael Beverley, delegate of the Norwich Medico-Chirurgical Society, were among the earliest British arrivals, but there were not a sufficient number of British delegates to convoke a meeting of the British section previously to the opening of the Congress so as to elect representative speakers and decide on a course of action. This want of organisation places the British delegation at a great disadvantage in face of the carefully prepared and well organised delegations of other countries. There are questions on which the British delegation could render considerable service. For instance, a severe contest is anticipated in regard to the drainage of Paris. Briefly the situation stands as follows It has been decided to purify the whole of the sewage of Paris by throwing it on the land at the rate of 40,000 cubic metres per hectare. Apart from the sewer farms established at Gennevillier the State has given 800 hectares and the town has bought 200 more hectares at Achères. This land will be laid out by the end of the year and it will then be possible to purify by land filtration 70,000,000 cubic metres of sewage per annum, or about half the sewage of the town. This has been done in accordance with the law of April 4th, 1869. A more recent law, that of July 4th, 1894, imposes the completion of the system in five years from that date—namely, before the opening of the great exhibition of 1900. For this purpose more land is to be secured on the Plateau de Mery-Pierrelaye and the Caps de Carrières de Poissy des Mureaux. There will then be no need to drain into and pollute the River Seine. The last-mentioned law also sanctioned a loan of 116,000,000 francs by means of a graduated tax on household property and it was calculated that this tax would not exceed the amount actually paid for the emptying of cesspools. In keeping with the decisions of the Municipal Council a prefectorial decree was issued on Aug. 8th, 1894, compelling householders to build water-closets protected by a syphon trap under the pan and an intercepting trap near the junction of the house drain and the sewers. Further it was enacted that every separate tenement consisting of three rooms should have a closet of its own. These rules implied such a revolution in the existing state of things that the house-owners of Paris have formed a syndicate to resist the application of the law. This syndicate attends to the interest generally of house-owners and issues a large weekly paper, but the main purpose is to prevent the construction of sanitary closets. Now this householders' syndicate has secretly secured the appointment of two representatives to the Madrid Congress. They are going to argue in favour of the separate system of drainage, for which there is much to be said, but under the cover of this theoretical question they hope to check the compulsory application of properly flushed and trapped closets within the houses. At this juncture a number of British delegates should intervene to show that the extensive experience acquired in England conclusively demonstrates that whatever system is applied in the streets, whether the separate system or not, there are no two systems for the interior of the houses. Indoors the two-gallon flush for the four-inch soil-pipe and syphon traps are absolutely indispensable. If this was done in a collective and impressive manner the little intrigue of the Paris proprietors' syndicate would be defeated and we might reasonably hope to find that great town satisfactorily drained by the commencement of next century.

Something also ought to be done by an organised and collective effort to restore the former useful and practical method of organisation which used to govern these International Congresses of Hygiene. As this method was destroyed by the organisers of the Congress held in London in 1891 the British delegation might now seek to repair the mischief which was done in England. At the opening ceremony the Acting President of the present Congress, Dr. Julián Calleja, pointed out the influence exercised by these Congresses over the legislatures of various countries and further expressed his conviction that the Congress now sitting would have more influence in this direction than any of the previous Congresses. For my part I see no reason justifying such an anticipation. So far as the number, the personal distinction and influence of the members attending is concerned this leaves nothing to be desired. But it does not suffice to crowd people together. Some means must be found of obtaining a collective expression of opinion. Formerly papers concluding with resolutions were carefully prepared, printed, and sent to all members before the Congress met. These papers were discussed at full sittings of the entire Congress held in the afternoons, the sections meeting in the mornings. The Congress then, in its collective capacity, voted on the five or six subjects which each member had had an opportunity of studying for some five or six weeks before the discussion. Such a vote naturally had a great influence. The vote of a section cannot have much effect unless confirmed at a general meeting of the entire Congress. Practically speaking, no such meetings are held except for the opening and closing ceremonies and such ceremonies only amount to an exchange of congratulations or words of welcome. Nor will the discussion in the sections have the influence that it might have had if the rules of this Congress had been faithfully carried out. According to these rules the papers to be read were to be accompanied with a summary written in French and Spanish, and these summaries, together with the text of resolutions, were to be circulated among the members a few weeks before the Congress met. The delegates would thus have some idea of the likely drift of the discussions and might prepare in advance suitable arguments so as to support or to combat this tendency. The resolutions resulting from such debates, though only adopted in a section, would certainly have some effect; but this rule has not been carried out. No summaries have been printed and nothing has been circulated among the members; thus no one knows what is going to be proposed or what arguments will be adduced. Fortunately the next Congress will in all probability meet in Paris in 1900 and the congresses held in France have in these respects always been the best organised. It is to be hoped, therefore, that the reign of chaos introduced in London in 1891 will come to a close at Paris in 1900.

THE OPENING CEREMONY.

SUNDAY, APRIL 10TH.

The large hall of the National Library was full to overflowing by two in the afternoon. It was a brilliant gathering. Uniforms of all nationalities, orders and decorations flashed in the bright light of what in England would be considered a fine summer afternoon. The Minister of the Interior occupied the chair, with Professor Brouardel and the Mayor of Madrid on his left side and the Governor of Madrid and Dr. Gimeno on his right side.

Dr. JULIAN GALLEJA, technical or acting President of the Congress, Dean of the Madrid Faculty of Medicine, and the President of the Superior Royal Council of Health, commenced the proceedings by addressing his respectful homages and salutations to Her Majesty the Queen Regent, who had so graciously consented to patronise the Congress. Then he spoke a few warm words of greeting and good wishes to the army and the navy which were fighting on behalf of the mother country in distant lands. The Acting President now turned and addressed himself to the foreign delegates who in such large numbers were attending the Congress. He congratulated himself that in spite of many complex difficulties all the countries of the Old and the New Worlds were represented at the Congress. From such a concourse of illustrious personages the cause of good sanitation would certainly derive considerable benefits. Hygiene did not consist of one particular science, but it was a combination of many different sciences. It was essentially a social science and was accessible to all. Science in general freely recognised the great benefits which sanitary science in particular had conferred on the whole civilised world. The public at large as well as technicians had applauded the progress accomplished, but there still remained much to be done. The universal theoretical recognition of the value of good sanitation was certainly a great moral triumph, but this did not suffice. In many countries the practical application of admitted principles was still neglected. To obtain the practical realisation of sanitary principles was the main purpose of such congresses. There were undoubtedly many obstacles with which scientific

sanitary reformers were but too familiar. For instance, and standing foremost, was the financial difficulty. Secondly, there was the interested opposition, notably of manufacturers and others, who find that sanitary regulations interfere with their processes of manufacture, &c. Then, again, there was the great question of personal liberty, the inviolability of the domicile, &c., which had sometimes to be set aside so as to enforce measures necessary for the preservation of public health. All these objections undoubtedly had been ably confuted by scientific sanitary reformers; still it was necessary, not only to reason out these matters, but to obtain the support of Governments so as to be able to carry out the necessary reforms. The influencing of Governments was the most practical and useful result likely to accrue from this Congress. Former congresses had already done much in this direction, but the speaker, in conclusion, expressed his conviction that the present Congress would have still greater weight on the Governments of the civilised world, adding that "the exceptional circumstances through which my beloved country is passing are, in truth, very sad and very extraordinary; nevertheless, the Spanish spirit will know how to face all obstacles as it has done in the past, and will bring all its solicitude to bear, so that nothing shall be wanting at this solemnity of peace and concord." This sentence was very loudly applauded.

Dr. BROUARDEL, Dean of the Paris Faculty of Medicine, replied on behalf of the Permanent International Committee and remarked that they had been well inspired when at Budapest they selected Madrid for their next place of meeting. The welcome they had received was no surprise, for the affability of the Spanish people had become proverbial. Their hosts had even succeeded in setting aside for a moment their terrible anxieties so as to worthily receive their guests. But this effort would not prove in vain. The patronage accorded to the Congress by the Queen Regent and the presence of the Minister of the Interior were an earnest proof of the desire of the country to advance in the cause of sanitary progress. It was most necessary that the authorities themselves should be convinced of the urgency of public health legislation. At the Official International Conferences of Venice, Paris, &c., they had already received much aid from the representatives of the Spanish Government. This would be the last congress held during this century and it must be acknowledged that the present century had done more for public health than any number of previous centuries. The century had commenced with the discovery of Jenner and was concluding by gathering the fruits of the work of Pasteur. Many old dangers to health had now disappeared. But it was more especially to the honour of our time to have understood that there are collective duties and principles that must be enforced and appreciated. The doctrine of human solidarity is now, more and more understood, nationally and internationally. We can, it is well known, prevent certain diseases. The mass of the people expect us to do so. We shall be traitors to our cause and their trust if we fail in this duty.

A German delegate, whose name was not announced, spoke on behalf of the German Government. He insisted on the growing importance of social questions, on the hatred growing amid the working classes, and the early advent of the class war. These dangers, however, might in a measure be met by good sanitary legislation destined to afford more comfort and better health to the working people.

Professor GRÜBER, on behalf of the Austrian Government, said that Spain had given the best proof of her earnestness in the cause of sanitary reform by organising so successfully the present brilliant gathering in spite of the extraordinary difficulties of the present political situation.

The delegate of the Belgian Government declared that Belgium was always eager to participate in all such congresses; and a Japanese delegate spoke, saying that Japan would not fail to avail itself of the lessons taught by the Congress.

Dr. E. VALLIN, recently Army Medical Inspector, rose in the name of the French delegation to express their thanks to the brave, generous, and chivalrous Spanish nation which was now passing so well and with so much dignity through a most difficult period in its politics. In France but little was known about Spanish hygiene, yet Spain had made great efforts of late and he felt convinced that they would have something to learn from their visit. For instance, there had been a good fight in favour of compulsory vaccination. Then all medical matters had been centralised. The teaching of hygiene was introduced into primary schools and Spain had a Society of Hygiene which published an official organ. But he had been more particularly impressed by the action of a society called the Friends of Art. This society had organised an annual festival which was called the "*Fête* of the Tree." Its object was to improve the climate and the resources of the country by the planting of trees. On that day all the school-children formed a procession under august patronage, and each child solemnly planted a tree. Generally, in the hope of reviving the silk trade, it was a mulberry tree, or else it was a linden, the royal tree of Spain. Thus at an early age the children were taught to create public property, to look forward to the future, and to do something for the public good. In this poetical manner the coming generation was taught a useful moral lesson that would have the practical result of improving the beauty and healthiness of the country.

While these speeches were being delivered there was confusion and heart-burning among the few scattered members of the British delegation. The nations were to respond in alphabetical order, and as England is spelt "Inglaterra" in Spanish we should follow close upon France. But the British delegation had not met; no one knew who was present, although it was generally felt that a Government representative should speak, and the only Government representatives present were Surgeon-General Macpherson from the War Office and Dr. Thomas Oliver from the Home Office, where he is concerned in the application of the Factory Acts. Dr. Oliver, however, was not in evening dress and Surgeon-General Macpherson, though in uniform, refused to speak and urged that the learned bodies rather than the Government officials should take the lead. Then at the very last moment Dr. Donald MacAlister, representing the University of Cambridge, was persuaded to mount the platform. Fortunately his brilliant and expansive scarlet robe produced a great effect, for his appearance elicited loud applause before he had been able to utter a single word. Speaking in English, Dr. MACALISTER said that it would be unfortunate indeed if, amid such cordial greetings, not a word was uttered on behalf of England. He spoke in the name of the University of Cambridge and as a member of the General Medical Council and on behalf of the profession generally. He need hardly say how deeply the profession in England sympathised with every effort made to improve the sanitary conditions of the Continent. Their sympathy with the international character of sanitary reform had, he trusted, found practical expression in the organisation of the International Congress of Hygiene held in London in 1891. He hoped all who were then present would recall that great gathering as a testimony of the goodwill of the British people. With regard to Spain in particular he could not remain silent. For many years Spain and England had been allies and victorious allies. Allied again to-day, not for war but for the work of peace, he hoped that their efforts would be equally glorious.

A Hungarian delegate spoke next and trusted that the Congress would see by the printed reports which the Hungarian delegation had brought with them, that great sanitary progress was being achieved in Hungary.

Dr. GIRARD, Surgeon-Major in the United States Army, was now called upon to respond. To avoid causing any irritation he had refrained from putting on his uniform and was not at all anxious to speak. The occupants of the platform, on their side, applauded his approach, and Dr. Girard so as not to incur the risk of any aggressive interruptions, spoke so low that it was impossible to hear him at a few feet from the platform. He said that he desired to express on behalf of the official delegation from the United States, their high appreciation of the very kind reception which had been shown them since their arrival in Spain. This was particularly gratifying under the present political circumstances. He wished the Congress all the success it so well deserved and hoped that before the Congress had terminated its labours the difficulties existing between Spain and the United States would be smoothed over.

The occupants of the platform could not but be gratified by these judicious remarks, while the people who crowded the hall could not hear what had occurred. Thus this episode which, if less prudently managed, might have given rise to some demonstration which would have still further complicated the political situation, passed quietly, and terminated in a graceful exchange of bows as the American delegate withdrew from the platform. Thus it

will be seen that to attend these Congresses it is sometimes necessary to possess some knowledge of diplomacy as well as of hygiene.

After a Dutch delegate had spoken in French, Professor PAGLIANI of Turin, formerly director of the Public Health Department at Rome, delivered a very eloquent speech in his own language. He saluted the Spanish people, who were upholding so well their national dignity. Spain had always been devoted to ideal conceptions and the grand ideal pursued by the sanitary reformers would travel onwards serenely in spite of temporary international convulsions. As hygienists they were not divided by political, religious, or class considerations; being devoted only to the interests of humanity, they could act independently of all these causes of dissension.

This speech, I noticed, elicited special applause from the Papal Nuncio, who was sitting close to the speaker. These words of peace were, however, followed by an emphatic political manifestation.

Dr. J. J. R. DE ARELLANO, delegate of the Mexican Government, received a regular ovation in consequence of the help offered to Spain by the Mexican Republic. Dr. de Arellano improved on this by speaking of Spain as his mother country. His Government, he added, had accepted the invitation to the Congress, firstly, so as to make a further manifestation of sympathy for Spain and, secondly, to show that the Mexican Government was anxious to associate itself with all progressive scientific movements. Finally, he wished success to the Congress so that it might benefit science and redound to the glory of Spain. These words were naturally greeted with frantic cheers. A Norwegian delegate was also much applauded because he spoke in Spanish; and then Dr. GUILLAUME, Director of the Swiss Statistical Bureau, said a few graceful words on behalf of Switzerland. The series of foreign speeches was brought to a close by General MAHMOUD PACHA, Director of the Constantinople School of Medicine, who represented the Turkish Government at the Venice and other official international conferences. Mahmoud Pacha brought the Congress back from politics into the wider and safer sphere of humanitarianism. He presented greetings and good wishes to the Congress from his august master the Sultan and declared that the Sublime Porte was eager to follow in the path of sanitary reform. He thought that science had no country, especially sanitary science, and that international sanitary congresses might well become the first link that would ultimately establish the solidarity of humanity. Thus it was reserved to the Turkish delegate to sweep away those political allusions which in spite of every precaution had trespassed upon the neutrality of the Congress, and this he did by invoking the most advanced principles of Western Europe.

The Mayor of Madrid now assured the members of the Congress of the hearty welcome they would receive from the population of Madrid, words of greeting which were still further emphasised by the Governor of the Province.

The GENERAL SECRETARY (Dr. Amalio Gimeno), who was warmly cheered by the Congress, said that never had such an assembly met under such adverse circumstances. Spain, though reluctant in the shedding of human blood, was lavish in the sacrifices it was ready to make to maintain its dignity. In spite of the present threat of war the Congress would testify to the country's devotion to the works of peace. At Budapest he had insisted on the scientific progress made in Spain, he had invited the Congress to come and see for themselves, and now he begged to thank all the foreign nations who had so well responded to this invitation.

Señor CAPDEPÓN, Minister of the Interior, then rose to pronounce the formal opening of the Congress, and to welcome, in the name of the Spanish Government, all the delegates present. This terminated the proceedings.

In the evening a gala performance was given at the Spanish Theatre, which in spite of its great size was well filled by the members of the Congress, who alone were admitted. The most celebrated actors rendered what may be considered as one of the classics of the Spanish stage, *La Niña Boba*, by Lope de Vega. The part of the heroine, played by Señora Maria Guerrero, was especially appreciated, and I am informed that this distinguished actress will soon appear on a London stage.

THE SECTIONS.

MONDAY, APRIL 11TH.

The various sections of the Congress commenced to work this morning at about 10 o'clock. Some confusion existed, and the readers of several papers failed to reach their sections when their names were called out. But the next on the list took their places and thus the business proceeded. The Bacteriological Section was one of the first to get to work, and here Dr. SPRONCH, Professor at the Utrecht University, dealt with the question of sero-therapeutic accidents. At the Wilhelmina Hospital, Amsterdam, out of 220 inoculations of serum, consisting in all of 16·7 cubic centimetres per patient, there had been 22·7 per cent. of accidents and a mortality of 20·9 per cent. But when the serum was heated, out of 103 patients treated with 18·1 cubic centimetres the accidents were reduced to the proportion of 8·7 per cent. and the deaths to 10·6 per cent. Adding to these figures those of the St. Elizabeth Hospital of Haarlem the total was 282 patients treated with 19·8 cubic centimetres of serum, resulting in 21 per cent. of accidents and 18·5 per cent. of deaths. But when the serum was heated, out of 198 cases treated with 19·6 cubic centimetres of serum there were only 5·4 per cent. of accidents and 13·1 per cent. of deaths.

In the section on Urban Hygiene Dr. LUIS MENENDEZ NOVO read a paper on the Treatment of Sewage. He thought this was the most difficult of all sanitary problems and that the employment of electricity or of chemicals had not given satisfactory results. The oldest system, which had prevailed many centuries ago in Spain, was to throw the sewage on the land, and modern science tended to show that, after all, this was the best method. Pathogenic germs were destroyed before the sewage reached a depth of 7 ft. The best ground was that which gave the freest passage to the water and to air. But the land must be allowed to rest occasionally, and no hard-and-fast rule could be established as to the amount of sewage it could receive. Means also should be taken to prevent the invasion of surrounding lands by the sewage.

Dr. KOEHLER of Berlin protested that these conclusions should have been printed and circulated among the members before the Congress met. At Dantzic and at Berlin they had good results from discharging raw sewage on the land, while at Brunswick they had had all manner of trouble in attempting a chemical treatment of the sewage.

Professor PUTZEYS of Liège, Belgium, agreed with the German delegates who had urged that there could be no general rule but each case should be treated on its own merits. In Belgium there was a great difference in places close to each other. At Liège, towards the German frontier, a very shallow soil covered a chalk deposit. Here irrigation was impossible and the sewage would sink through cracks in the chalk and pollute the water springs. Westwards of Liège the ground was of heavy clay, letting water through only when cracked by the heat of summer. To the north there was suitable sandy soil, which might be used by the inhabitants of Liège but was too far for the town of Brussels.

Dr. HENRIOT of Reims related that excellent results had been obtained for his town by throwing the raw sewage on the land.

Mr. ADOLPHE SMITH explained that this was not possible in, notably, the crowded manufacturing districts of Lancashire and Yorkshire, and as a novelty of the day, he described the working of the septic tank at Exeter.

M. DELAUNEY (France) concluded the discussion in this section by remarking that all the speakers had agreed that where suitable land could be obtained it was best to trust to land filtration. The strenuous efforts made to improve chemical processes proved that they were not satisfactory. If not absolutely perfect yet of all known methods that of utilising the soil had given the best results.

During the afternoon some members of the Congress went to witness the Basque game of tennis called *Jai-Alai*. Others went to the Faculty of Medicine, or to the hospitals of St. John and the Infant Jesus, while not a few went to the bull-fight. This evening there is a reception at the Athenæum Literary Club.

THE SANITARY EXHIBITION.

The Sanitary Exhibition is well advanced as exhibitions go, for there never was an exhibition ready on the opening day. In this case, however, quite enough is ready to interest the visitors. It is, of course, a small exhibition. Spain has but little to show in respect to manufactured apparatus, &c., bearing on health questions. Such objects have still to be imported from England, France, or Germany; but, on the other hand, there is a fair display of projects, and, better still, some record of work actually achieved. Several large rooms on the ground floor of the National Library (a building which corresponds to the British Museum in

London) have been devoted to this purpose. On the walls are hung coloured drawings illustrating various schemes of sanitary improvement; for instance, a design for a very extensive asylum for the insane, surrounded by gardens and fields, to supply wholesome agricultural occupation for the patients; then there is the plan of a large civil hospital prepared by Señor Mariano Belmas, architect, and editor of *La Higiene Popular*, a monthly publication which seeks to spread a knowledge of modern sanitation throughout Spain. Señor Belmas is the principal organiser of the exhibition and he exhibits his drawings and plans for the drainage of the towns of Salamanca and San Fernando. For these towns he proposes to employ hard-ware pipes of British manufacture, excepting of course for the main collecting sewers. Señor Wagon, civil engineer, has also a similar project for the town of Bilbao, the peculiar feature being that the sewers do not receive all the rain-water. In some districts the gutters suffice to drain off the rain-water and thus partially relieve the sewers from the sudden pressure due to storm-water. Another project, for the drainage of Barcelona, is exhibited by Señor Favia, a well-known engineer and sanitary reformer of that important commercial and manufacturing centre. Señor Fort, an architect, has a project for a popular hydropathic establishment by which he proposes that every form of bath, douche, &c., should be provided at a minimum cost for persons who have but slender means.

All these, however, are but projects. Dr. Rubio, one of the leading surgeons of Spain, has devoted a considerable portion of his private means to create a small model surgical hospital. With the aid of other subscriptions beside his own this hospital has been constructed and is now in working order. It is known as the Rubio Institute. The plans will be exhibited at the Congress and the delegates will be invited to visit the institute itself. The Laboratory of San Sebastian has a stall showing the chemical processes employed for the control of the wine and food supplies of that fashionable seaside resort. Then the military and naval departments of the State have also a laboratory and many interesting exhibits, including a plan for the Madrid military hospital prepared by the military engineering department. The Spanish Red Cross Association have a section to themselves and, among other things, they exhibit an operating table made exclusively of nickel and glass.

Dr. Comenge, Director of the Urban Sanitary Services of Barcelona, has supplied a number of diagrams showing the death-rate, birth-rate, &c., of that town. These statistics are shown by graphics which are not, as usual, drawn in parallel, vertical, or horizontal columns, but are shown in a series of circles within circles. According to the figures thus displayed, during the five years 1873 to 1877 inclusive, the average yearly death-rate was equal to 34·5 per 1000 of the population of Barcelona. The births during the same period were equal to 31·0 per 1000. Thus it will be seen that the birth-rate was below the death-rate. The authorities at Barcelona boast that great improvements have been accomplished, and in proof point to the fact that the death-rate shows a yearly average for the last five years ending 1897 of only 23·7 per 1000; this undoubtedly appears at first sight to be a great improvement, but much of its significance is destroyed by the fact that the birth-rate has fallen to 22 per 1000. Thus for a fall of 10·8 per 1000 in the death-rate there is an accompanying reduction of 9 per 1000 in the birth-rate. The great difference is, that the birth-rate is now 1·7 less than the death-rate and twenty years ago it used to be 3·5 less than the death-rate. What, however, will be of greater interest to the British public is the low death-rate from tuberculosis noticed at Barcelona. Out of each 100 deaths the proportion attributed to tuberculosis was equal in 1894 to 13·1 per cent.; in 1895 to 15·5 per cent.; in 1896 to 13·5 per cent.; and in 1897 to 14·6 per cent. During the last year the proportion of deaths due to tuberculosis in Paris was set down at 25·5 per cent. Speaking of vital statistics, Dr. César Chicote, chief of the San Sebastian Municipal Laboratory, told me that this town was divided into two parts by a large boulevard. On one side stood the old town with leaking cesspools, bad drainage, narrow streets, and many other unwholesome conditions, and here the death-rate was equal to 32 per 1000. On the other side of the boulevard stood the new town with wide streets, better drained houses, and a complete system of sewers, and the death-rate was only 17 per 1000. On my objecting that probably only rich people lived in the new town Dr. Chicote replied that such was not the case and that there were also many poor peopl in this the newest part of San Sebastian.

The Seville Institute of Hygiene, of which the chief director is Dr. Leopoldo Murga, has an interesting stall where no less than 1800 microscopic preparations will be shown dealing with many phases of bacteriological science. There are notably statistics and all the original documents relating to 480 inoculations practised by this institution for the prevention of rabies. These were commenced on March 3rd, 1895, and the figures are carried forward to March 31st of the present year. During that time it was possible to obtain possession of the dogs which had bitten 128 patients, and by inoculating rabbits it was demonstrated that these dogs were really suffering from hydrophobia. As for the other cases, the dogs were only supposed to have been rabid, but the fact could not be proved. In any case, of the 480 patients inoculated, including the 128 cases about which no doubts could be entertained, only 2 died from hydrophobia after inoculation. The process adopted is known as Dr. Ferran's intensive method—that is to say, contrary to the practice at the Pasteur Institute, the virus is not attenuated.

Among the foreign nationalities the municipalities of Paris and Berlin have voted sums so that exhibits illustrating the sanitary progress of those towns may be sent to Madrid. The town of Budapest, where the last International Congress of Hygiene was held, also sends plans and explanatory pamphlets. The Dutch contribute a number of contrivances to prevent accidents and diseases in factories, workshops, and various industries. Even from so far as Mexico come a number of well-illustrated and elaborate publications setting forth the sanitary improvements effected in that country and photographs of hospitals, slaughter-houses, asylums, &c., built in Mexico.

Several disinfecting stoves also have arrived. These are of French manufacture. The firm of Jules le Blanc, Paris, has stoves of two types: the non-portable and the portable. The former vary in size. The smallest model measures 1·05 by 1·50 metres, weighs 1050 kilogrammes, and costs £112. The boiler for the same weighs 850 kilogrammes and costs £68. The largest size measures 1·50 by 2·30 metres, weighs 2800 kilogrammes, and costs £192, with a boiler weighing 1250 kilogrammes and costing £92. The portable stoves which can be drawn from place to place by horses measure from 1·05 by 1·70 metres to 1·30 by 2·0 metres. They weigh from 1850 to 3500 kilogrammes and cost from £200 to £280. The heat produced within the stove is equal to 115°C., and on an average 12 litres of water and 3 kilogrammes of coal are consumed for each operation which should last twenty minutes. Another French disinfecting stove is manufactured by M. Fernand Dehaitre, likewise of Paris. This is a smaller stove, for it measures only 0·800 by 1·600 metres. It weighs about 1400 kilogrammes and costs £100. The great advantage offered is a simpler method of opening and shutting, which is accomplished at once by one single movement instead of by numerous bolts or screws. This reduces the risk of the accidents which are more likely to occur where there are numerous fastenings, as one of these may, through neglect, remain open. A two-horse-power boiler accompanies this stove, weighs 500 kilogrammes and costs £46. It will be seen therefore that this apparatus has, in any case, the advantage of cheapness; but it also met with the approval of the late Dr. Péan, who introduced it at the International Hospital of Paris, and it is employed by the administration of the Belgian State railways. The Madrid Municipality exhibits its disinfecting apparatus, which includes the stoves of Messrs. Geneste and Herscher, the French sanitary engineers. These stoves have often been described before, are well known, and employed in various parts of Europe. Altogether the exhibition is an important and an interesting annex to the Congress.

SCIENTIFIC GLASS-BLOWING.—Mr. Thomas Bolas, F.C.S., F.I.C., author of "Glass-blowing and Glass-working," gave an interesting demonstration before the members of the Society of Designers on Tuesday, April 5th. Among other things he showed how it is possible to blow bulbs for chemical and other purposes from a solid glass rod and exhibited a syringe constructed entirely of glass—that is to say, without the need of cotton packing. A new form of draughtsman's reservoir pen which he has invented should prove useful in applying caustic liquids in surgery and also in the application of medicaments to the eye.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated—viz.:—

Monday, April 4th:

Anatomy and Physiology.—Charles Isherwood Brierley, Yorkshire College, Leeds; Tom Bower Fawley, Yorkshire College, Leeds, and Mr. Cooke's School of Anatomy and Physiology; Frederick A. Worsley Drinkwater and William Thomas Shields, Victoria University College, Liverpool; George Rowland Roberts, St. Thomas's Hospital; James Frederick Morrison, Queen's College, Belfast; Edward Garneys Wales, Cambridge University; Sydney Lionel Prall, Stanley Hodgson, Guy's Hospital; Bernard Joseph Ward, Charles Birch, and Arthur James Arch, Mason College, Birmingham; Edward Fow Fisher and Robert Howard Newby Smith, London Hospital; John M. Herbert Munro, University College, Bristol; and Walter Rix Read, St. Bartholomew's Hospital.

Twenty-six gentlemen were referred in both subjects for three months.

Tuesday, April 5th:

Anatomy and Physiology.—George Ernest Waugh, Cambridge University and University College, London; Charles Seymour Parker, University College, London; Charles Haldane D. Robbs, Bertram S. Osmond Maunsell, and Harry Robinson Humby, St. Bartholomew's Hospital; Walter Turner Haydon and Wilfrid Fawssett, St. Thomas's Hospital; Charles Edgar Blackstone and Joseph Strickland Goodall, Middlesex Hospital; Louis Edward Stamm, John Evans, and Lionel Pern, Guy's Hospital; Alfred McCabe-Dallas, Bombay University and Guy's Hospital; James Edward Collins, London and Guy's Hospital; Louis Stephen Shoosmith and Samuel Donaldson, St. Mary's Hospital; William Payne and Henry Doyle Brice, Westminster Hospital; William Ronald Kirkness, King's College, London; Leonard Douglas Saunders and Reginald Temple Harrison, St. George's Hospital; Harold Edward Ridewood and Arthur Beaumont Waller, London Hospital; and Percy North Gleig, Charing Cross Hospital.

Twelve gentlemen were referred in both subjects, three in anatomy only and three in physiology only, for three months.

Wednesday, April 6th:

Anatomy and Physiology.—Hugh George Rashleigh, Arthur Carr Osburn, Ernest Frederick Reeve, Alfred D. Eskell Kennard, and Kenneth Weldon Goadby, Guy's Hospital; George Jacks Humphreys, John Caruthers Sale, and Ambrose Hilton John, St. Bartholomew's Hospital; Langton Fuller Hanbury, Robert Leonard Beane, and Owen Binns Gauntlett, St. Thomas's Hospital; Arthur Robartes Wellington, St. Mary's Hospital; Herbert Edward Crawley, Oxford University and St. Mary's Hospital; Edward Faulknor Ackery, Charing-cross Hospital; Charles H. Farley Bailey and Ernest Rock Carling, Westminster Hospital; Edgar W. Fox Dolman, King's College, London; Reginald J. Lambart Sladen, Charles Edward Ham, and George Sowden, London Hospital; Bransby Yule, University College, London; Adrian Caddy, St. George's Hospital; and Thomas Sanders, Cambridge University.

Anatomy only.—Alfred Newman Leathem, Charing-cross Hospital; and William Robert Ellicott, Cambridge University and Mr. Cooke's School of Anatomy and Physiology.

Eleven gentlemen were referred in both subjects and two in physiology for three months.

Thursday, April 7th:

Anatomy and Physiology.—William Spencer Lewis, Owens College, Manchester, and Mason College, Birmingham; Arthur Thomson Marshall, King's College, London; John Pugh Jones, University College of South Wales, Cardiff; Charles Montague Neale May and Oswald J. S. Damian, St. George's Hospital; Dudley Sheridan Skelton and Theophilus William Morcom, London Hospital; Sidney James Ormond, Thomas Arnold Matthews, Claude Tessier, Arthur C. Horner Gray, Michael Abdy Collins, Beethold Muir, and Hugh Kirbell Lacey, Guy's Hospital; Charles de Zouche Marshall, Albert Francis Miskin, Charles Ambrose Palmer, Harold Upcott, and Horace Haward Kiddle, St. Thomas's Hospital; William John Morrish and Cecil William Bond, St. Mary's Hospital; Albert Edward Thomas, Arthur Hastings Bostock, and Colin Sadler Hawes, St. Bartholomew's Hospital; George V. Hamlyn Fairhall, Westminster Hospital; and William Stanley Rooke, University College, London.

Ten gentlemen were referred in both subjects for three months.

Saturday, April 9th:

Anatomy and Physiology.—Perry Praime Tobit, King's College, London; Richard Smelling Roper, George Thomas Willan, Josh E. Lionel Bates, and George S. Clifford Hayes, Guy's Hospital; Frederick Ernest Wilson, Guy's Hospital and University College, London; Darrell Winn Bishop and Gerald Morgan Soper, St. Mary's Hospital; Herbert George Clitherow, Harold Rowe Jeremy and Edward Spencer Scott, London Hospital; Thomas E. Cecil Cole, St. Bartholomew's Hospital; Percy Alfred Hayne, St. George's Hospital; and Frederick Eustace Anley, Charing-cross Hospital.

Physiology only.—David Thomas Jones, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; Alexander Apfell Vernon, Long Island College, New York, and Mr. Cooke's School of Anatomy and Physiology; and Edward Green, Cambridge University and King's College, London.

Twelve gentlemen were referred in both subjects, one in anatomy and one in physiology only for three months.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates at the Primary Examination have passed in the subjects indicated:—

PART I.

Biology.—T. J. M. Clapperton, King's College Hospital, and A. J. Simmons, Birmingham.

Chemistry.—R. P. N. Bluett, Glasgow and St. Mary's Hospital; W. E. Cuthbertson, Bristol and Glasgow; T. D. Hemans, St. Thomas's Hospital; S. F. Hickman, Royal Free Hospital; J. E. Howrovd, Leeds; A. Kellgren, Royal Free Hospital; and H. O. Sutcliffe, Cambridge.

Materia Medica and Pharmacy.—W. P. Allen, Birmingham; R. P. N. Bluett, Glasgow and St. Mary's Hospital; E. Coulthard, Royal Free Hospital; W. E. Cuthbertson, Bristol and Glasgow; A. G. C. Davies, Guy's Hospital; S. R. Dudley, St. Bartholomew's Hospital; A. J. Kennedy and P. W. Robinson, Edinburgh; L. L. G. Thorpe, University College Hospital; and A. Wolpe, Würzburg.

PART II.

Anatomy.—W. Alcock, Sheffield; H. F. Bellamy, Charing-cross Hospital; R. P. N. Bluett, Glasgow and St. Mary's Hospital; E. Courtauld, Royal Free Hospital; C. L. Driscoll, Charing-cross Hospital; D. R. T. Griffiths, Guy's Hospital; W. T. Harris, St. Thomas's Hospital; E. H. Kenny, Manchester; A. M. Marval, Royal Free Hospital; D. W. Purkis, St. Bartholomew's Hospital; H. Richardson, Leeds; C. S. Scott, St. Bartholomew's Hospital; F. A. Segreda, Guy's Hospital; F. E. Shean, London Hospital; H. H. Sloane, St. Bartholomew's Hospital; W. S. Snell, Edinburgh and St. Mary's Hospital; W. Sykes, Manchester; and J. A. West, St. Bartholomew's Hospital.

Physiology.—J. C. M. Bailey, St. Bartholomew's Hospital; H. F. Bellamy, Charing-cross Hospital; R. P. N. Bluett, Glasgow and St. Mary's Hospital; R. V. Cowey, Edinburgh; A. W. H. Grant, Charing-cross Hospital; W. T. Harris, St. Thomas's Hospital; E. H. Kenny, Manchester; A. M. Marval, Royal Free Hospital; D. W. Purkis, St. Bartholomew's Hospital; H. Richardson, Leeds; C. S. Scott, St. Bartholomew's Hospital; F. A. Segreda, Guy's Hospital; H. H. Sloane, St. Bartholomew's Hospital; W. S. Snell, Edinburgh and St. Mary's Hospital; A. C. Stark, Westminster Hospital; W. Sykes, Manchester; and J. A. West, St. Bartholomew's Hospital.

MR. A. B. HARRIS, M.D. St. And., M.R.C.S. Eng., J.P., has been elected a member of the Falmouth Corporation.

MEDICAL MAGISTRATES. — Mr. R. Williams, L.R.C.P. Irel., M.R.C.S. Eng, of Wrexham, and Mr. R. L. Roberts, M.D. Lond., of Ruabon, have been appointed magistrates for Denbighshire.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bonn:* Dr. Hermann Petersen has been recognised as *privat-docent* of Surgery.—*Breslau:* Dr. G. Born, Extraordinary Professor of Anatomy, has been made an honorary professor.—*Budapest:* Dr. Josef Bäcker, First Assistant in the Obstetric clinic, and Dr. Hugo Feleki, have been recognised as *privat-docenten* of Midwifery and Gynæcology.—*Heidelberg:* Dr. Gottlieb has been appointed Professor of Pharmacology in place of the late Dr. Schroeder. Dr. Hammer has been recognised as *privat-docent* of Internal Medicine.—*Iurieff:* Dr. Muratoff has been appointed to the chair of Midwifery and Gynæcology in place of Dr. Gubaroff.—*Leipzig:* Dr. Max Seiffert has been recognised as *privat-docent* of Pædiatry and Dr. Franz Hoffmann as *privat-docent* of Physiology.—*St. Petersburg (Military Medical Academy):* Dr. Kajan has been recognised as *privat-docent* of Surgery.—*Tübingen:* Dr. Carl Grunert has been recognised as *privat-docent* of Ophthalmology.—*Warsaw:* Dr. Shcherbakoff has been appointed to the chair of Clinical Therapeutics.—*Würzburg:* Dr. Anton Bühler has been recognised as *privat-docent* of Anatomy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following is the prize list for the winter session 1897-98:—Descriptive Anatomy: Junior.—A. Charles, first prize (£3) and medal; and R. H. Oulton, second prize (£1) and certificate. Senior—J. P. Byrne, first prize (£3) and medal; and C. R. Byrne, second prize (£1) and certificate. Practical Anatomy: First year—R. H. Oulton, first prize (£3) and medal; and T. C. Fitzgerald, second prize (£1) and certificate. Second year—C. R. Boyce, first prize (£3) and medal; and J. F. Peart, second prize (£1) and certificate. Third year—J. S. P. Stewart first prize (£3) and medal; and F. G. Fitzgerald, second prize (£1) and certificate. Practice of Medicine: G. W. Little, first prize (£3) and medal; and J. S. P. Stewart, second prize (£1) and certificate. Surgery: D. A. Fitzgerald, first prize (£3) and medal; and H. H. Swanzy, second prize (£1) and certificate. Midwifery: D. A. Fitzgerald, first prize (£3) and medal; and M. Gavin, second prize (£1) and certificate. Physiology: J. F. Peart, first prize (£3) and medal; and J. P. Byrne, second prize (£1) and certificate. Chemistry:

Miss M. J. Shire, first prize (£3) and medal; and L. C. E. Murphy and W. J. O'Doherty (equal), second prize (£1) and certificate. Pathology: J. S. P. Stewart, first prize (£3) and medal; and S. R. Godkin, second prize (£1) and certificate. Physics: Miss M. J. Shire, first prize (£3) and medal; and W. B. A. Moore, second prize (£1) and certificate.

PRESENTATIONS TO MEDICAL MEN.—At a meeting on March 29th of the Brixham ambulance classes in connexion with the Great Western Railway ambulance class, on the occasion of distributing the certificates and badges to the successful candidates, Mr. George C. Searle, M.R.C.S. Eng., of Brixham, Devon, was the recipient of a Tantalus case in recognition of his instructive lectures to the class.—Dr. Taylor Grant, late medical officer of health of Shanghai, has been presented with a silver tea service and also a numerously signed address from members of the foreign and native communities engrossed on vellum and handsomely bound in morocco. He was also presented with a farewell address by the members of the medical profession in Shanghai.—At an evening entertainment on Jan. 27th last, in the Barnsley-road board school, Wombwell, in connexion with the St. John Ambulance Association, Mr. D. B. Foley, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., the lecturer of the classes, was the recipient of a marble clock and bronzes.—Mr. John Joule, L.S.A., who had been in practice for some time at Somersham, on his leaving the village was presented by the inhabitants with an illuminated address, an umbrella, and a gold-nibbed swan fountain pen.—During the past winter, at Blagdon, under the auspices of the Axbridge District Technical Committee, a series of lectures have been given to the ambulance classes for men and nursing classes for women by Mr. T. O. Halliwell, L.R.C.P. Lond., M.R.C.S. Eng., and on the recent conclusion of the lectures Mr. Halliwell received from the ladies the gift of a hall-lamp as a token of appreciation of his services.—At the meeting of the Torquay Gardeners' Association held on April 1st an illuminated address was presented to Mr. R. Hamilton Ramsay, M.D., C.M. Glasg., in recognition of the valuable services which he had rendered to the association.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Treatment of Habitual Drunkards.

THE Home Secretary has arranged to introduce and explain the provisions of the Bill with regard to the treatment of habitual drunkards on Monday, April 25th.

The Army Medical Department.

The following question in the name of Mr. Carson appears in the notice paper, viz.:—"To ask the Financial Secretary to the War Office whether the Royal College of Physicians in Ireland, acting in the interests of the public and of the Army Medical Department, has refused, as asked by the War Office, to nominate two civil surgeons to serve as surgeons with the army in the United Kingdom and at what time the reforms in the Army Medical Department promised by the Secretary of State for War will be carried into effect."

Midwives Registration Bill.

The second reading of this Bill stands as the first order on Wednesday, May 11th, but whether it is taken then depends on the progress made with the Irish Local Government Bill. According to a resolution of the House the latter measure enjoys precedence over all other orders whenever it is put down and the intention of the Government is to take its various stages *de die in diem*. If, therefore, as is by no means improbable, the Committee stage is still in progress on May 11th nothing can be done then with the Midwives Registration Bill.

HOUSE OF COMMONS.

TUESDAY, APRIL 5TH.

Examinations for Sanitary Inspectors.

Lord Edmond Fitzmaurice asked the President of the Local Government Board if he was prepared to give effect to the recommendations of the Committee appointed by the Local Government Board in 1892 to frame a scheme for a Conjoint Board of Examination for Sanitary Inspectors for the purpose set out in the Public Health Act, 1891, s. 108 (2) (d), whether the Sanitary Institute had, with the approval of the Local Government Board, enjoyed a monopoly of the privilege of such examination since the aforesaid Act was passed; and whether other bodies had applied for recognition of their examination for this purpose; and if so, the reasons why a similar recognition to that accorded to the Sanitary Institute had not been given in their case.—Mr. Chaplain replied that the Sanitary Institute was the only body that had as yet been authorised under the Act in question. Their application was received before that of any other association; subsequently applications were made by other bodies, and no authorisation had yet been given in those cases in consequence of the desire of the Local Government Board to secure the constitution of one Joint Board of Examination, to include representatives of the Sanitary Institute and other associations referred to. A committee consisting of representatives of the different bodies was appointed on the recommendation of the Board to consider a scheme for this purpose. The Board had hoped that as the result of conferences difficulties which had arisen would be met, but as yet he regretted to say this had not been the case. If these difficulties were not removed without delay it would be necessary for him to take action at once.

A Case of Rabies.

Mr. Walter Long, in reply to Mr. McKenna, said that a case of rabies occurred in Devonshire some six weeks prior to the revocation of the muzzling order in that county, but the dog was one which was believed to have been exposed to infection some six months before it was killed and which had, in consequence, been strictly isolated and kept under close supervision. The action taken by the Board of Agriculture and the local authority at the time of the original outbreak rendered the extension of the order unnecessary.

Foreign Milk.

Mr. Wingfield-Digby asked the President of the Local Government Board whether he was aware that milk from abroad, strongly impregnated with poisonous acids, was being landed in this country and though there was no guarantee to show whether the said milk came from pure and sanitary dairies or from insanitary dairies and diseased animals yet this impregnated and stale stuff was allowed to be sold as fresh new milk to the detriment of public health and the discouragement of the British farmer and all honest traders; and, if he was aware of these facts, would the Government take immediate steps to put an end to this practice.—Mr. Chaplin replied: I am not aware that the facts are as stated in the question. If I had such information it would, of course, command my attention. There is one case, I am aware, in which it is alleged that in a particular instance milk which was supposed to have come from abroad contained 40 grains of boric acid to the gallon, but proceedings in that case have been instituted and it is now awaiting decision.

Death in Prison.

Mr. Davitt addressed to the Home Secretary a series of questions with reference to the treatment and death in prison of a man named Richard Holton who had been committed to prison for seven days in default of paying a fine of five shillings by the Aston magistrates.—Sir M. White Ridley replied: I have not had time as yet to consider the report of the inquest in this case, which is one that requires to be carefully looked into; but I am anxious to give the hon. Member the fullest information possible, and the facts, so far as I have been able to ascertain them, are these. The prisoner's health on reception was recorded as good; two days after he complained of sickness, was treated in his cell, and ordered to rest for two days. At the end of the two days commencing lung trouble was discovered. He was admitted to hospital and became seriously ill. He was unfit for removal on the day for his discharge, suffering from pneumonia of both lungs, but refused to have his wife informed until the following day, when two telegrams were sent at his dictation, the first to a wrong address which the prisoner himself gave. The wife arrived at the prison at a quarter to 11 at night, and the governor, being informed by the medical officer that the prisoner though dangerously ill might last a week, refused her admission and advised her to call early the next morning. The usual regulations as to visits are suspended in cases of serious illness, and the governor has an unfettered discretion in the matter. In the present case he appears to have committed a grave error of judgment which the commissioners deeply regret; but the governor is a humane man and I see no reason to doubt that in acting as he did, contrary both to the spirit and letter of the regulations, he acted in the *bond fide* belief that the life of the prisoner was not in immediate danger.

The Institute of Preventive Medicine.

Mr. Samuel Smith asked the Home Secretary whether the licence for the practice of vivisection of the British Institute of Preventive Medicine would be transferred to the new building on the Embankment contrary to the wish of the people of London, as shown by the petition to this House signed by 183,700 persons.—Sir M. White Ridley replied: Yes, after a very full consideration of every aspect of the question I have not thought it possible to refuse to transfer the registration of the Institute to their new and more suitable premises in Grosvenor-road.

Prosser's Well at Maidstone.

Mr. Henry J. Wilson asked the Secretary to the Treasury, in view of the fact that the chemical officers of the Inland Revenue were appointed referees in disputed cases of adulteration under the Sale of Food and Drugs Act, and that water was specially excluded from the operation of that Act under Clause 3, would he state whether it was in any way the duty of the chemical officers to undertake the analysis of water for sanitary purposes and act as referees in disputed cases and under what authority the chemical officers of the Inland Revenue recently analysed the water taken from a well at Maidstone, known as Prosser's Well, and in their report expressed the opinion that the water was not liable to contamination; whether, as a consequence of such report, the application to the court to close the well was refused; was he aware that this well was in close proximity to houses in which no less than 14 cases of enteric fever occurred during the recent epidemic; and whether, seeing that the report was not signed by the chief of the laboratory, the action of these chemical officers was sanctioned by the President of the Local Government Board.—Mr. Hanbury said that the question only appeared on the notice paper that morning and asked further time to prepare his answer to it.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, J. W., L.R.C P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Armley Sanitary District and the Workhouse of the Bramley Union.

BLAIR, G. M., M.B., Ch.B. Glasg., has been appointed House Physician to the Royal Hospital for Diseases of the Chest, City-road, London.

BOVEY, THOS. W W., M.R.C S.Eng., L.R C.P.Lond., has been appointed House Physician to the Norfolk and Norwich Hospital, Norwich.

BOWIE, J. C., M.B., C.M. Aberd., has been appointed Medical Officer and Public Vaccinator for the parishes of Sandsting and Aithsting, Shetland.

BRUCE, J., M.B., C.M. Edin., has been appointed an Honorary Medical Officer to the Leancholl Hospital, Forres.

BURTON, H., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health by the Marp'e Urban District Council.

CHILDE, C. P., F.R.C.S., L.R.C.P. Lond., has been appointed an Honorary Medical Officer to the St. John's Convalescent Home, Southsea.

CRAWFORD, D., M.B., C.M. Edin., F.R.C.S., has been appointed an Honorary Surgeon to the Stanley Hospital, Liverpool.

DU CANE, EDGAR, B.A., M.B., B.Ch., has been appointed Resident Medical Officer to Christ College, Brecon.

FAIRBANKS, WM., M.D. Edin., C.M., has been appointed Medical Officer for the Workhouse of the Wells Union.

FOWLER, J. S., M.B., C.M., M.R.C.P. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Extra-mural Clinical Tutor to the Edinburgh Royal Infirmary.

HICKMANN, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Coleford Sanitary District of the Frome Union.

HODGSON, G. G. G., L.R.C.P. Lond., M.R.C.S., has been appointed Police Surgeon for the Chertsey Division, Surrey, vice H. E. Daniell resigned.

MACLENNAN, E. M., M.B., C.M. Aberd., has been appointed an Honorary Medical Officer to the Leancholl Hospital, Forres.

MASON, F. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 4 District of the Flaxton Out-relief Union.

MAXWELL, J. B., B.A. Cantab., M.R.C.S., L R C P., has been appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City-road, London.

MILWARD, VICTOR F., B.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R C.P. Lond., has been appointed Resident Surgical Officer to the General Hospital, Birmingham.

RENSHAW, C. J., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Ashton-upon-Mersey Urban District Council.

ROBERTS, G. W., M.D. St. And., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Denbigh Urban District Council.

ROBINSON, B. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Stourport Urban District Council.

ROWE, W. T., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the West London Hospital, Hammersmith-road, W.

SCOTT, F. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gillingham Sanitary District of the Medway Union.

SMITH, J. W., M.D. Edin., C.M., has been re-appointed Medical Officer of Health by the Ryton Urban District Council.

STABB, ARTHUR F., M.B., B.C. Cantab., M.R.C.P., has been appointed Assistant Obstetric Physician to St. George's Hospital, London.

TURNER, A. C., M.B., C.M. Edin., has been appointed an Assistant Medical Officer to the Fisherton Asylum, Salisbury.

WILSON, A., M.B., C.M. Glasg., has been appointed Ettles Lecturer at Inverness.

YOUNG, J. Y. S., M.B., C.M. Edin., has been appointed a Resident Medical Officer to the Convalescent House, Corstorphine, Edinburgh.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary £80 per annum, with board, washing, and apartments, but no extra fees. Applications to the Clerk to the Guardians, Clerk's Offices, 45, Hamilton-square, Birkenhead.

BOROUGH OF MIDDLESBROUGH.—Medical Officer of Health. Salary £350 per annum, payable monthly. Applications to the Town Clerk, Middlesbrough.

CHESTER GENERAL INFIRMARY.—Assistant House Surgeon for one year. Salary £40 per annum, with residence and maintenance in the house.

CITY OF LONDON FREEMEN'S ORPHAN SCHOOL AND THE LONDON AND ROGERS ALMSHOUSES, Ferndale-road, Brixton.—Medical Officer, married. Salary £125 per annum. Applications to the Town Clerk's Office, Guildhall, E.C.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Bagillt-street, Holywell.

GENERAL HOSPITAL, Nottingham.—House Surgeon for two years. Salary £100, rising £10 a year to £120.

GENERAL INFIRMARY, Gloucester, and GLOUCESTERSHIRE EYE INSTITUTION, Gloucester.—Assistant Surgeon.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HOSPITAL FOR WOMEN AND CHILDREN at Leeds.—Non-resident House Surgeon for twelve months. Salary £90.

MIDDLESBROUGH COUNTY BOROUGH ASYLUM, Cleveland, Yorkshire.—Assistant Medical Officer, single. Salary £100 per annum, with furnished apartments, board, washing, and attendance.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months, board, apartments, and washing provided.

ROUSAY PARISH COUNCIL, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Applications to the Clerk of the Parish Council, Rousay, Orkney.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer for two years, unmarried. Salary £100 per annum, with board and lodging.

ROYAL CORNWALL INFIRMARY, Truro.—Honorary Ophthalmic Surgeon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

SCARBOROUGH HOSPITAL.—Senior and Junior Resident House Surgeons. The former for twelve months, salary £80 per annum, with board and lodging, and the latter for six months, salary at the rate of £50 per annum, with board and lodging.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, London.—Honorary Surgeon and Honorary Assistant Surgeons, Applications to Mr. T. J. Savage, 60, Moorgate-street, E.C.

THE HOSPITAL OF ST. FRANCIS, 145, New Kent-road, London, S.E.—Assistant Surgeon and Assistant Physician (out-patients only).

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon for one year. Salary £50 per annum, with board, residence, &c.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon for about two months. Salary 3 guineas a week, with board, washing, and travelling expenses. Also House Physician, and to act as Medical Registrar and Pathologist, for one year. Salary £100 a year, with board, lodging, and washing. Also House Surgeon, and to act as Surgical Registrar, for one year. Salary £100 a year, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer to visit and attend (including midwifery), the sick poor at their own homes, unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to W. Draper, Esq., De Grey House, York.

Births, Marriages, and Deaths.

BIRTHS.

BERRINGTON-STONER.—On April 9th, at Rio Lodge, Hove, the wife of C. Berrington-Stoner, D.D.S., L.D.S., of a son.

BUCKMASTER.—On April 5th, at 16, Northwick-terrace, N.W., the wife of George A. Buckmaster, M.D., of a daughter.

BROOM.—On Feb. 14th, 1898, at Sandgate, near Brisbane, Queensland, the wife of Arthur Robert Broom, M.R.C.S. Eng., L.R.C.P. Edin., of a son.

CULMER.—On March 30th, at Nassau, Bahamas, the wife of John J. Culmer, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MEYRICK-JONES.—On April 8th, at Church-street, Crewkerne, Somerset, the wife of A. M. Meyrick-Jones, M.B., B.S., F.R.C.S., of a son.

STANLEY.—On April 2nd, at Brabourne, Kent, the wife of Hubert Stanley, M.B. Cantab., M.R.C.S., L.R.C.P., of twins—boy and girl.

SYLVESTER.—On April 8th, at Leiston, Suffolk, the wife of Herbert Mayris Sylvester, M.R.C.S. Eng., of a son.

WAINEWRIGHT.—On April 2nd, at 39, Lee-terrace, Blackheath, the wife of Robert S. Wainewright, M.D. Lond., of a daughter.

MARRIAGES.

SAVORY—LEIGH BENNETT.—On April 13th, at Thrybergh, by the Rev. Gray Granville, rector of Ilam, uncle of the bride, assisted by the Rev. Canon Bartlet, Horace Savory, M.A., M.B., of Haileybury College, to Mary Ellinor Leigh, second daughter of the Rev. Canon Leigh Bennett.

SEAL—WARN.—On March 12th, at St. Paul's Cathedral, Calcutta, Charles Edward Baldwin Seal, M.R.C.S., L.R.C.P., of Darjeeling, to Jessie, second daughter of William Warn, of Tetbury, Gloucestershire.

DEATH.

KING.—On April 7th, at the English Nursing Home, Cairo, Thomas Percy King, M.B., B.C. Cantab., M.R.C.S., son of the late Dr. Thomas King, of Rochford, Essex.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 14th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 8	30·24	S.W.	0·08	110	69	45	51	58	Fine
,, 9	29·83	S.W.	0·45	104	62	50	50	52	Cloudy
,, 10	29·82	S.W.	0·08	83	57	52	53	55	Cloudy
,, 11	29·76	W.	0·19	105	62	48	49	52	Cloudy
,, 12	29·57	N.W.	...	94	57	45	45	47	Cloudy
,, 13	30·06	S.W.	...	103	61	40	45	47	Hazy
,, 14	29·85	S.W.	...	65	54	46	48	53	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. C. P. White: (1) Intestinal Obstruction due to Cicatricial Stricture of the Small Intestine; (2) Columnar-celled Carcinoma of the Œsophagus.—Mr. d'Este Emery: Secondary Growths from a Case of Carcinoma of the Breast.—Mr. G. B. Hunt: Extreme Contraction of the Stomach with some remarks on the Pathology of the Condition.—Dr. L. Dickinson: An Aneurysm of the Thoracic Aorta which Ruptured Externally.—Dr. P. Weber: Liver showing an Early Interlobular Type of Cirrhosis from a Case of Suppurative Pylephlebitis.—Dr. E. Bradford: Hæmatoma in a Hydronephrotic Kidney.—Dr. Garrod: A Case of Carcinoma of the Œsophagus Perforating the Aorta.—Dr. L. Freyberger: (1) A Brain with Three subsequent Hæmorrhages and a Heart from the same Case showing a well-developed Musculus Papillaris on the Mitral Valve; (2) The Minute Structure of an Anæmic Infarct of the Lung. Card Specimens:—Dr. C. D. Green: (1) A Stomach with Two Perforating Ulcers and a Fistulous Communication with the Colon; (2) A Lobulated Fibroma of the Nipple.

WEDNESDAY (20th).—ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Gt. George-street, Westminster, S.W.).—7.30 P.M. Papers:—Major H. E. Rawson: Anticyclonic Systems and their Movements.—Hon. F. A. Rollo Russell: Results of Observations on Haze and Transparency in 1897.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. H. Morland: Exhibition of Diatoms.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8 P.M. Exhibition of Cases.

THURSDAY (21st).—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Clinical Cases. Paper:—Mr. H. T. Pechell: On the Use of Ormsby's Ether Inhaler in General and in Dental Surgery, with remarks on Etherisation and on Dilute Solutions of Chloroform.

FRIDAY (22nd).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. F. Taylor and Mr. A. D. Fripp: A Case in which a Renal Calculus was Detected by the Roentgen Rays and successfully Removed.—Dr. J. R. Bradford: A Case of Thrombosis of the Superior Mesenteric Vein causing Intestinal Obstruction.—Mr. R. Johnson: A Case of Tuberculous Peritonitis in which Symptoms of Intestinal Obstruction resulted probably from Thrombosis of the Superior Mesenteric Vein.—Dr. L. Dickinson and Mr. W. A. Hubert: Raynaud's Gangrene in connexion with Parturition.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (18th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Lt. G. Reid: Sanitary Appliances.

WEDNESDAY (20th).—EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Mr S. Stephenson: Ophthalmia in Newly-born Children. (Post-Graduate Course.)

THURSDAY (21st).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. J. W. Clarke: Details of Plumbers' Work.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

UNSOUGHT PUBLICITY.

DR. THOMAS G. NICHOLSON writes to us to say that he recently took a house at Marlow and that paragraphs promptly appeared in the local journals unknown to, and unsought by, himself. On his return to town he found a letter awaiting him from the editor of the "principal paper" asking for a paragraph containing personal particulars. Dr. Nicholson naturally enough replied that he could do no such thing, although he had no doubt that the editor was actuated by the kindliest of motives. The mistaken kindness of friends and would-be friends has before now placed medical men in a very unpleasant situation, but in these days of commercialism the only thing to do is to follow Dr. Nicholson's example—namely, protest and, if possible, prevent such action.

POLITICS OR PRACTICE.

To the Editors of THE LANCET.

SIRS,—There has appeared quite recently in several local papers this advertisement:—

> "WANTED, a RESIDENT MEDICAL PRACTITIONER for eight large villages. A splendid opening for an energetic man who would attend to his profession.—Address for particulars, Mr. —— of ——."

I applied for particulars and received a letter which purported to come from Mr. —— making an appointment for me to meet Mr. X. I wired to Mr. —— suggesting a more convenient day and received a letter from Mr. X agreeing to my plan. I was rather puzzled to account for both letters being apparently *written by one hand*. On my arrival I was met by Mr. ——, who had been deputed by Mr. X. to take me to the latter's house, and as we journeyed thither I learned that Mr. —— was acting only as advertising agent and had otherwise nothing to do with the matter. He said that Mr. X. had just been defeated in the county council election by the resident medical man, of whose existence I had not heard when I set out on my voyage of discovery; that the said practitioner was a red-hot politician, and that, of course, he could not attend to politics and his practice, and that some people were complaining of the practitioner's neglecting them.

When we arrived at a road branching off to Mr. X.'s house I became curious to know where the doctor lived. "Straight on that way, near the bottom of the village," said the deputy. "Thank you," said I, "Good day, I will go on and see him"; and I left Mr. ——. I found

the doctor knew all about it. One man had been down already, and did not come near him. He, however, did not think the chances very good. Mr. —— had voluntarily assured the doctor of his acting only as an agent in the business, of his regret and disapproval, and of his personal intention to retain him for the family doctor as he had always been. Though I do not for an instant suggest that Mr. X. is not animated by the most disinterested motives (by exactly the same public spirit, indeed, as no doubt prompted the offer of his services to his neighbours as their county councillor) still I hope that my plain narrative of the facts will prevent all other medical men seeking an opening from proposing to supply his "want" in this case.

I am, Sirs, yours faithfully,

March 29th, 1898. THOS. M. WATT.

THE TREATMENT OF OTORRHŒA.

DR. J. R. LOGAN of the Liverpool Infirmary for Children, writing in the *Caledonian Medical Journal*, recommends that in otorrhœa the auditory meatus should be cleansed by a preliminary syringing or douching followed by wiping with a series of cotton-wool swabs or brushes. If these are sufficiently soft and made to project for an inch or more beyond the point of the probe to which they are attached they furnish a safe and very efficient means of removing the discharge. For subsequently keeping the meatus clean he prefers the double cyanide of zinc and mercury, a substance which was introduced as a surgical dressing by Lord Lister in 1893. There are two varieties of it in the market, one of them having the natural white colour and the other being tinted pink by means of rosolane (hydrochloride of mauvine). The coloured salt when rubbed in a mortar with water forms a soft flocculent powder, which remains much better in suspension than the white substance. The proportion usually employed is one part of the cyanide to twelve or twenty of water, and two or three drops of the warm mixture are instilled into the deepest part of the meatus by means of a fine glass pipette, the point of which is provided with a piece of crow-quill sized rubber tube projecting about 1 in. beyond the glass. This is repeated two or three times a week, but if convenient it may be done daily. By this means a recent case of otorrhœa may be kept absolutely sweet and the most profuse and offensive discharge may be rendered quite free from smell by a single operation.

A QUESTION OF TREATMENT.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly offer a hint as to treatment in a case of redness of the integument of the nose? The patient is a woman, aged twenty-eight years, and she used to suffer frequently from dyspepsia, but under appropriate dietary this is seldom *en évidence* now. The trouble seems to be chiefly due to dilatation of the small veins and to be passive in character, but the colour occasionally becomes vividly red and this chiefly when, owing to some indiscretion, an attack of indigestion occurs. Massage appears to have but little influence on the case. I am, Sirs, yours faithfully,

April 11th, 1898. VENULE.

AN APPEAL.

To the Editors of THE LANCET.

SIRS,—I desire to draw the attention of charitable members of the profession to the case of the widow and family (five in number) of the late John Page Hentsch, M.R.C.S.Eng. and L.S.A., of Coldharbour-lane, Brixton, S.W. Mr. Hentsch died in January last after an illness of nearly a year's duration, leaving those dependent upon him totally unprovided for. By the aid of friends it is hoped to provide for three of the children, but pecuniary help is wanted to tide the family over the present period of distress. I shall be glad to receive and acknowledge on behalf of the widow and family any contributions which may be sent to me. I am, Sirs, yours faithfully,

410, Brixton-road, S.W., April 11th, 1898. G. DAVID KNIGHT.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—May I ask if you or any of your readers know of any home where a lady can be received who a year ago underwent the operation of colotomy for stoppage of the bowels? She would require medical and nursing attention and board. She has £52 a year and is sixty-six years old. I am, Sirs, yours faithfully,

April 12th, 1898. G. S.

"AN OBSTINATE CASE OF HERPES."

To the Editors of THE LANCET.

SIRS,—I have had in my hospital and private practice several such cases of chronic or recurrent herpes præputialis as is described by Mr. J. Firench Blake in THE LANCET of April 9th. He should be quite sure of the absence of a specific cause and should ascertain whether his patient's wife suffers from leucorrhœa; if so and this is cured the herpes will probably disappear. Excessive coitus is, of course, a frequent cause. In several cases I have seen well-marked varicose veins in the prepuce and around the glans. In two of these cases I have tied such veins and the herpes disappeared permanently. I agree with Unna in thinking that many of these recurrent cases are due to the compression of nerve terminals brought about by venous engorgement, and certainly find that most cases exhibit more or less enlarged veins. As regards treatment, if any one of the above-mentioned causes be present it should be remedied. If the foreskin be long it should be removed. Sponging with cold water should be practised morning and night. The herpes having been for the time being removed coitus should be forbidden for some weeks and glycerine and tannin, or, better still, sulphate of copper (20 gr. to 1 oz.), or sulphate of zinc (40 gr. to 1 oz.), applied to the part on lint. Tincture hamamelidis may often also be found useful, but whichever is selected it should be frequently removed, the part washed, and the application renewed, and in all cases the foreskin should be separated from the glans by the lint. Greasy applications should never be applied during the interval of the attacks and during the attack I think that cocaine while relieving the irritation tends to increase the trouble.

I am, Sirs, yours faithfully,

Frognal, N.W., April 11th, 1898. G. HAY REYNOLDS, M.B. Aberd.

TO CONTRADICT A RUMOUR.

To the Editors of THE LANCET.

SIRS,—It has come to the knowledge of the directors of Dr. Tibbles' Vi-Cocoa (1898) Limited, that a report is in circulation that a Mr. Harness is in some way connected with or interested in the business of Dr. Tibbles' Vi-cocoa (1898) Limited. Will you permit me to contradict this report publicly in your columns? It is wholly without foundation. I speak with authority on the matter, for I am now secretary to the present Vi-Cocoa Company; I was secretary to the former Vi-Cocoa Company during the whole period of its existence; and I was in the employ of the owners of the business before either company was formed. Hence I am in a position to state positively that no person of the name of Harness has ever been in any way concerned or interested in or in any way connected with that business or either company.

I am, Sirs, yours faithfully,

G. BROOKE SMALLEY,
Secretary to Dr. Tibbles' Vi-Cocoa (1898) Ltd.

Bunhill-row, London, E.C., April 13th, 1898.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In your last issue, under the head of "Appointments," you have it that Dr. Bond is re-appointed medical officer of health for Chepstow. It is an error. I am medical officer of health for the *urban* district of Chepstow, Dr. Bond holds a large *combined* district of which the Chepstow rural district forms part; hence the mistake.

I am, Sirs, yours truly,

Melrose House, Chepstow, April 12th, 1898. E. P. KING.

*** We regret the error.—ED. L.

Dr. T. R. Atkinson.—The names of numerous institutions will be found in our advertisement columns, also in Burdett's "Hospitals and Charities." Probably, however, most establishments would charge a higher fee than that mentioned. As to the "cure" mentioned we should advise our correspondent to have nothing to do with it.

C. O. H.—The plate is incorrect, but we doubt if it can be called illegal. The offenders would fall back upon the double meaning of the title of "Dr." as a defence. The matter is one that should be referred to the General Medical Council.

An Old L.S.A. Eng. cannot practise in all parts of America on his diploma. He will find in THE LANCET of Sept. 12th and Oct. 3rd, 1896, an account of the formalities required by the different States.

J. D. M. would be glad to know of a thoroughly reliable institution for inebriates where a man could be received at a moderate charge.

Assistant.—The fee belongs to the principal.

During the week marked copies of the following newspapers have been received: *Nottingham Guardian, Berkshire Chronicle, Wiltshire Times, Consett Guardian, Westmorland Gazette, Halifax Guardian, Hereford Times, New York Herald, Lytellton Times, Todmorden Advertiser, Times of India, Pioneer Mail, Scotsman, Yarmouth Advertiser, Oxford Times, Architect, Derby Express, Rugby Advertiser, Hastings Times, Builder, Glasgow Herald, Isle of Wight Observer, Liverpool Daily Post, Englishman (Calcutta), Southend Echo, Middlesbrough Evening Telegraph, Bristol Mercury, Lancashire Express, Dundee Courier, South Wales Daily News, Llandudno Directory, Cheltenham Mercury, Hawick Advertiser, Yorkshire Post, Eastern Morning News, Western Morning News, Leeds Mercury, Brighton Argus, Salisbury Journal, Leek Times, Croydon Guardian, Enfield Chronicle, Walsall Advertiser, Sussex Daily News, Newport Advertiser, Herald of Wales, Birmingham Daily Post, Southampton Observer, West Briton Advertiser, Hemel Hempstead Gazette, Manchester Courier, Sanitary Record, Free Press (West Bromwich), Mining Journal, Local Government Chronicle, Reading Mercury, Brighton Gazette, Public Health Engineer, Surrey Advertiser, Hertfordshire Mercury, Local Government Journal, City Press, La Revue Mame (Paris), Vegetarian, Civil and Military Gazette (Lahore), The Age (Brisbane), Eastern Daily Press, Manchester Evening Chronicle, Hong-Kong Weekly Press, Notes and Queries, Lloyd's Weekly Newspaper, Kendal County News, West Middlesex Herald, Lytham Times, Kidderminster Times,* &c., &c.

Communications, Letters, &c., have been received from—

A.—Dr. T. R. Atkinson, Sherborne; Automobile Club of Great Britain, Secretary of; Dr. R. J. Aitken, Glasgow; Mr. C. Abbott, Burghead; Mons. J. Astier, Paris; Dr. H. H. Aitchison, Wallsend-on-Tyne; Mr. E. Armitage, Wailuku, Hawaiian Islands; Messrs. Allen and Hanburys, Lond.; *American X-ray Journal*, St. Louis, Editors of.

B.—Mr. H. J. Blackett, Lond.; Dr. F. T. Bond, Gloucester; Friedr. Bayer and Co., Elberfeld; Mr. F. L. Benham, Lond.; Mr. T. R. Bradford, Lond.; Mr. C. A. G. Browne, Lond.; Birkenhead Union, Clerk of; B. B. B., Lond.; Birmingham General Hospital, House Governor of; Mr. S. H. Benson, Lond.; Messrs. Blondeau et Cie, Lond.; Dr. P. H. Boyden, Thorpe Hamlet; Borough of Middlesbrough, Town Clerk of; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. J. E. S. Barnett, Kingston Hill.

C.—Mr. A. Cuff, Sheffield; Mr. T. R. Collins, Lond; *Cambridge Daily News*, Cambridge, Editor of; Messrs. J. and A. Churchill, Lond.; Mr. H. Connop, Bradford; Dr. C., Lond.; Mr. R. Cuffe, Woodhall Spa; Mr. F. W. Clarke, Manchester; Mr. F. Collins, Halling; Messrs. H. Cook and Co., Lond.; Mr. T. Cooke, Lond.; Mr. R. A. Clarke, Teddington; Mr. T. R. Collins, Bath.

D.—Mr. G. L. Daube, Frankfurt-on-Maine; Surgeon-Lieut.-Col. S. L. Dobie, Inverness; Dunlop Pneumatic Tyre Co., Lond.; Mr. Elliott Daunt, Sevenoaks.

E.—E., Lond.

F.—Mr. G. Fowler, Lond.; Foreign Press Office, Paris; Messrs. Ferris and Co., Bristol; Mr. H. A. Fall, Braunton.

G.—Dr. J. J. Grant, Edinburgh; General Medical Council, Lond., Registrar of, Lond.; Mr. A. E. Griffin, Lond.; Glasgow Royal Infirmary, Superintendent of; Guy's Hospital Medical School, Lond., Dean of.

H.—Mr. L. M. Haynes, Evesham; Messrs. C. J. Hewlett and Son, Lond.; Mr. W. Herbert, Birkenhead; Mr. J. W. Howell, Docking; Hospital for Women and Children, Leeds; Messrs. Hazell, Watson, and Viney, Lond.; Dr. T. Harris, Manchester; Mr. Hubert, Billingshurst; Mr. W. Hay, Hull; Mr. J. Heywood, Manchester; Mr. F. S. D. Hogg, Tillingham; Dr. S. Hawley, Walsall; Mr. Reginald Harrison, Lond.; Dr. William Horrocks, Bradford.

I.—*Ironmongers' Chronicle*, Lond., Manager of.

K.—Mr. A. Kingston, Royston; Dr. H. Kenwood, Stoke Newington; Messrs. R. A. Knight and Co., Lond.; Mr. G. D. Knight, Lond.

L.—Mr. J. A. Lunnis, Lond.; Dr. J. F. Little, Lond.; London and Provincial Dairy Co, Lond.; Messrs. T. Lupton and Co., Manchester; Mr. J. Lloyd, Chirk; Locum, Lond.; L.R.C.P., Banbury.

M.—Mr. William Mason; Medical Society of Victoria, Melbourne; Middlesbrough County Borough Asylum, Clerk of; Mr. J. C. McWalter, Dublin; Mr. R. O. Moon, Winchester; Messrs. J. Murdoch and Co., Lond.; Mr. R. Margerison, Winchester; Dr. H. Macnaughton-Jones, Lond.; M. O. W., Lond.; Milk Preparations Co., Brentwood.

N.—Mr. W. G. Nash, Bedford; Dr. Nissim, Paris; Messrs. Newton, Chambers, and Co., Sheffield; Dr. J. Norton, Lond.; *Newcastle Daily Journal*.

O.—*Occidental Medical Times*, Sacramento, U.S.A., Editor of; Messrs. Orridge and Co., Lond.; Omicron, Lond.

P.—Mr. J. Pollack, Glasgow; Mr. E. Pittway, Thaxted; Peacock Chemical Co., Lond.; Dr. T. H. S. Pullin, Sidmouth.

R.—Dr. H. M. Rigby, Lond.; Mr. H. W. Raich, Wimbledon; Mr. Mayo Robson, Leeds; Revolution Cycle Co., Dublin; R. M., Lond.; Royal Cornwall Infirmary, Truro, Secretary of; Messrs. Reynell and Son, Lond.; Dr. J. Ryan, Finnea; Royal Hospital for Children and Women, Lond., Secretary of; Mrs. A. Rowley, Lond.; Mr. J. F. Rawdon, Birkenhead.

S.—Mr. S. Snell, Sheffield; Society of Apothecaries of London, Secretary of; Mr. G. P. Streeter, Lond.; Dr. Sydney Stephenson, Lond.; Dr. R. Saundby, Birmingham; Mr. F. W. Sears, Lond.; Sanitas Co., Lond., Managing Director of; Mr. W. Slater, Cambridge; North Staffs Infirmary, Stoke-on-Trent, Secretary of; Mr. W. H. Smith, Manchester; Messrs. Street and Co., Lond.; Messrs. Street Bros., Lond.; Messrs. T. Smith, Lond.; Mr. E. Sharp, Truro; Mr. Morton Smale, Lond.; Mr. T. J. Savage, Lond.

T.—Dr. J. C. Thresh, Chelmsford; Tadcaster Union, Clerk of; Mr. F. W. Thornton, Huddersfield; Messrs. Teff and Co., Bristol; Dr. H. N. Taylor, Lond.

U.—University College, Lond., Dean of; Mr. J. R. Upton, Lond.; Mr. J. C. Umney, Lond.

V.—Dr. G. R. Vicars, Wood Dalling.

W.—Dr. A. McC. Weir, East Sheen; Miss Woodward, Folkestone; Dr. A. G. Worton, Nuneaton; Wolverhampton and Staffs General Hospital, House Governor of; Messrs. J. Wright and Co., Bristol; Messrs. Wills, Lond.; Mrs. L. Williams, Lond.; Dr. Walker, Middlesbrough.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. S. E. Atkins, Pinhoe; Mr. R. R. Anderson, Fern Hill; A. B., Taunton; Apothecary, Lond.; Alpha, Blackburn; Mr. G. J. Arnold, New Quay; African, Lond.

B.—Mr. J. Broom, Ottery St. Mary; Dr. F. Bolster, H.M.S. *Victory*, Portsmouth; T. B. Browne, Ltd., Lond.; Beta, Lond.; Booth-Clarkson, Liverpool; Messrs. Brown, Gould, and Co., Lond.; Bennett, Lond.; T. J. Bemridge, Exeter; Mr. W. Buck, Manchester; Messrs. W. H. Bailey and Son, Lond.; Dr. A. Butler, Epsom; Bona Fides, Lond.; Brighton, &c., Throat Hospital, Secretary of.

C.—Mr. F. A. Cotton, Dersham; Messrs. A. Cohen and Co., Lond.; Mr. J. J. Culmer, Nassau, Bahamas; Messrs. Cooper and Preece, Ross-on-Wye; Clinical, Lond.; Cortland Wagon Co., Lond.; Mr. H. A. Collins, Saxmundham; Mr. J. B. Cameron, Lond.; Messrs. J. A. Carveth and Co., Toronto; Dr. H. W. Cross, Newcastle-on-Tyne; Dr. W. J. Codrington, H.M.S. *Hero*, Portsmouth; Centum, Lond.

D.—Mr. M. G. Davies, Penygroes; D. P. C., Lond.; Doctor, Huddersfield; D.P.H., Lond.; Delta, Lond.

E.—Mr. O. Edwards, Leominster; E. R., Lond.

F.—Mr. A. C. Farrington, Shelfanger; F. M. L., Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.; Dr. F., Bury; F. S., Lond.

G.—Mr. H. J. Gibbs, Singapore; Dr. R. Griffith, Netherton; G., Manchester; Messrs. Gilyard Bros., Bradford; Gateshead Dispensary, Secretary of; G. B., Lond.

H.—Dr. C. A. Hill, Liverpool; Mr. W. C. Hearnden, Leatherhead; Dr. J. Hunter, Leicester; H. C., Bootle; H. F., Lond.; Mr. W. Halley, Lond.; Mr. E. J. Hayford, Cape Coast Castle.

J.—Dr. Jones, Lond.; Junius, Lond.; Mr. John, Runcorn; Mr. F. H. Jacob, Westbury.

K.—Mr. W. B. Kerr, Hindley; Dr. Keys, Castlefin; Messrs. Keith and Co., Edinburgh.

L.—Lady Longmore, Woolstone; Mr. P. B. Le Franc, Langla, India; Launceston General Hospital, Tasmania, Chairman of; L. P., Tetbury; Lamorna, Lond.; Mr. B. W. Lamb, Albrighton.

M.—Dr. A. Mackay, Crook; Mr. J. Maunsell, Onslow, West Australia; Mr. H. Morton, Birmingham; Mr. P. Möller, Lond.; Mental Nurses' Coöperation, Lond., Secretary of; Mr. G. F. W. Meadows, Otley; Malo, Lond.; Dr. F. K. March, Bradford; M.O.H., Lond.; Manchester Hospital for Consumption, Secretary of; Dr. P. A. McCarthy, Killeagh.

O.—Oculus, Lond.

P.—Mr. F. Piggott, Cambridge; Parish of St. Luke, Chelsea, Clerk of; Permanent, Lond.

R.—Dr. A. Robinson, Rotherham; Richmond, Lond.; Dr. C. Reinhardt, South Stoke; Mr. A. Rainford, Port Dinorwic.

S.—Mr. W. Smith, Aberdeen; Mr. W. H. Smith, Weston; Dr. W. Smith, Bath; Mr. J. S. Sharman, Lond.; St. Mungo's College, Glasgow, Secretary of; Mr. J. Stretton, Wokingham; Staffs General Infirmary, Secretary of; Sobriety, Lond.; Messrs. J. P. Segg and Co., Lond.; Spes, Lond.; Surgeon, Kettering; Scapula, Lond.; S., Lond; Mr. J. Sampson, York; Mr. A. Speight, Shrewsbury; Statim, Lond.; Sigma, Lond.; Messrs. Sykes, Josephine, and Co., Lond.; Mr. J. H. Stuart, Ballycastle; Mr. J. M. Slimon, Kirkintilloch; Sanitas, Lond.

T.—Mrs. Theobald, Leicester; Mr. J. Thin, Edinburgh.

U.—Urbs, Lond.

V.—Mr. J. M. Vallance, Thornley; Veritas, Lond.

W.—Dr. R. S. Wainewright, Lond.; Dr. H. Woothington, Scarborough; Whitwell, Shrewsbury; Warneford Asylum, Medical Superintendent of; Mr. J. F. Walker, Swallowfield; Walters, Lond.; Messrs. Widenmann, Broicher, and Co., Lond.

X.—X. Y., Lond.; X., Lond.; X., Clitheroe.

Y.—Mr. R. Yates, Lond.

Z.—Z., Lond.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.
Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

ABSTRACT OF

The Hunterian Lectures

ON

THE SURGERY OF THE KIDNEY.

Delivered before the Royal College of Surgeons of England on March 21st, 23rd, and 25th, 1898,

BY HENRY MORRIS, F.R.C.S. ENG.,

SURGEON TO THE MIDDLESEX HOSPITAL.

LECTURE II.[1]

Delivered on March 23rd.

RENAL CALCULUS; THE DIFFICULTIES AND ERRORS IN DIAGNOSIS IN THEIR RELATION TO EXPLORATION OF THE KIDNEY; UNSUSPECTED, QUIESCENT, AND MIGRATORY CALCULI.

MR. PRESIDENT AND GENTLEMEN,—To-day I wish to draw attention to some renal calculous disorders. If I put them in the very forefront of surgical affections of the kidney I do so for the following reasons: 1. They are the most frequent and most painful of the surgical diseases of the kidney. Probably no disease, except acute tetanus, is capable of causing worse suffering. 2. Renal calculus, whilst slowly destroying the kidney, often physically disables its victim by its unrelenting irritation and its unyielding resistance to every form of medical and dietetic treatment. 3. No disease gives rise to such a variety of morbid changes in the kidney as calculus and none is more certainly fatal when allowed to progress without surgical interference. 4. Few operations in surgery are so successful as nephrolithotomy and no great operation is followed by a smaller mortality. Nephrolithotomy gives absolute cure, saving the kidney from progressive destruction and the patient from what at any moment may prove to be an imminent danger to life. 5. Renal surgery will grow in confidence and in favour with the profession and the public as nephrolithotomy anticipates and displaces nephrotomy and nephrectomy. I attempted to show in the latter part of the first lecture that nephrectomy is being rapidly restricted in its application as advances are made in ureteral operations. It may also be safely asserted that nephrotomy, at present the most frequent operation resorted to for calculous affections, will be required but rarely if nephrolithotomy is performed more early and more often. Calculous pyonephrosis is the result of long-standing irritation and progressive destruction of the kidney, and there is no reason why it should ever occur if physicians would recommend and surgeons would practise early operations for stone in the kidney. That this is a consummation much to be desired is seen by comparing the mortality of nephrolithotomy with that of nephrotomy and nephrectomy for calculous conditions. The figures are as follows:—Nephrolithotomy mortality, 2·9 per cent; nephrotomy, 23·25 per cent.; nephrectomy, 29·4 per cent. 6. Another reason why calculous disorders take so prominent a lead among the surgical affections of the kidney is because of the difficulties and errors attending their diagnosis.

When calculi have been previously passed, when well-marked attacks of renal colic occur, when crystals of uric acid or calcium oxalate are frequently found in the urine, and when the urine is intermittently mixed with a good deal of blood or persistently contains a microscopic quantity, there are the strongest *a priori* grounds for thinking that a stone is present. This evidence is strengthened if attacks of colic and hæmaturia are readily induced by exercise or jolting and readily subside with rest and if a sharp pain or distinct tenderness is always caused by bimanual examination of the renal region. In many cases, however, mistakes in diagnosis are bound to arise. Morbid conditions other than stone will be found from time to time in cases in which the character of the pain and the state of the urine point to calculus as the probable cause. These mistakes are apt to excite a prejudice against renal exploration; but the results obtained by those who have had large practice in renal surgery ought to correct this. The experience gained by operations has taught us much as to what the conditions are which cause symptoms typical of stone when no stone exists.

In 1892 I published some lectures[2] on the conditions simulating renal calculus as verified by surgical exploration in 28 cases. To these I now add 16 cases, making 44 in all. In a few instances a calculus was possibly in the ureter at the time of the exploration, because one was passed some little time subsequently. But in the greater number of the 44 cases some other morbid state of the kidney was found and remedied. It is certain that the diagnosis of calculus, though incorrect, was advantageous to these patients for the very reason that it led to the exploration and in this way to the discovery of the true cause of the disease. The expression "negative exploration" is often applied to every operation in search of renal calculus which does not result in the discovery of a stone. This expression is very misleading. It is not a "negative" result to find and excise commencing foci of tuberculous disease, to fix a misplaced or freely shifting kidney, to open and scrape away half a dozen small abscesses or suppurating cysts, to excise a solid renal or peri-renal tumour or a tense cyst, to liberate a kidney hampered by tough adhesions, or to detect and divide a ureteral stricture or obstructing valve. Yet these are some of the conditions which have been met with in the search for stone in the kidney and which in many instances have been most successfully cured. I have explored several cases in which the diagnosis was very doubtful but the severity of the sufferings so intense that the patients have willingly submitted to an operation. The exploration has proved the absence of a calculus but has revealed a degree of mobility behind the peritoneum altogether out of proportion to any mobility detectable by clinical examination. In these cases complete relief has been obtained by nephropexy. In other cases I have found instead of calculus the kidney more or less displaced, and though little, if at all, moveable yet greatly engorged with venous blood owing to distortion of the veins at the hilum. In other cases, again, the kidney has been swollen and congested with venous blood, obstructed by the pressure of tough and condensed perinephric cellular tissue. The relief which is given by the so-called "negative exploration" in cases such as I have referred to is, to my mind, a striking illustration of the indirect benefits which nephrolithotomy has conferred on suffering humanity.

Another important class of cases in which the symptoms simulate renal calculus is *ureteritis*, a disease to which more attention seems to have been given in France and Germany than elsewhere. As long as nephrotomy was limited to cases in which the kidney was converted into a great abscess the ureter was never seen in the living human body; but since nephrolithotomy took its place as a recognised operation, and an exploratory incision with a view to nephrolithotomy has been considered justifiable because proved to be safe, the morbid states of the ureter have by degrees come to be better known and operative measures have been adopted for their improvement or cure.

I feel sure that cases of so-called nephralgia will become rarer and rarer, (1) if due care is used in the clinical observation of patients supposed to be suffering from renal calculus, (2) if proper care is taken in the selection of cases for operation, and (3) if a more thorough and methodical exploration is made of the kidney *and ureter* than is, I believe, customary at present.

There are many conditions outside the kidney, as well as those connected with that organ, which give rise to symptoms suggestive of renal calculus. I have known instances of each of the following diseases being the subject of this mistake. (*a*) Gastric ulcer; (*b*) malignant and tuberculous growths in the intestines; (*c*) intestinal adhesions, whether involving the renal pedicle or not; (*d*) aortic or cœliac aneurysm stretching the ureter or renal vessels; (*e*) spinal disease; (*f*) vesical calculus; (*g*) abscess and calculus in the prostate; (*h*) growths in the bladder; (*i*) ovaritis; (*j*) tuberculous disease of the Fallopian tube; (*k*) a gallstone in the cystic duct. Still, there certainly are cases in which neither within nor without the urinary organs has anything been discovered to explain continuous discomfort or attacks of paroxysmal pain in the renal region, and yet complete relief has followed an exploratory operation. These are the cases which we are

[1] Lecture I. was published in THE LANCET of April 16th, 1898.

[2] Brit. Med. Jour., vol. i., 1892.

apt to call nephralgia and these the only operations which we can properly speak of as "negative explorations." Nor do I think we must quite rely upon a statement which has been put forward with some authority to the effect that paroxysmal renal pain or so-called nephralgia is never associated with neuralgia in other situations and has never been relieved or cured by anti-neuralgic remedies. We do not get well-marked cases of the kind in this country, nor do I suggest that all the cases of renal pain which are cured by renal exploration are of malarial origin; but nephralgia of malarial origin would seem to be known in other countries, and there is reason therefore for thinking it may from time to time be met with in our own in persons who have lived much abroad.

I recall a short but suggestive contribution to the *Medical Times* on Nephralgia due to Malarial Poisoning, by an old pupil, Mr. F. W. Kirkham, who was formerly surgeon to the Royal West India Mail, and whose name is associated with a most successful case of ureterotomy for impacted calculus.[3] Mr. Kirkham therein reports the case of an engineer whom he was called to see when at Colon, in the Isthmus of Panama, who had twice suffered from intermittent fever. This young man (aged twenty-five years) was seized suddenly with severe dull aching pain in the right loin, varied at intervals by paroxysms of severe shooting pains extending down the corresponding thigh. After lasting about four hours they passed off attended by profuse perspiration. Similar attacks occurred on the two following days, and again on the fourth day, when he was first seen professionally. Mr. Kirkham found that the temperature was 102·4° F., the pulse was 108, the skin was dry, and the tongue was clean. There was no enlargement of the liver, spleen, or kidney, but there was tenderness in the right loin. The urine, though alkaline, was free from any abnormal sediment. Morphia relieved pain and promoted sleep, and 20 grains of quinine prevented the recurrence of the attack on the following day, and 15 grains had the same effect on the day after. As soon as the quinine was discontinued the attacks recurred, but a return to the quinine and subsequently a change of climate enabled him to enjoy perfect health. Mr. Kirkham adds: "During the past two years I have had four patients under my care who after recovering or during their recovery from malarial fevers have been seized with daily recurring attacks of pain in the region of the kidney, presenting symptoms very like those due to the passage of a renal calculus."

Tiffany of Maryland[4] speaks of having seen a number of cases of malarial hæmaturia in which it would seem that a history of intermittent or remittent fever was often wanting, but the patients had a sallow complexion, which, however, might have been wrongly attributed to the affection for which surgical relief was sought.

Hopes were entertained that the Roentgen rays would be of service in determining the presence or absence of renal calculi, but hitherto they have afforded but little help in this direction. In time possibly they will be able to render more assistance than they have yet done, but if they demonstrate with certainty the presence of a calculus without being also able to reveal the other morbid conditions remediable by operation which mimic calculus they will, I fear, be the means of putting back renal surgery by deterring many patients from submitting to surgical explorations who can be cured by no other treatment than an operation.

"UNSUSPECTED RENAL CALCULUS."

I have pointed out that there are numerous morbid conditions other than renal calculus which cause typical renal colic. Conversely, there are many cases in which the symptoms due to renal or ureteral calculus are not referred to the kidney or ureter at all, but to some other organ. It is also well known that a calculus for a long time may cause no symptoms whatever. If such silent, lurking calculi could be discovered and removed many deaths from calculous anuria, much illness and suffering from perinephric abscesses and renal fistulæ and many kidneys gradually undergoing atrophy or disorganisation might be saved by well-timed operation. Unsuspected calculi group themselves into two classes: those which do not excite symptoms and those which cause symptoms which are not referred to the kidney or ureter.

A. Calculi which do not cause symptoms.—I might quote several cases in which a calculus after existing for years has set up perinephric abscess without having previously caused any definite renal symptoms. A calculus may grow silently to such a size as to be felt on palpating the abdomen without causing any subjective symptoms. I have met with three or four such cases. I will epitomise one of them. In May, 1894, I saw a woman, aged twenty-seven years, with Dr. Ford Anderson, who for two or three years had suffered from pain and sense of weakness in her back, more especially in the left side. About four weeks before I saw her she began to pass muco-pus in alkaline urine, and five days before she was seized with violent pain in the left renal region, which lasted many hours, in spite of morphia injections. Following upon this attack were several rigors, a temperature of 105° F., more or less continuous pain in the left side, and some fulness in the left flank. When I saw her she was extremely ill, with a hectic flush on her cheeks, widely dilated pupils, a small, rapid, weak pulse, a furred tongue, and very marked nervous depression and anxiety. She complained of pain over the left kidney, but had never felt pain and was quite unaware of anything wrong in the right kidney. On the *right* side there was a hard irregular swelling plainly to be felt in the loin and through the anterior abdominal parietes. Through an incision in the right semilunar line the *left* kidney was made out to be larger and more globular in form than normal. It was quite impossible to be sure that the enlargement was due to anything other than simple hypertrophy. At the inner and lower border of the *right* kidney was felt a lump, which was obviously a large calculus filling the infundibulum and projecting into the upper part of the ureter. Through an oblique incision in the *right* loin a calculus weighing 830 grains was removed.

It was, I believe, little more than a coincidence that after this operation on her right kidney the patient lost all her pain on her left side. I think the relief she felt was owing to the stone, which was blocking the left ureter, slipping back into the renal pelvis during the movements requisite for the operation, or under the relaxing influence of the anæsthetic. It was plain, for the following reasons, that the pus in the urine, both before and after the nephrolithotomy, must have come from the left kidney: (1) the urine remained unchanged by the operation; (2) the right ureter was completely blocked before the operation by the large stone removed, to which the whole infundibulum was tenaciously adherent; (3) after the operation all the urine secreted by the right kidney escaped through the lumbar wound; (4) there was no pus found about the stone in the right kidney. It is also equally certain that the calculi which were later passed and removed by operation from the left kidney had been the cause of the feverish and nervous as well as of the urinary symptoms, and that I had, so to speak, operated upon the wrong organ. This arose through my following the teaching, to which a good deal of importance was attached by the distinguished operator who originated it, namely, that a stone in one kidney may cause pain to be referred to the opposite kidney, without itself being the seat of pain; and that if the abdominal route is taken we shall be able to avoid operating upon the wrong kidney by finding out by direct palpation in which organ the stone is really situated. In this particular case cœliotomy was not needed to discover the stone in the right kidney; this was done at the bedside. On the other hand, it did not enable me to ascertain that the left kidney contained one large branched calculus and two others of smaller size which I removed at a subsequent operation nine months after the first, as well as a calculus which was passed naturally from the left kidney during convalescence from the nephrolithotomy on the right kidney. The left kidney, with the hand in the abdominal cavity, was felt to be enlarged, more or less globular, and of uniform firmness. It was very carefully palpated for stone, but nothing was felt beyond what was consistent with simple hypertrophy.

Fifteen years ago, in a paper published in the Transactions of the Royal Medical and Chirurgical Society,[5] I called attention to the uncertainty of ascertaining the presence of a calculus by direct palpation of the kidney, either with the hand in the abdominal cavity or after the kidney had been removed from the body. In the Transactions of the Clinical Society of 1887[6] I again referred to the same probability of error. Further experience has convinced me of the fallacy

[3] Medical Times, April 4th, 1885.

[4] Transactions of the American Surgical Association, vol. xii., 1894, p. 113.

[5] Vol. lxviii., p. 75, et seq.

[6] Vol. x., p. 109.

of this mode of examination and I would lay it down as an axiom that the kidney which ought to be first explored is the one on the painful side. I shall refer in my next lecture to a case of calculous anuria in which calculi could be felt through the abdominal wall in the right kidney, but the attacks of pain associated with the anuria were referred to the left kidney. I operated upon the painful side, found a small stone in a large, hypertrophied kidney, and the paroxysms of pain and anuria ceased entirely.

There is not, so far as I know, any case on record in which there is completely satisfactory evidence of symptoms on one side only being caused by a stone in the kidney of the opposite side. The presence of a stone on one side is not proof that the opposite and painful side is not also affected. That the attacks referred to one side have ceased after operating upon the opposite and painless side is not conclusive. This may be a coincidence and due to the accidental shifting of a calculus in the painful kidney or to some other cause. Of course it may happen that with a great deal of disease on the painful side there may be silent or quiescent disease on the opposite side, and this quiet disease may be so advanced as to cause a fatal issue after operating on the painful side; but this is an entirely different question. In several of the fatal cases in my lists of nephrotomy and nephrectomy for stone, the opposite kidney has been proved, by post-mortem examination to be disorganised by unsuspected calculus. It may be asked, "Is it consistent to reject the theory of transferred or reflected pain, as applied to the opposite kidney, and yet to accept it when applied to the bladder or to the ovary?" Well, I believe it is. I have verified the one and have not seen any proof of the other. I do not attempt a full explanation of this; but I would point out that there are instances of a nerve connexion between parts on the same side of the median line more direct than between similar organs or parts on the opposite sides of the body.

B. Unsuspected calculi with symptoms transferred to other organs.—In renal calculus the symptoms may be referred to the bladder, ovary, or testicle instead of to the kidney. I am constantly seeing cases of renal calculus and other renal diseases which have been under prolonged and repeated treatment for cystitis. Bladders are frequently sounded, irrigated, injected with solutions of silver nitrate, and otherwise actively treated, without apparently the least suspicion that the trouble is due to stone in the kidney. I will mention one very striking instance, in which for nearly ten years all symptoms pointed to the bladder, none to the kidney; but at length a renal calculus was removed and the patient regained perfect health. A married woman, aged thirty-five years, leading an active life and of a physically and mentally healthy constitution, had suffered from very painful micturition, cystitis, and frequent phosphatic concretions in the bladder for two years. All the tried remedies having failed to give relief, a vesico-vaginal fistula was established by operation and the urine was allowed to flow away continually into a urinal. This state of things went on for some years and then the vesico-vaginal fistula was closed. No sooner had this been successfully accomplished than all the old symptoms returned, so that in two or three months the fistula had to be re-established. In this condition the patient passed over nine of the best years of her womanhood. Then some pain and some extra resistance were experienced in the right renal region, and after four or five months' duration I was asked to see her by Dr. Fenton, who had diagnosed right renal calculus. I endorsed this opinion and on May 14th, 1893, I removed a small lozenge-shaped uric acid calculus weighing only 4 gr. through an incision in the convex border of the kidney. The patient made an uninterrupted recovery and when quite convalescent from the nephrolithotomy Dr. Fenton closed the vesico-vaginal fistula. The patient remains well to this day, has perfect control over her urine and, as she expresses it, "finds her life quite a different thing and now well worth living."

C. Unsuspected calculi with high temperature and great psychical disturbance.—This third group of cases is well illustrated by the following, the patient being desperately ill for two or three months with symptoms of a typhoid type, attended with acute but vague pains over the whole body, and with great mental prostration, the illness terminating after the discharge of a few ounces of pus and some renal calculi, presumably from the left kidney. On June 16th, 1893, I saw, with Mr. Ewart of Eastbourne, a man from the East, where he occupied a position requiring great mental and bodily activity. For a few days before sailing for Europe he was not feeling well and on his arrival at Brindisi he was so ill and in such pain when moved that he was screaming while he was carried ashore. With great difficulty and several halts he reached Aix, where he became too ill to go further. His symptoms whilst at Aix were high fever, frequent rigors, and, as he himself described them, excruciating pains all over him. Sometimes the pains were worse at one part, sometimes at another, but there was a slightly marked predominance on the left side of his trunk and left lower limb. His urine was offensive and contained pus. It was suggested that he might have a renal calculus, but there was no indication in which kidney it was. Accompanied by Mr. Ewart he at length reached London, though it once or twice during the journey seemed impossible that he could do so alive. Frequent doses of morphia had to be given to relieve pain. When I saw him on his arrival in London he was emaciated to a marked degree, hectic, and had a high temperature with extreme general hyperæsthesia. He was tender and complained of pains all over him, cried out or groaned when touched; but at one time he would complain most bitterly of a part which at another time seemed free from pain and could be handled without hurting him. He was shockingly depressed, would take no food willingly, and lay always in a lethargic state except when touched or moved, which he often tearfully resented. By his relatives he was seen to be quite changed, his temperament was altered, and his nerve and moral courage were lost. The urine was 1015, turbid, alkaline, very offensive, depositing an abundant whitish sediment, and contained a distinct but not a large amount of pus, many of the pus cells undergoing fatty degeneration. There were neither blood corpuscles, sugar, tube casts, nor tubercle bacilli in the urine. On the following day I examined him under an anæsthetic. Nothing abnormal was detected about his bladder, prostate, or urethra, nor in any part of the abdomen or pelvis. There was no undue fulness or hardness of either kidney to be felt. Dr. Cayley and Dr. Ringer saw him on three or four occasions, but we were unable to come to any definite diagnosis except that there was some focus of suppuration somewhere within range of the genito-urinary organs, but precisely where we were unable to say. On the whole it seemed most likely to be in the left kidney; but with this uncertainty, and in the serious febrile and exhausted state of the patient, I was unwilling to urge an operation, which the physicians by no means encouraged me to do. He improved but little during his stay in London, and on July 15th he was removed to his house in the country. A calculus and pus were passed on Aug. 28th. The after temperature was 103° F., and he had a rigor on the previous day. After this he much improved. On Oct. 6th some more pus and four stones were passed and he then got quite well. He returned to his duties in the East on Oct. 20th, 1893. He was seen by Mr. Ewart in August, 1897, in excellent health and quite his natural self.

It is a question whether the nervous and mental phenomena without fever are a peculiar form of uræmic brain symptoms or whether the renal disease, like any other serious disease, is a direct cause of the psychical disturbance. The character of the disturbance is especially one of depression—melancholia, stupor, and nervous apprehension of danger being the most frequent forms. Psychical disturbance has been often noted in Bright's and other renal diseases. I have seen it in advanced lardaceous disease without any other affection of the kidney. But in these disorders other unmistakeable uræmic symptoms existed which have not been present in the calculous cases to which I am now alluding.

QUIESCENT CALCULUS

is little less dangerous to its possessor than the unsuspected stone. It is often said, "the stone may settle down and become imbedded in the kidney or it may pass naturally, and then there will be no further trouble." But often this is not so. One of my objects in this lecture is to show that neither the one nor the other of these events can be looked forward to with perfect equanimity, and that in every case in which a stone is believed or known to be present the best course is to explore the kidney and remove the stone. We ought not to close our eyes to the possibility of sudden danger arising from a hitherto quiescent calculus or from one giving only slight and occasional reminders of its existence. If I am rightly informed, the insurance offices are wise enough not to do so, nor should the surgeon.

MIGRATORY CALCULI.

Lastly, I want to show the possible and actual dangers of leaving a calculus to make its own way out of the urinary passages. In this connexion let me ask what would be thought of a surgeon who advised a patient with a stone in his bladder to wait a few months and see if it would pass through the urethra naturally on the ground that it was only a little stone and therefore would be able to make its way perhaps without, perhaps by dint of, stretching; that the process might be a painful one, or might not; that when once the calculus got into the passage the force of the pressure of urine behind would be almost sure to drive it onwards, but that if it did not do so, or alarming symptoms due either to the over-distension of the organs behind or to the sloughing of the part of the tube in which the calculus was impacted, then, and then only, resort should be had to an operation. This is precisely the line of argument daily acted upon in the case of renal calculus. And why? Not because less damage to the kidney will result from the obstruction in the ureter—on the contrary, the serious effect of a blocked ureter is much earlier and much more rapid in its progress; not because the suffering from renal calculus is less than from vesical calculus; not because extravasation of urine never occurs from obstructed ureter or renal pelvis, for witness the perinephric and perireteral abscesses and fistulæ, but because of the supposed risks to life of operation on the kidney. This reason is really no longer tenable. No operation practised for vesical calculus has a lower mortality than nephrolithotomy. For years I made it a practice in cases in which the symptoms were slight and of only recent occurrence to treat the patients for a time on the expectant plan. I have several specimens passed in this way; they are the emblems of what ought to be very largely an obsolete treatment.

Summary.—The conclusions at which I have arrived are the following.

1. That the aim of the surgical treatment of renal calculus should be to extend the application of nephrolithotomy and thereby restrict the necessity of nephrotomy and nephrectomy.

2. That more frequently than not the failure to find a stone is not in reality a failure of treatment, because there are so many curable morbid conditions which mimic renal calculus and which are discoverable only by exploration.

3. That the theory that a stone in one kidney, whether that kidney is itself painful or not, reflects or transmits pain to the opposite kidney, is quite unproven; that it is a dangerous theory calculated to lead to very erroneous practice and that the surgical principle with regard to exploratory operations should be that with pain, paroxysmal or continuous, on one side only the kidney on the painful side should be explored.

4. That nephrectomy for calculous conditions is very rarely called for and should be done only in most exceptional cases. Nephrotomy for calculous pyonephrosis is the proper operation—at any rate as a primary operation—because of the frequency of double calculous disease. Experience has shown that kidneys from which stones weighing 830 gr. and 1300 gr. have been removed are functionally sufficient to maintain life during the blocking of the ureter and the suspension of the function of the kidney of the opposite side.

5. That nephrectomy whilst the opposite organ is occupied by calculus is fraught with very great danger to life; whereas nephrectomy after the opposite kidney has been freed from stone will probably be followed by recovery from the operation and possibly by very good health for years afterwards.

6. That when renal calculus causes reflected or transferred vesical or ovarian pain the removal of the calculus will be followed by complete cure of the bladder or ovarian symptoms.

7. That in some cases renal calculous conditions are attended by very remarkable nervous symptoms, sometimes with sometimes without high temperature, and that information as to the cause of these symptoms is needed.

8. That unsuspected renal calculi are a source of very real danger to their possessors, and when, whether by accident or by the systematic examination of the urine, we have cause to suspect the presence of a calculus we should recommend its immediate removal regardless of the fact that it is not causing renal or transferred pain.

9. That quiescent calculus is as dangerous to the individual as unsuspected calculus and ought to be removed by operation.

10. That the hitherto accepted teaching that a renal calculus, if causing only mild symptoms or attacks of renal colic of only recent occurrence, should be treated on the expectant plan ought to be discarded as unsound in theory and dangerous in practice.

11. That the same principle should be applied to renal calculus which has long been the rule in regard to vesical calculus—namely, when suspected it should be searched for; when known to exist removed, without waiting in the hope that it may become encysted or spontaneously expelled.

12. That the very low mortality of nephrolithotomy puts this operation upon the same footing for renal calculus as lithotrity in the most experienced hands for vesical calculus.

A SHORT ACCOUNT OF THE MIDDLESBROUGH SMALL-POX EPIDEMIC—1897-98.

BY CHARLES V. DINGLE, M.D., B.S., B.HY. DURH.,
MEDICAL OFFICER OF HEALTH FOR MIDDLESBROUGH PRO TEMPORE.

UP to and including March 31st, 1898, there had been 1200 cases of small-pox notified during the epidemic at Middlesbrough. The first case was notified on Nov. 22nd, 1897. The origin of this case is somewhat obscure; it was supposed at the time to have been contracted at a wild beast show which visited Middlesbrough on Nov. 10th and remained two days, but on further inquiry I have been able to elicit the fact that this person and a friend visited the show together on the evening of the 11th; they were both afterwards attacked by small-pox, the case of the friend not being notified. Both say they felt ill on the night they visited the show. In the case which was notified the patient was removed to the hospital with an unmistakeable small-pox rash on Nov. 22nd—i.e., only eleven days after having been at the show. The patient in the case which was not notified was the wife of a coloured sailor and it is more than probable, although it cannot be definitely proved, that the sailor brought the infection into the town, his wife, sister-in-law, and niece, all living in the same house, and the friend already alluded to, who frequently visited the house, being the first persons to be attacked. This man was in constant contact with the sailors of the port and it has transpired that small-pox was raging in Bilbao and other Spanish ports all last year, there having been no less than 418 deaths from small-pox in Bilbao alone during the year. On an average from two to three vessels enter the port of Middlesbrough every day all the year round from Bilbao and neighbouring ports laden with iron ore, which they discharge at the wharfs in Middlesbrough and at the works on the banks of the river Tees. That cases of small-pox have been imported from Bilbao I know. One sailor left his ship at this port on Feb. 8th last year. He was known to have been about the town and on Feb. 16th was admitted into Sunderland Small-pox Hospital with a fully-developed rash of at least a week's duration, showing that he had small-pox at the time he was in this town.

There was also another source by which the infection may have been brought into the town. On Nov. 2nd, 1897, there arrived in Middlesbrough about 800 navvies gathered together from all parts of the country. They were engaged laying down new tram-lines and were working for a period of nearly three months; no cases have been directly traced to them. After Dec. 4th no cases were notified until Dec. 27th, so that it looked as if the first group of cases had been stamped out. On looking for the cause of the second outbreak I found again that one of the first two families to be attacked had been in close contact with the sailors of the port, the child who was attacked having gone amongst the ships and sailors selling small articles. On Dec. 31st a wake was held over the body of an Irish Roman Catholic who lived close to the infected house from which a child had been removed on the 28th. This case was unrecognised until after death, but there is no doubt that the cause of death was small-pox of a very virulent nature. Dozens of people attended this wake and the rapid extension of the outbreak

can be clearly traced as the result of this wholesale infection. On Feb. 6th, 1898, 37 cases were notified and 75 cases on the 8th, being the greatest number notified in any one day during the epidemic. From this date the epidemic has run the usual course, there being periodical recrudescences, in this instance each succeeding outbreak only averaging half the number of cases in the previous one. The epidemic is not ceasing with the suddenness of the Gloucester outbreak, but is, on the other hand, dying a hard death.

Before the epidemic the sanitary authorities of Middlesbrough had a provision of 14 beds and 2 cots for small-pox cases alone. These were in a separate block but within the same grounds as the block for other fever cases. The main block contained 46 beds used for scarlet fever and typhoid fever. There was also another small isolation block. As soon as it was seen that the provision made for small-pox cases was inadequate the sanitary and sanatorium committee ordered a Humphrey's corrugated iron block, capable of providing 20 beds; the erection of this was immediately proceeded with. In the meanwhile 4 tents were obtained and pitched, but owing to the site chosen for them being close to that on which the workmen were engaged in erecting the Humphrey's building it was not found possible to utilise them, the workmen refusing to work on the buildings so long as there were patients in these tents. Up to Feb. 6th it had been found possible to isolate all the cases, but owing to the sudden increase on that day and on the 8th the accommodation was insufficient for all the cases and only the worst, as far as surroundings and severity, could be provided for, the rest remaining at their homes. The work of erecting buildings was pushed on as rapidly as possible and by March 3rd the authorities got so well ahead with their work of providing accommodation that it was possible to once more isolate every case as it occurred and also to take in as many of the cases which had been left in the town as could then be persuaded to be removed. Finally provision was made for 322 beds, the greatest number ever occupied at one time being 578. The blocks of buildings are divided into three sections, facetiously named by the patients, "Dawson City," "Klondyke," and "Kimberley." The first section consists of six of Humphrey's iron buildings on brick foundations, the second section of ten wooden buildings, and the third section of six wooden buildings, all likewise on brick foundations. The permanent hospital and the block originally built for small-pox have been used for administration purposes alone. Besides the above there are a permanent brick-built disinfecting-house containing a steam Washington Lyon's disinfector, a small temporary dwelling-house built of corrugated iron, in which two resident medical assistants reside as well as a resident clergyman, and properly constructed kitchens, laundries, discharging block, and storehouses, &c.

Statistics.—At present it is not possible to use the whole of the cases for the purpose of statistics, so I have taken the first 1200 cases—that is, all that had been notified up to April 1st. It is possible that there may still be some more deaths to take place amongst these cases, but there cannot be so many as to materially alter the value of the following tables. In 1897 the estimated population of Middlesbrough was 89,246; it is probably now 90,000. At the beginning of the epidemic a vaccination census was taken by the guardians; the enumerated population, that is, those who were found at home at the time the census was being taken, is given at 69,525, or roughly about 20,000 less than the estimated population. Of the above 68,219 were found to have been primarily vaccinated, 1306 were unvaccinated, and 14,163 had been revaccinated at some period or other of their lives. Of children under fourteen years of age 653 were reported to be unvaccinated. As regards primary vaccination this shows Middlesbrough to be a well-vaccinated town, but the same cannot be said regarding its revaccination. It can reasonably be supposed that the 20,000 not enumerated would be vaccinated in about the same proportions as the above. There are said to be nearly 40,000 children attending the various schools of the district. Taking the 1200 cases attacked, we find they are divided into 1028 who are vaccinated and 172 who are unvaccinated. It is not strictly accurate to work from the enumerated population given by the guardians, so I will take the percentages from the estimated population of nearly 90,000. If these, as I have stated above is most probable, are vaccinated in the same proportion as the enumerated population we have 87,844 vaccinated and 1682 unvaccinated persons in Middlesbrough.[1] We now see that the attack-rate, 172 cases, amongst the unvaccinated is equal to 10·2 per cent. of the population, whereas the attack-rate, 1028, amongst the vaccinated is only equal to 1·1 per cent. of the total population.

I will next give the fatality-rate for cases attacked. Up to the present time there have been 166 deaths amongst the 1200 cases, that is, 13·8 per cent. of the cases. This is not the death-rate for the whole epidemic, but only represents that for a definite period; nevertheless, as it is not likely that there will now be any more deaths occurring in this group of cases it gives a very accurate knowledge of the proportion of deaths between vaccinated and unvaccinated cases. Of the 166 deaths 79 occurred amongst the unvaccinated cases or cases of doubtful vaccination—that is, cases which are said to have been vaccinated but on whom no marks of the vaccination are visible. This is equal to a fatality-rate of 45·93 per cent. as compared with 87 deaths amongst the vaccinated persons attacked, equal to a fatality-rate of 8·46 per cent. The following table gives the age periods of all the cases, also for the vaccinated and unvaccinated, separately, together with the deaths in each of the latter.

Age periods.	Total cases.	Vaccinated.	Died.	Unvaccinated.	Died.
Under 5 years	29	9	1	20	10
5 years and under 10 years ...	65	32	0	33	14
10 ,, ,, 15 ,, ...	117	99	2	18	3
15 ,, ,, 25 ,, ...	409	384	19	25	13
25 ,, ,, 60 ,, ...	574	501	64	73	38
60 years and over	6	3	1	3	1
Totals	1200	1028	87	172	79

An examination of this table shows the protection afforded by vaccination to life at all age periods. Taking the children under ten years of age we find 94 cases; of these 41 were vaccinated and 53 were unvaccinated, but when we look at the death column we find that out of the 41 vaccinated children only 1 died, whereas of the unvaccinated 24 died.

The following table refers to the revaccinated cases. Out of 1200 cases 56 had been revaccinated at one period or another of their lives. I give the age periods of these cases and the date of revaccination in days before the attack. Of these one died, revaccinated 13 years ago, aged thirty years. Up to March 31st this was the only death in a revaccinated person:—

Age periods.	Number of days revaccinated before attack.														Total number of cases.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Over 14 days.	
Under 5 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1*	1
5 years and under 10 years	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
10 years and under 15 years	—	—	—	1	1	—	—	—	—	—	2	—	1	1	2†	8
15 years and under 25 years	—	—	—	—	1	1	1	2	3	4	2	2	—	1	3‡	20
25 years and under 60 years	2	—	—	1	—	2	2	1	2	2	1	1	2	3	6§	25
60 and over	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
Totals	2	—	—	2	2	3	3	3	5	6	6	3	4	5	12	56

* One 28 days before. † One 28 days and one 7 weeks before.
‡ One 18 days, one 25 days, and one 9 weeks before.
§ Five over 10 years and one 22 days before.

The next table gives a list with age periods of cases attacked with small-pox during primary vaccination with the length in days that they have been vaccinated. Of these

[1] I have based this on 20,000 added to the enumerated population given by the guardians in order to bring the population up to or near its estimated number.

one died at the age of five years who had been vaccinated 12 days.

Age periods.	Number of days vaccinated before attack.														Total number of cases.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Over 14 days.	
Under 5 years	—	—	—	—	—	—	1	—	—	—	1	1	—	—	—	3
5 years and under 10 years	—	—	—	—	—	1	2	1	—	1	1	—	1	1	—	8
10 years and under 15 years	—	—	—	—	—	1	—	1	1	—	—	—	1	—	—	4
15 years and under 25 years	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1*	2
25 years and under 60 years	—	1	—	—	—	—	—	—	1	1	1	2	—	2	2†	10
Totals...	—	1	—	—	1	2	3	2	2	2	3	3	2	3	3	27

* One 6 weeks before. † One 19 days and one 41 days before.

The following means have been taken for dealing with the epidemic. I have already given a short account of the accommodation provided at the sanatorium. The difficulty experienced was not that the authorities did not fully realise their position; it arose from the impossibility to procure sufficient workmen. The duty of seeing to the erection of the temporary hospitals was in the hands of a sub-committee and when the report of their work comes to be published it will be seen that they carried out their duties to the smallest detail in a manner very rarely, if ever, accomplished before. Not only is there a perfect system of drainage to each ward, but also systems of hot and cold water and gas are laid on. The wards are bright and cheerful, being decorated internally with plants and pictures. The food is excellent, well cooked, and plentiful, and I have heard nothing but praise from all the patients who have been discharged as cured. Isolation has been very efficiently carried out; of the 1200 cases 1078 have been removed to the hospital and treated there. Disinfection by means of SO^2 cylinders of the infected houses was performed as soon as ever the patient was removed. The bedding and clothes of the patients were removed with them and passed through a Washington Lyon's disinfector. Mattresses and beds were also passed through the disinfector, but in many cases, if dirty, were destroyed by burning.

Vaccination has been carried out in various ways; two public stations were opened at which the public vaccinator and his assistants were present all day to vaccinate any presenting themselves free of cost. When the numbers attending these stations began to decline domiciliary vaccination was undertaken by the guardians; the town was divided into twelve districts, and each district was canvassed by a medical man attended by a clerk. Since then the corporation have provided free lymph to the medical men of the town and anyone wishing to be vaccinated can be attended to by their own medical attendant free of charge, the medical man being paid by the guardians for every successful vaccination. Every infected house is also visited and vaccination offered to the inmates.

Middlesbrough.

CLINICAL REMARKS ON STRICTURE OF THE URETHRA.

BY REGINALD HARRISON, F.R.C.S. ENG.,
SURGEON TO ST. PETER'S HOSPITAL.

THE following classification of strictures is one which may be conveniently used for clinical purposes. First, those amenable to some form of dilatation; second, those found to be unadapted for such treatment and where other measures should be considered; and third, those which may have been regarded as impassable strictures. I shall limit my remarks to questions arising under these three headings.

The first class includes by far the greatest number and all strictures in their early stages. When this process of treatment proceeds satisfactorily, as it usually does, the patient is soon able to undertake the management of his own case after he has been instructed in the use of the appropriate instrument. For whatever is done in the way of treatment by dilatation or otherwise in the majority of advanced forms of urethral obstruction the patient can seldom hope to entirely dispense with the passing of a bougie. When a person who is suffering from symptoms which may indicate stricture presents himself for the first time, much care is required in exploring his urethra with a catheter or bougie. It is very easy to spoil a stricture and so lose the way through it. Thus future access to the bladder may be rendered rather more than less difficult. On making an examination of this kind our object should be to ascertain, without causing pain or bleeding if possible, (1) the presence and position of the obstruction, and (2) the degree of contraction which has been arrived at. It is undesirable to endeavour to pass an instrument into the bladder without knowing all this beforehand, otherwise we may easily select one too large for the purpose and so in the first attempt do more harm than good. The thinnest end of the wedge must first be inserted and then the dimensions of the contraction can be readily and accurately gauged. In view of giving effect to these points I described fifteen years ago[1] a flexible conical bougie or dilator which, so far as my experience of it goes, has superseded most instruments of this kind and has been the means of considerably reducing the number of what are called impassable strictures. These instruments are used both for locating and measuring all kinds and degrees of urethral stricture. They are about 20 in. long, commencing with a fine probe-ended extremity, which gradually expands in the opposite direction. They are made in different sizes and are rendered extremely flexible when placed in warm water for a few minutes if necessary before using them. In this way they will readily coil up within the bladder. I much prefer the French make (Lassère's); I find them useful, not only for the purposes I have mentioned, but for smoothing out a rough urethra and making the access to a stricture funnel-shaped so that it may be easily entered by almost any other instrument. The late Mr. Lund of Manchester christened them "whips" when I first showed them and he adopted them, and they have since always gone by this name. Bangs' filiform bougies, made on the same principle of the finest whalebone, are applicable to even more contracted forms of obstruction, such, for instance, as the eccentric pin-hole strictures which are occasionally met with. They may also often be used with advantage as pilots for the "whips." I can strongly recommend both of these instruments to practitioners who are liable to meet with stricture cases and have not hitherto given them a trial. Either of them will do duty in an emergency in relieving a retention of urine in the absence of a catheter by at once dilating the stricture to almost any extent by a single introduction of the instrument. On its withdrawal the patient is usually able to empty his bladder immediately by his own efforts. I have frequently used them in this way with prompt relief. I think they should be more generally known. No force can be exercised by them, otherwise they will double up and the object be defeated.

Passing to the second class of cases, which includes strictures found on trial to be unadapted for any form of dilatation, when for any reason a large amount of scar tissue has been imported into a stricture—as, for instance, in obstructions following wounds and injuries of the urethra—it may be found impossible to sufficiently dilate the contraction which follows. This may proceed from some difficulty in connexion with the access or entrance to the stricture, as when damage has been done to the interior of the urethra, from the inherent contractility of the tissue composing the obstruction, or from certain constitutional disturbances following attempts at dilatation even of the gentlest and most gradual kind. Let me briefly illustrate these three conditions.

CASE 1.—A man, aged forty-two years, saw me in 1890 under the following circumstances. He was a great traveller, and though he had a slight stricture for which he occasionally used a bougie himself he was not inconvenienced by it. About a year before I saw him he had had sudden retention of urine following a chill when he was in a remote part of Australia and there had been much difficulty and bleeding in relieving him with a metal catheter. Since this happened he had never felt certain whether he would be able to pass his bougie. Sometimes it would enter and at others it

[1] THE LANCET, Feb. 3rd, 1883.

would not. Though he continued to pass his urine in a fair stream this uncertainty unnerved him and prevented him travelling abroad as an explorer as he had been accustomed to do. In every other respect he was in excellent health. I examined him and found a short cul-de-sac, which was probably the remains of a false passage below the line of his stricture and which occasionally caught the tip of his bougie and prevented it entering the stricture above. There was, in fact, a sort of valve arrangement. I performed an internal urethrotomy for him and divided the floor of the stricture, so, as it were, throwing the siding into the main line. He has since had no difficulty whatever and has resumed his explorations in various parts of the world.

CASE 2.—This was a man, thirty years of age, who in 1893 damaged his deep urethra by being thrown forward on to the pommel of his saddle. A stricture followed which proved most contractile. There was no difficulty in dilating it up to a No. 12 bougie, but this was invariably followed by an attack of retention of urine in the course of a few hours. It was all the same whatever degree of dilatation was attempted. I advised an internal urethrotomy to be performed. A splice of new tissue was thus introduced and he has since been free from all further inconvenience beyond occasionally passing a full-sized bougie for himself.

CASE 3.—The patient was a man, aged fifty years, who had spent much time in Africa and had contracted several malarial fevers. One or other of these was invariably roused up when he passed his bougie, in spite of large doses of quinine taken as a preventive. The fever necessitated his spending two or three days in bed on each occasion. The stricture was a very contractile one, and though the instrument passed tolerably easily on its withdrawal it was firmly gripped and then the constitutional symptoms followed. I performed an internal urethrotomy for him after well sterilising his urine previously and taking other antiseptic precautions (as I shall presently note). The patient has since had no further trouble of this kind. It is curious to observe the effect of tension, and its removal, relative to the production and prevention of urethral fever and the other fevers which it resembles.

In cases such as these and the like we may do immediate and permanent good to strictures which will not yield to dilatation alone, and thus prevent the bad effects of back pressure gradually extending to the bladder and kidneys above, by introducing a splice of new material into the contracted portion of the canal, much on the same principle as we should expand a tight garment. For these purposes I usually select Maisonneuve's instrument. It consists of a fine pilot and director upon which a small triangular knife dulled at the apex runs. It can thus only divide the contracted portion or portions of the canal and this it does by a clean linear longitudinal incision corresponding in depth with the size of the blade. As healing takes place, under the occasional use of a bougie a splice or interval of new tissue is introduced between the lips of the incision and thus the calibre of the canal may be considerably increased in a short time. For forty-eight hours or so before this is done it is well to sterilise the urine with some boric acid taken by the mouth in small doses or with what I have found still better, boracite. The former sometimes produces indigestion whilst the latter is both pleasant and reliable. The filiform pilot is then passed through the stricture into the bladder, the fine metal director following it. The urethrotome is next run along the groove in the latter and the stricture or strictures are divided from before backwards. Care should be taken not to run the blade further than the last point of contraction, so as to avoid touching any fibres of the bladder sphincter. The latter is unnecessary and may cause some bleeding. To make sure that all stricture fibres are severed and a clear interval is provided between the lips of the incision thus made a short series of Lister's metal bulbous bougies (10 to 15, English gauge) should be successively passed before the patient recovers from the anæsthetic. The ordinary round-ended bougies are not suitable for this purpose, as they may catch in the lips of the wound. It is a matter of much importance to secure a perfectly smooth, soft scar. All metal instruments for use in connexion with a strictured urethra should be bulbous or olive-headed. The bladder is then emptied of any urine it may contain and washed out with a solution of perchloride of mercury (1 in 6000) until the lotion returns quite clear. An ounce or so of the solution is left behind in the bladder so that the first portion of the urine voluntarily passed is sterilised. This completes an operation which need not occupy more than a few minutes. Carbolised vaseline (three grains to two ounces) is used for the instruments. I rarely tie a catheter in the bladder unless—as sometimes happens—a chronic stricture has induced an atonic bladder, when a soft rubber catheter may be retained for forty-eight hours or so, otherwise we may have high temperatures until the viscus is artificially emptied. With these antiseptic precautions there is seldom any marked degree of urinary fever. On the fourth or fifth day after a whip bougie is generally passed and the patient is instructed in the use of a suitable instrument. For many years Maisonneuve's operation has commended itself to me on the grounds of its simplicity, its adaptability to the most contracted forms of stricture, and the benign character of the scar tissue which usually results. I have therefore referred to some details to which I have learnt to attach considerable importance. The extension of the antiseptic principle to these operations has in all respects greatly benefited them.

Still more rarely there are cases of stricture met with where neither dilatation nor internal urethrotomy will cover the ground the contraction occupies. Instances occur when, by reason of contraction, abscess, and fistula, the perineum and urethral wall become matted together and converted into a hard mass of dense warty-looking tissue which can be only successfully dealt with by some form of perineal section. This, however, though the cases may be comparatively few, is a subject of itself and requires a consideration which cannot be included within the limits of these remarks. It must be reserved for another occasion.

I will therefore pass on to the third division of my classification—patients who present themselves for treatment on the ground that they are suffering from an impassable stricture. In my earlier days I was much impressed by the teaching of Syme, endorsed by Bickersteth of Liverpool in his practice, to the effect that such a term as "impassable" could only be used in a somewhat relative sense and was inapplicable unless the canal was structurally or, if I may use the term, hermetically closed, as, for instance, when a urinary fistula coexisted. Syme thus refers to this point: "There is nothing of more consequence in the treatment of stricture than knowledge of the fact that this alleged impermeability has no real existence except in those rare exceptional cases where the urethra has been divided by violence and allowed to cicatrise with obliteration of the passage beyond the opening at the seat of injury. It is obvious, indeed, that if the urine is permitted to pass, no matter in how small a stream, there must be room for the introduction of an instrument provided it be sufficiently small and properly guided."[2] This is a high ideal to take and to attempt to follow, but it puts into prominence the first principle associated with the treatment of urethral stricture whatever form it may assume. Though we may fail to attain it, the possibility of doing so in a legitimate and scientific manner should never be lost sight of. If such a conclusion as this could have been arrived at in the time of Syme how much more so is it within our reach in the present day after what has been done in improving the construction of all kinds of instruments used for this purpose. Though much patience and tact is often required in obtaining access to the bladder through a contracted stricture, failure, I believe, need now but rarely occur. Nor is the attainment of this a matter of indifference relative merely to the adoption of one out of two eligible courses. Experience shows that as there are strictures which need not be cut merely because they may seem in the first instance to be impassable so far as a bougie is concerned, so are there strictures which though passable in this sense are yet found to need cutting. No sufficient answer can be given to the important question that is thus raised until a stricture has been fully explored and this, I believe, can be generally done. For an impassable stricture I do not think there can be any better alternative than the one associated with the name of Mr. Wheelhouse, where the contraction is sought for by opening the perineum. It would, however, not be difficult to find many surgeons largely engaged in operative work who have never availed themselves of this proceeding on the ground that a stricture had resisted all legitimate efforts to enter the bladder along the urethra.

Lower Berkeley-street, W.

[2] On Stricture of the Urethra, second edition, 1855.

REMARKS ON THE ANATOMY AND TREATMENT OF FLAT-FOOT.

BY J. JACKSON CLARKE, M.B. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON AT THE NORTH-WEST LONDON AND CITY ORTHOPÆDIC HOSPITALS.

JUST as long narrow backs are the most likely to become over-curved from weight acting between the two extremities of the spine, long narrow feet are also the most likely to become flattened from pressure on the highest parts of the arches. Some months ago a little girl, aged ten years, came under my care for lameness and painful feet. For the age and size of the patient the feet were remarkably long; they also showed an advanced condition of flat-foot, the whole of the inner border of the foot touching the ground when the patient stood up. The foot, naturally long, was still further lengthened by the sinking of the longitudinal arches. The footprint, reproduced on a reduced scale in Fig. 1, measured $8\frac{3}{10}$ in. from front to back. Both feet were similarly altered in form and since they showed the condition uncomplicated by hallux valgus, &c., I thought radiographs would be useful in demonstrating the exact changes in the relative position of the bones. The radiographs reproduced on a smaller scale in Fig. 2 were made for me by Messrs. Coxeter, the patient sitting down with the sole of the left foot placed flat on the plate whilst that of the right rested on its outer edge.

FIG. 1.

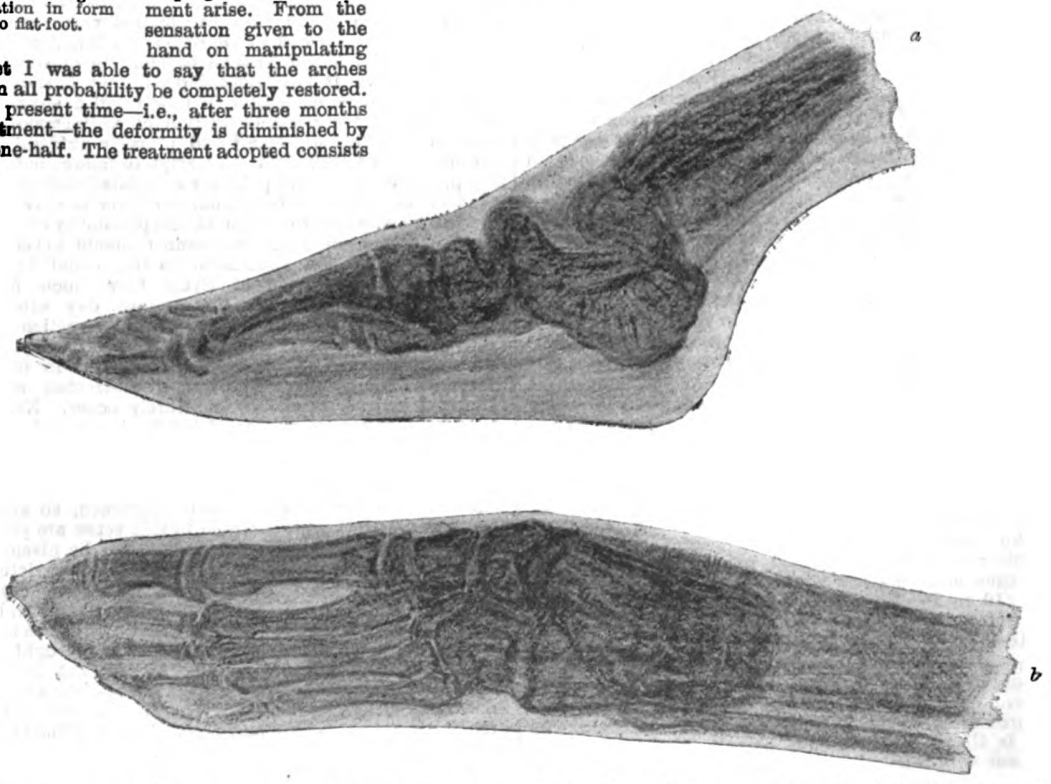


Footprint showing the alteration in form due to flat-foot.

Here, then, is a common case of static flat-foot of severe degree; the questions of prognosis and treatment arise. From the sensation given to the hand on manipulating the feet I was able to say that the arches could in all probability be completely restored. At the present time—i.e., after three months of treatment—the deformity is diminished by about one-half. The treatment adopted consists in wearing boots properly shaped—i.e., having soles of the same outline as the plate shown in Fig. 3 *b*—and furnished with pads of vulcanised rubber so formed that their highest part falls in front of the transverse tarsal joints. In addition to this an outside leg iron jointed at the ankle and supported by an inside T-strap has been applied in this case. Even for severe cases in hospital practice I find this method rarely fails. Manual wrenchings and douchings are also helpful and as soon as sufficient improvement has been obtained suitable exercises may be begun. Some surgeons would appear to recommend that all cases of flat-foot should be treated by exercises alone. Doubtless three exercises—(1) rising on tip-toe a definite number of times, the toes being inclined inwards; (2) adduction of the foot, repeated several times; and (3) walking for a short time daily on the outer border of the foot—are all of service and in suitable cases may alone suffice, but they are not to be used indiscriminately, as the following instance will show. A boy, aged twelve years, came to me at the North-West London Hospital with marked flat-foot on the left side, the right foot being normal. He was ordered a pad, &c., for the left foot and was carefully instructed to rest save for five minutes twice a day when he was to do the tip-toe exercise. A week later he returned with the right foot pronouncedly flat. Flat-foot thus rapidly developed deserves to be named *acute* and is much more common than is supposed. In this instance acute flat-foot occurred whilst one of the recognised exercises was being carried out. On manipulating the right foot I found it readily reducible to the normal shape, causing but little pain to the patient. After bandaging the foot in an over-corrected position I advised a week's rest in bed and the subsequent use of a rubber pad and leg iron.

Another form of flat-foot that often demands complete rest for a time is that observed in active rickets. Every case requires its own management and also the management of *complications*, of which hallux valgus and hammer-toe are the commonest. As an instance of a method of treatment found to be successful in these conditions I may mention the case of a girl, aged thirteen years, the condition of whose right foot before treatment is shown in Fig. 3 *a*. There are

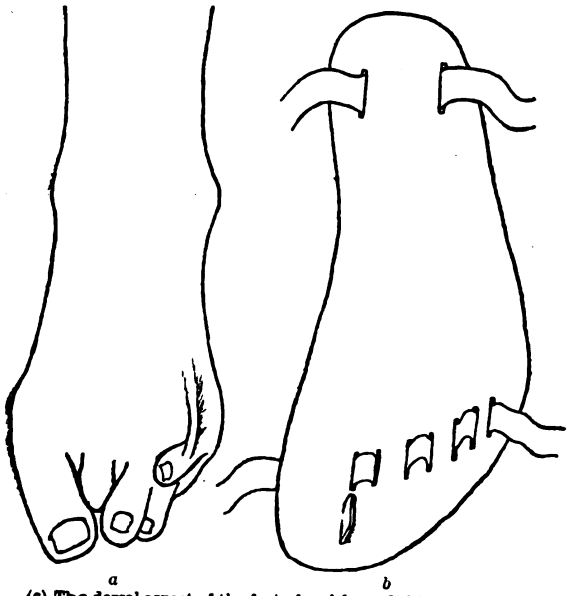
FIG. 2.



(*a*) Radiograph of the left foot seen sideways, showing that the scaphoid is displaced downwards from the head of the astragalus and on the outer side of the foot the cuboid is also displaced downwards. (*b*) Radiograph of the right foot showing the oblique position of the astragalus and some alteration in the shape of its head.

hallux valgus and hammer-toe as well as a not uncommon displacement of the little toe. For this patient I ordered a metal plate cut the same shape as the sole of the boot ought to be, only smaller, with a toe-post and slots for a soft narrow bandage to hold the toes in their proper position. The tense extensor tendon of the little toe was divided subcutaneously. The foot with the plate applied goes easily into a boot of the proper size for the patient, whose toes now, after two months of treatment, are quite normally disposed when the plate is removed. Hallux valgus and hammer-toe are not always so readily remedied as this. In the former condition I have had to open the metatarso-phalangeal joint and trim the head of the metatarsal bone; in hammer-toe the lateral and anterior ligaments of the first inter-phalangeal joint usually require division. In every case careful after-treatment is required.

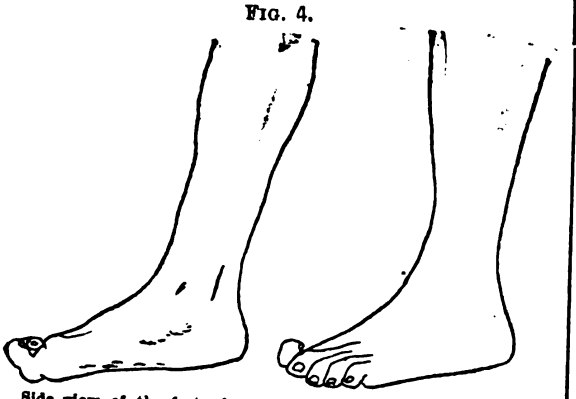
FIG. 3.



(a) The dorsal aspect of the foot of a girl, aged thirteen years, showing hallux valgus and hammer-toe. (b) The metal sole-plate used in the treatment of this case.

The most refractory form of flat-foot is that due to osteo-arthritis or to chronic rheumatism. In such cases, as in severe rachitic cases, the bones become deformed and there may be considerable spasm of muscles. In the case of a man, aged thirty years, who was invalided out of the army on account of the lameness caused by his rheumatism, this

FIG. 4.



Side view of the feet of a man, aged thirty years, showing deformity of the great toes, &c.

condition was present to a marked degree. He is subject to attacks of iritis. The right foot is flat and rigid and the calf muscles of the right side are considerably wasted. On both sides the great toes are curiously bent (over-extended), as shown in Fig. 4. Even in such cases by patient treatment much improvement can be obtained.

Old Cavendish-street, W.

A CASE OF PURULENT PERICARDITIS AND DOUBLE EMPYEMA; OPERATION; DEATH.

BY R. SEVESTRE, M.D. CANTAB.

A MAN, aged twenty-two years, was admitted into Addenbrooke's Hospital, Cambridge, on May 12th, 1897, under the care of Professor Bradbury, who has kindly given me permission to publish the case. On May 7th, 1897, the patient shivered and complained of pain in the left side of his chest; soon after cough came on. On admission on May 12th his face wore a distressed expression and there was a herpetic eruption about the alæ nasi and the right angle of the mouth. The tongue was furred. The pulse was 112, irregular in time and volume. The temperature was 101·8° F. The respirations were 56, being interrupted frequently by a short cough with the expectoration of thick, mucoid, rusty sputum which was found to contain pneumococci. The physical signs in the chest were as follows. Movement was diminished on the left side with vocal vibrations absent in the lateral region and at the base of the left lung. The percussion note was dull below the middle of the left scapula and extended into the lateral region and in this area the respiratory sounds were feeble and bronchial in character; on the right side the breath sounds were exaggerated and some moist sounds were present. The apex beat was not definitely localised, but pulsation could be felt in the fourth left interspace. The cardiac area of dulness was not observed to be increased; the sounds were clear but distant. No friction was detected. Nothing abnormal was detected about the abdomen or limbs. The urine had a specific gravity of 1030 and contained a trace of albumin. The case was diagnosed as one of pneumonia. On May 15th the patient complained of pain in the right lateral region and pleuritic friction could be heard. On the 18th he was restless, complaining much of cough, with great difficulty in expectorating a small quantity of thick purulent sputum. An exploring needle had been passed through the chest wall on the 17th in the seventh left interspace in the post-axillary line, as the physical signs suggested fluid in the left pleural cavity; the result, however, was negative. The apex beat of the heart could be felt with difficulty in the fifth left interspace in the nipple line; the right limit of cardiac dulness extended an inch beyond the right border of the sternum; the upper limit was in the third interspace; the sounds were distant and heard with difficulty. The pulse was irregular in time and volume. On the 24th the patient for several days had been lying persistently on his left side; an attempt to assume any other position caused him great distress. His face wore an anxious expression, was pale and inclined to be cyanosed, this becoming marked after an attack of coughing. The head and extremities were cold and covered with perspiration. Sleep was only obtained in snatches owing to paroxysms of cough. He was sensible when spoken to, but rambled very much when left to himself. His temperature had been erratic, showing a tendency to be higher in the evening than in the morning, but it had not been over 101° for several days. The physical signs in the left lung had not materially altered; over the base of the right lung the percussion note was dull and the breath sounds were much impaired. An exploring needle was passed through the chest wall in the left lateral region and a syringeful of pus was withdrawn; this seemed to relieve him; an attempt at aspiration failed, however, to withdraw any more fluid. On the 25th the general condition of the patient was much worse. Perspiration covered the face and extremities, which were cold and cyanosed. The respirations were rapid and shallow. The pulse varied at times, running barely perceptible and not to be counted. Pitting was obtained over the sternum. No pulsation could be felt over the cardiac area. The right limit of the cardiac dulness was an inch from the right nipple; the upper limit was at the upper border of the second left rib, and on the left side it was continuous with that over the lung. The sounds were heard with difficulty. As the patient's condition was rapidly becoming more serious Professor Bradbury, after consultation with Professor Allbutt, decided to aspirate the pericardium. A hypodermic needle was passed through the chest wall at a spot 1 in. from

the left border of the sternum in the fourth left interspace and pus was withdrawn; the needle of a Potain's aspirator was then passed through the same spot and 23 oz of sweet creamy pus were withdrawn; on bacteriological examination this proved to be almost a pure culture of pneumococci. The effect was extraordinary as the pus came away; the cyanosis and perspiration disappeared entirely, the pulse at the wrist improved, the respirations became deeper and less frequent, and the patient lay with comfort on his back. The apex beat was felt in the fifth space in the nipple line, the cardiac sounds were distinct and clear, and friction synchronous with the heart's beat could be heard along the upper border of the altered cardiac dulness which was now at the lower border of the third left rib. On the 26th the patient passed a good night. The pulse and respiration had improved. The morning temperature was 98°. With these improved conditions it was decided to open the pericardium. Mr. Byles, after injecting four minims of a 4 per cent. solution of cocaine into the spot where he had aspirated, cut down on to the pericardium; as pulsation could be felt at the bottom of the wound a hypodermic needle was passed in and pure blood was withdrawn; it was decided to do nothing further. On the 28th the face was slightly cyanosed, the patient was inclined to be restless, talking to himself, but answered sensibly when spoken to. The respirations were 32. The cough was troublesome with the expectoration of thick muco-purulent sputum. The pulse was 148, soft, and irregular in time and volume. On the 29th his condition was evidently grave. His face had a drawn, cyanosed look and was covered with perspiration. The respirations were 60 and the pulse was 128, very feeble, not "paradox." The temperature was erratic, with a rise in the evening. No cardiac impulse could be felt; the cardiac dulness had increased almost to the extent it was before aspiration. The sounds were muffled. For the last few days he had complained of pain in the epigastrium. The liver dulness was increased downwards. As it seemed clear that the pericardium had refilled Mr. Byles opened the wound in the fourth left interspace, and after pushing a director through the pericardium pus escaped. He then increased the opening and put in a drainage-tube. The quantity of pus that escaped amounted to 45 oz. The relief afforded was again very marked. On the 31st the patient's general condition was not satisfactory. The respirations were 32 and the pulse was 124. The physical signs pointed to effusion in both pleural cavities, which on exploration proved to be purulent. Under chloroform Mr. Byles resected 1 in. of the ninth rib below the angle of the left scapula and allowed 15 oz. of pus to escape; two days later a corresponding portion of rib on the right side was resected with the escape of 20 oz. of pus. Pneumococci were present in the pus from both pleural cavities. On June 4th the patient was comfortable, his pulse had improved, and the temperature was lower (100°). A great quantity of purulent discharge came from all three openings; as that from the pericardium seemed thick and viscid the cavity was washed out daily with a warm solution of boracic acid; no ill effects were observed. The heart sounds could not be distinguished with any accuracy, first on account of pericardial friction and secondly on account of bubbling, metallic sounds varying from time to time and apparently dependent on the amount of fluid present. On the 8th his general condition was not so good; he was thinner and more feeble. His pulse was 120, regular but dicrotic. The respirations were 40 and interrupted by paroxysms of cough which caused him pain over the lower part of the sternum. On June 12th and for the last few days the patient had been more feeble and irritable. After an attack of restlessness he became collapsed and died.

The bacteriological and post-mortem examinations were performed by Professor Kanthack. The pericardial sac was enlarged, but not to any considerable extent; the visceral and parietal layers were thickened and covered with thick pus; there was a little pus in the sac. There were no adhesions. The myocardium was paler than normal and slightly infiltrated just under the pericardium. The interior of the heart presented nothing noteworthy. Both lungs were firmly adherent to the chest wall; a large empyema occupied both sides. The various lobes of the lungs were found firmly adherent to each other; on section they looked greyish in colour and œdematous. They were soft and friable and on gently squeezing them a purulent exudation appeared from the bronchioles. Gangrene and abscesses were not present. The liver presented a typical nutmeg appearance. The kidneys were engorged and cloudy with pale cortex.

The accompanying table represents all the cases of purulent pericarditis treated by operation that I have been able to find in recent literature. In 1883 Dr. S. West[1] read a very complete paper on Purulent Pericarditis before the Royal Medical and Chirurgical Society, giving statistics of paracentesis pericardii; the cases I have collected are since this date, but I do not suppose the list is a complete one. Purulent pericarditis is not a common affection and appears usually as a complication in some infective disease. Of these it is stated that it occurs most frequently in pyæmia; the cases in the accompanying list bear out this point. Among other causes assigned may be mentioned pneumonia and influenza. There are a certain number of cases, however, in which no apparent cause can be found and I would suggest that some of these cases of idiopathic purulent pericarditis may be explained by the spread of inflammation from the mediastinal glands to the pericardium. That this occurs in cases of tubercle is well known.[2] A point of great interest, and one for which no explanation has been offered, is the frequent absence of any pericardial friction sounds; in several of the cases given it was expressly stated in the notes that pericardial friction was not heard. In Ziemssen's Cyclopædia[3] Bauer quotes "the opinion that the friction murmur is often absent in purulent pericarditis," but thinks it is erroneous. Its possible absence is a point to be remembered, for it tends very greatly to increase the difficulty of diagnosis.

It will be noted in several of the cases quoted that effusion into the pleural cavities took place, more frequently into the left than the right. Furthermore the effusion in many cases was serous; this seems to imply that it is not dependent on a direct spread of inflammation to the pleura, otherwise one would expect the effusion to be purulent. The only explanation I have to offer is a physical one—namely, that it is consequent upon pressure on the vessels at the root of the lung. The presence of a left pleural effusion adds very much to the difficulty of diagnosing a pericardial effusion; the converse that a pericardial effusion may simulate a pleural effusion has several times been shown to be correct. In two cases given ribs were resected under the idea that an empyema was being dealt with. A dilated heart has been mistaken frequently for a pericardial effusion. There are no physical signs that I am aware of whereby the nature of the fluid can be diagnosed; in cases of pyæmia it may be surmised, but the presence of pus in the syringe of the exploring needle is usually the first indication of the nature of the effusion.

Paracentesis pericardii has been performed so often and with such signal success that it is quite unnecessary to enter into any discussion as to the justifiability of such an operation. A few words, however, may not be out of place as to the nature and seat of the operation. As regards the site of the incision there is still much difference of opinion and from the list of cases it will be seen that different sites have been chosen; in the majority it is on the left side of the sternum in the fourth or fifth interspace. Dieulafoy injected fluid into the pericardium after death and found that the pericardium as it became distended stretched away in all directions from the base of the heart; also that the heart itself was gradually raised. He recommended the fifth space on the left side about 1 in. from the edge of the sternum, a spot at which there is little chance of wounding the heart or internal mammary artery. Mr. Parker,[4] as the result of his investigations in children, advises the fourth left interspace close to the sternum. A space close to the sternum in the corresponding space on the right side has been recommended by Rotch,[5] but I do not see that it has any advantage over the place indicated by Dieulafoy, and the chance of injuring important structures seems greater. After an exploratory puncture has been made and pus demonstrated it is better to make an incision in the same spot or, if the ribs be too close together, in the space above, for frequent aspiration has been proved to be of no avail. The large quantity of fluid that the pericardium will hold is noteworthy and it is of

[1] West: Purulent Pericarditis, Transactions of the Royal Medical and Chirurgical Society, 1883, vol. lxvi., p. 256.
[2] Osler: Tubercular Pericarditis, American Journal of the Medical Sciences, January, 1893.
[3] Ziemssen's Cyclopædia, vol. vi., p. 608.
[4] Transactions of the Clinical Society, vol. xxii., p. 67.
[5] Transactions of the Association of American Physicians, vol. xii., p. 201.

A TABLE OF SEVENTEEN CASES OF PURULENT PERICARDITIS TREATED BY OPERATION.

No.	Reference and name.	Sex.	Age: years	Cause.	Clinical history.	Nature and seat of operation.	Fluid.	Recovery or death.	Necropsy.
1	Medical News, vol. xlvi., 1885, p. 69. Professor Gussenbauer.	M.	13	Pyæmia.	Fall on the shoulder; osteomyelitis.	Five ribs resected on the left side; pericardium washed out.	Pus.	Recovery.	—
2	THE LANCET, March 29th, 1884, p. 560. Dr. Ashby.	?	½	?	Dull over the sternum; fluctuating swelling over the ensiform cartilage.	Incision over the ensiform cartilage.	Pus.	Death.	Pus in pericardium connected by sinus with the incision.
3	London Medical Record, vol. xiii., p. 330. From Russia.	F.	35	Pyæmia.	After a fall intense dyspnœa, cyanosis.	Aspiration in fourth left space; incision in fourth left space close to sternum; pericardium washed out.	Pus, 120 c.c., 2 fluid lb.	Death 18 hours after.	Pericardium thickened; heart, large cavities flabby; right pleural effusion serous.
4	Brit. Med. Jour. vol. i., 1885 p. 1246. Dr. Raven.	M.	30	?	Pain in right side; dyspnœa; no pericardial friction.	Aspiration twice; place not stated.	Pus, 2 quarts.	Death.	Pericardium thickened; old adhesion between apex and pericardium.
5	Australian Medical Journal, 1885, vol. ix., p. 525. Dr. F. J. Newman.	M.	32	With enteric fever.	Enteric, pericardial friction; pleural effusion.	Aspiration four times; incision in third left space; pericardium washed out.	Pus, 36 oz.	Death 54 days after aspiration.	Pericardium thickened; on raising skin a sinus appeared in the 2nd left space leading into pericardial sac. Right empyema; left pleural effusion serous.
6	New York Medical Journal, vol. xlviii, p. 232. Dr. Doubleday.	M.	26	?	Pain in left side; cyanosis, dyspnœa; pleural effusion both sides, serous.	Aspiration 8 times in fifth and sixth spaces.	Pus.	Death 34 days after first aspiration.	Pericardium thickened. Pleural effusions serous.
7	Transactions of the Clinical Society, 1888, vol. xxii., p. 43. Dr. H. Dickinson.	M.	10	Pyæmia.	Cyanosis; no pericardial friction heard. Left pleural effusion serous.	Aspiration in right space close to sternum three times. Incision same place.	Pus.	Recovery.	
8	Transactions of the Clinical Society, 1888. Vol. xxii., p. 60. Mr. Parker.	F.	8	Pyæmia.	Necrosis of tibia.	Aspiration in fourth left space; Incision resection of fifth left costal cartilage.	Pus.	Death.	Much lymph over pericardium.
9	Brit. Med. Jour., vol. i., 1891, p. 360. Dr. Bronner.	F.	11	Influenza.	Influenza; pneumonia; right empyema; no friction heard.	Exploratory puncture followed by incision in fourth left space 1 in. from sternum; pericardium washed out.	Pus, 2 pints.	Death 26 days after operation.	No necropsy.
10	Medical Press and Circular, 1891, p. 244. Dr. P. Davidson.	M.	6½	?	Pain in left side; empyema; no pericardial friction.	Exploratory puncture followed by incision in fourth left space 1 in. from sternum.	Pus.	Recovery; tube removed 35 days after operation.	
11	Transactions of the Association of American Physicians, vol. xii., p. 197. Dr. Shattuck.	M.	26	Pneumonia.	Pericardial friction; left empyema.	Aspiration in fifth left space 1 in. external to nipple; incision same place.	Pus, 1 pint; 2 pints.	Recovery.	
12	Edinburgh Hospital Reports, 1896, vol. iv., p 200. Dr. Underhill.	F.	6	Pyæmia.	Acute necrosis. No pericardial friction. Hæmorrhage after incision.	Aspiration twice, fifth space. Incision same place.	Pus, 4½ oz., 17 oz., 10 oz.	Death 11 days after aspiration.	Pericardium thickened. Source of hæmorrhage not found. Left empyema.
13	Transactions of the Royal Academy of Medicine, Ireland, 1896. vol. xiv., p. 106. Mr. J. O'Connor	M.	11	Pneumonia.	Right lobar pneumonia. No pericardial friction. Left pleural effusion.	Aspiration fourth left space; incision same place.	Pus, 30 oz.	Death 34 days after operation.	Pericardial layers adherent. Left pleural effusion serous.
14	Brit. Med. Jour., vol. ii., 1896, p. 1504. Dr. Robinson.	M.	16	?	Diaphragmatic pleurisy; pericardial friction.	Incision sixth left rib; resected in lateral region.	Pus, 2 quarts.	Recovery; tube removed 61 days after operation.	—
15	Professor Bradbury.	M.	22	Pneumonia.	No pericardial friction; double empyema.	Aspiration fourth space 1 in. from sternum; incision same place.	Pus, 24 oz., 45 oz.	Death 18 days after aspiration.	Thickened pericardium; double empyema.
16	University Medical Magazine, Philadelphia, January, 1893. Dr. Osler.	M.	36	Pyæmia.	Necrosis of nasal bones; no pericardial friction heard.	Aspiration and incision in fourth left space, midway between nipple and sternum.	Serous pus, 2 pints.	Death 18 days after operation.	No necropsy.
17	Abstract in University Medical Magazine, Philadelphia, vol. vii., 1894-5, p. 876. Von Biselberg.	M.	17	?	Punctured wound over cardiac area; this healed and was followed later by pericarditis.	Aspiration 3 times; incision and resection of fourth left costal cartilage.	Pus.	Recovery.	—

interest to observe the effort nature makes provided the patient live long enough to get rid of a purulent effusion. There are two places in which the pus may point. In Case 2 an abscess was opened over the ensiform cartilage, which post mortem was found to be connected by a sinus with the pericardium.

In Case 5 the pus had burrowed forward and would have pointed in the second left interspace close to the sternum. To Professor Rosentein of Leyden is due the credit of being the first to incise and drain the pericardium, the patient recovering completely; the second case, which was also successful, was a patient under the care of Dr. West. Since then the operation has been performed with varying success. Of the 17 cases tabulated 6 are reported to have recovered, but the cases are too few to draw up any reliable statistics. Incision into the pericardium has now been done a sufficient number of times to make it clear that there is no great difficulty or danger about the operation, and I think it must be allowed that it offers the only reasonable hope of recovery to a patient suffering from purulent pericarditis.

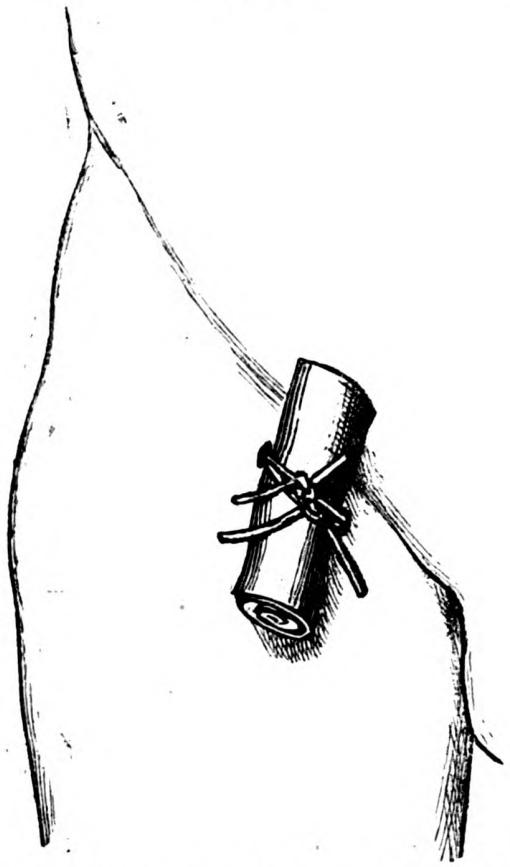
Leicester.

A SIMPLE METHOD FOR CONTROLLING HÆMORRHAGE DURING DISARTICULATION AT THE HIP.

BY J. LYNN THOMAS, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE CARDIFF INFIRMARY; CONSULTING SURGEON TO THE CARDIFF PROVIDENT DISPENSARY.

IN emergencies the ideal method for controlling hæmorrhage in amputation at the hip-joint is undoubtedly that which requires no special instruments in one's operation bag. Perhaps the majority of the younger surgeons do not

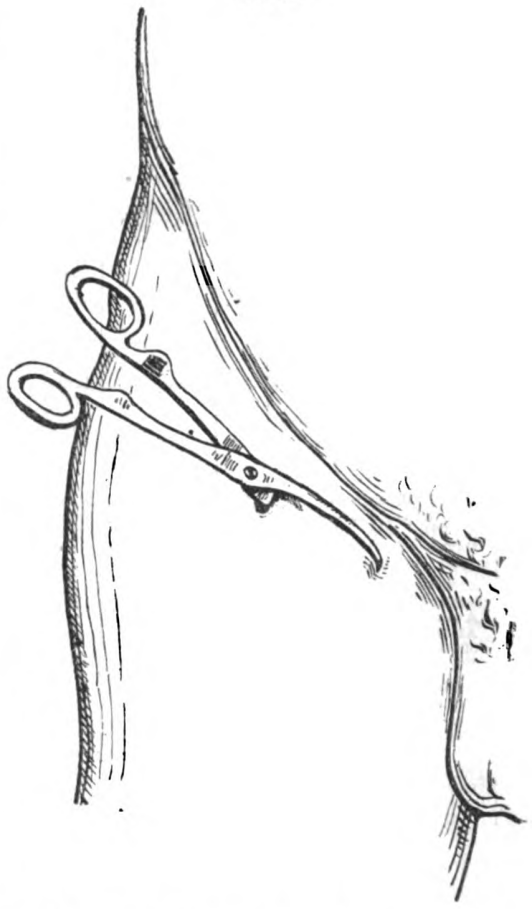
FIG. 1.



realise that the loss of blood is quite insignificant in disarticulation of the hip by the anterior rachet incision because the femoral artery and vein are ligated at the outset of the operation (Treves). I should think the amount of blood lost is less than the quantity of blood driven into the body by vertical elevation of the limb for a couple of minutes prior to the operation. In a properly equipped operation room surrounded by competent assistants the surgeon can adopt either a simple or a complicated method of arresting the hæmorrhage with equal comfort and confidence of success, but in a badly lighted room with incompetent or inefficient assistance in a private house amputation at the hip becomes a very serious and anxious undertaking, unless one happens to possess two one-foot skewers and at least two yards of indiarubber tubing in the operation bag (Wyeth's). In Swain's "Surgical Emergencies" (fifth edition) Davy's lever and Jordan Lloyd's methods are the only two referred to in connexion with the arrest of hæmorrhage in disarticulation of the hip. The first method is practically obsolete, though extremely ingenious, and very few men are *au fait* with the other method.

During the last twelve months I have had to disarticulate at the hip on three occasions, once at the infirmary and twice in private practice, (1) for sarcoma of the femur, (2) for osteomyelitis of the femur, and (3) for an injury. On one occasion I used with satisfaction the following method. The common

FIG. 2.



femoral artery and vein were temporarily compressed immediately below Poupart's ligament. At this point the artery is quite superficial and easily felt and is well above the origin of the deep femoral artery. The femoral pulse being felt I made two stab punctures in the skin, one about an inch outside the pulse and the other about two inches to its inner side—i.e., immediately below the pubic spine. An aneurysm needle with two eyes (Horsley's pattern), which I always carry in my bag, was pushed from one stab-puncture well behind the artery and vein to the other stab-puncture and two long, thick silk ligatures were carried through in withdrawing the needle, then a pad of Gamgee tissue was rolled up and placed over the artery between the punctures and the two silks were tied separately over the Gamgee

tissue, and thus the vessels were efficiently and satisfactorily occluded during the operation. Fig. 1 conveys at a glance the principle involved in this method. It is advisable to simply tie the first stage only of the surgeon's knot and clamp it with forceps and by this means we can easily re-tie if necessary when letting go after ligating the visible blood-vessels on the face of the stump. The only condition which might embarrass one in adopting this method of controlling hæmorrhage in amputation at the hip would be the occurrence of an irreducible femoral hernia. Fig. 2 illustrates a method of controlling the same vessels by means of a large Doyen's broad ligament forceps; there is only one puncture made on the outer side of the femoral pulse and one blade is forced through behind the vessels and then the forceps is clamped. This method would be quicker and would take only a few seconds to apply, but it means the acquisition of a special instrument which is not in every operation-bag, whilst the first method requires nothing beyond the essentials of every operation-bag.

I am not aware that the principle of under-running the vessels with silk and tying it over them has been applied to the common femoral vessels before, whilst it is a recognised method of treating cirsoid aneurysm of the scalp. It is hardly necessary to add that after placing the ligatures and pad (in the method I once adopted successfully) it is necessary to elevate the limb to drain it of its blood before tying the knot tightly. If one were amputating at the shoulder-joint single-handed the same method would be found very useful.

My best thanks are due to my friend Mr. S. W. Allen for the two illustrations.

Cardiff.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF ERYTHEMA NODOSUM ET BULLOSUM.

BY J. A. GIBB, M.B., C.M. ABERD.

THE following case in a male patient has recently occurred in my practice. The uncommon character of the affection may make its report of some interest to the readers of THE LANCET. The patient had undergone a considerable amount of climatic exposure prior to the attack, which commenced on March 5th of this year with stiffness in the jaws and pain in the limbs. On the 7th I was called in and I found the patient in the following condition. He was in bed and was sweating profusely. The left knee was enlarged and red but was not painful, and there was no œdema. On the inner side of the right tendo Achillis were several large erythematous spots, oval in shape and of about the size of a half-crown. The same condition existed over the condyles of both humeri extending some little way down the ulnar side of the forearm. Both elbow-joints were enlarged but there was no œdema. The temperature was 99° F. and the pulse was 92. The treatment adopted was the administration of salicylate of soda and bicarbonate of soda, and a free action of the bowels was obtained. I again saw the patient on the 9th. The left knee was quite normal in appearance and the spots on the right leg had all but disappeared. The whole of the left arm was very much swollen, tense, and hard from the shoulder to the finger-tips. The right arm was the same, but in addition on the inner aspect of the humerus was a bullous eruption consisting of six large red blebs each of about the size of a pigeon's egg. One of the bullæ was surrounded at its base by a number of smaller vesicles on a red base. Although there were no bullæ on the left arm the whole of the inner aspect of the humerus had the appearance of a bruise in the first stage, the same as the right arm with the exception of the bullæ. The temperature was 101°. The tongue was red. The patient had been restless all night and complained that he saw a number of steam-engines and various mechanical things which he knew nothing about. I ordered him a sleeping draught of the solution of hydrochlorate of morphia. On the 10th the left arm was considerably improved, the redness disappearing in the ordinary stages of a bruise. The right arm was still very much swollen and there was a good deal of œdema. The temperature was normal. I now gave the patient one-grain doses of quinine and continued it for two days with no marked result. On the 12th I started giving him arsenic in five-minim doses three times a day. This was continued until April 1st, when I discontinued seeing the patient. By that time he had regained normal movement about the elbow-joints. The bullæ had ruptured and were quite healed with no scarring and very little pigmentation. On looking up the subject I find that cases of bullous erythema have been recorded by Dr. Duffin, Dr. Crocker, Dr. Frederick Taylor, and Dr. Pye-Smith. Although the bullous eruption was not symmetrical, yet the discoloration was the same in both arms, and both elbow-joints were affected at the same time and in the same way. Its combination with erythema nodosum inclines me to think that this case was one of erythema bullosum and not pemphigus. There was never any heart affection throughout the case. I examined the patient from time to time. There was no sugar or albumin in the urine. He was always a healthy man. He could only remember being ill once before and that was from typhoid fever. He was fifty-six years old and robust.

Aston-Upthorpe, Berkshire.

TUMOUR OF THE KIDNEY CONTAINING EMBRYONIC MUSCLE FIBRES.

BY BRUCE BUCHANAN MORTON, M.B., C.M. GLASG.

ON account of the rarity of such cases a short clinical description and pathological report of the following case will probably be of interest.

On Nov. 24th, 1897, Dr. Johnstone, Whetley Hill, Bradford, requested me to visit a male child, aged two years, who had a large abdominal swelling, first noticed four months previously and since growing rapidly. No pain or tenderness was complained of by the little one, who took his food well but had of late months lost flesh and suffered from periods of constipation which had to be relieved by medicine. The tumour occupied the whole abdominal cavity; it bulged rather more to the left side and forwards and there were distended veins overlying it. It was smooth, hard, and moveable in a limited range towards the middle line. Percussion was absolutely dull over the whole area of the swelling, with a tympanitic note in the right side flank only. The tumour felt heavy and solid and was probably of the size of a small football. The urine was reported by Dr. Johnstone to be free from blood or albumin. With his concurrence, considering the probability of malignant conditions and the early and high mortality after removal of such tumours, no operation was advised. The child lingered till Christmas Day and seemed to die from starvation by general pressure and flattening causing chronic intestinal obstruction.

At the post-mortem examination, which was confined to the abdomen, the tumour was found to have its base in the left lumbar and hypochondriac regions; it was covered by layers of descending meso-colon, the descending colon itself being stretched and flattened over it from above downwards. The rest of the intestines lay empty, collapsed, and flattened in the right flank. The right kidney was normal in all respects, as was its suprarenal body. This on the left side was not found but may have been atrophied by the pressure of the large tumour which seemed to spring from the sinus of the kidney or the loose tissue surrounding the hilum, the pelvis of the kidney and the ureter being free from growth and only compressed, as also was the kidney proper, which lay opened out as two leaves from its anterior to its posterior border. There were no enlarged glands in the abdomen. Both testes had descended. The tumour itself weighed 6lb. 2 oz.; it had a tense, thick capsule and was spherical in shape. On section an outer white or pink rind was seen 1½ in. in thickness and like the outer fatty layer of a ham. This enclosed an inner mass of softer substance streaked with pink tracts and reddish-brown areas and with scattered hæmorrhages. Further, towards the base of the tumour, a large clot was turned out. A hard nodule was felt at the inner margin of the rind and was removed for examination. The tumour, kidney, and ureter were removed to the museum of Bradford Infirmary. The renal vessels of the left side were in calibre much above normal or those of the

right side. On microscopical examination of the hard nodule referred to it was found to be wholly composed of embryonic muscular fibres; these were as a field of loose bundles and were seen to be striped on moderately careful focussing. There were also large vessels showing endarteritic processes, and here and there the adventitia of vessels seemed to be proliferating. The large mass of the growth (i.e., rind and parts of inner area not destroyed by hæmorrhages) seemed to consist of groups and islets of round cells separated from each other by bands of spindle elements. Within these groups of round cells were numerous vessels and also what appeared to be tubules. The round cells appeared to have in places arisen from the vessels. Fibrous tissue was very scanty in the tumour. For the microscopical interpretation I am indebted to the reports of friends in Bradford, and to the report of the Clinical Research Association, and all I now acknowledge. The tumour was shown at the January meeting of the Bradford Medico-Chirurgical Society, and also at the March meeting of the Pathological Society of Manchester by Dr. Eurich of Bradford, who suggests that the specimen be classed as a teratoma and who describes it as an angio-myosarcoma. The presence of numerous tubules and their relation to the tumour, also the inclusion of embryonic muscular fibres, I cannot pretend to account for. The origin of such tumours from remains of the Wolffian bodies or the statement which has been advanced relative to the close anatomical relationship in the embryo of the muscle plates of the protovertebral somites with the intermediate cell-mass are amongst interesting suggestions on a matter still *sub judice*. The opinions of any of the readers of THE LANCET who may have specially observed such cases would be interesting to the profession.

Bradford, Yorks.

NOTES OF A CASE OF XEROSTOMIA (MOUTH-DRYNESS).

BY ARTHUR J. SHARP, M.D. LOND., F.R.C.S. ENG.

A SINGLE woman, aged forty-one years, consulted me in February last for constant dryness of the mouth. Her family and personal history were alike good, and except for the local trouble she had never been better in her life. She admitted no history of nervousness or nervous shock. For nearly twenty years, however, she had been troubled with painful sensations at the bottom of the back which were only aggravated by professional treatment but which disappeared suddenly and effectually after taking a single bottle of tonic medicine bought at a druggist's. Her dentist (Mr. E. Burrows, who kindly sent her to me) had found her mouth unduly sensitive and had blamed her "nerves" as being the cause of her symptoms. She had never had neuralgia. She had had influenza seven or eight years ago, and had had very occasional headaches, but not lately. The dryness dated from October, 1896, when it came on rather suddenly. She taught at a Sunday school and had found it impossible to do so without constantly sipping water. The tongue was worst during the first winter. During the last winter she had had several colds in the head and the dryness had always been worse on these occasions. Hot or spicy food or fluids she had neither cared for nor been able to take. The dryness was worst out of doors or by a fireside. The secretion of tears was not affected; the eyes looked irritable and developed a little gummy discharge at night. She had always been "shortsighted," and strong winds made the eyes water and so did reading at night. She said that she could smell and taste perfectly and had no complaint to make about the nose. A brief examination gave the impression that the mucous membrane was pale and somewhat dry. No obstruction could be found nor any dry crusts, but a musty smell often associated with such conditions was recognisable. When she had a cold she used as many handkerchiefs as anyone else. The teeth were not specially bad; several had been stopped at various times and she had lost some of the back ones. Lately she had worn some artificial ones; the dryness was aggravated if they were disused. She had no difficulty in chewing or swallowing with the aid of frequent sips of fluid. The mucous membrane lining the lips, gums, cheeks, tongue, and palate was dry and glazed. The fauces and pharyngeal wall were granular, but the dryness only extended to the base of the tongue. One or two strings of dry mucus were seen in the mouth and there was always a quantity adherent to the teeth and lips in the morning. The tip of the tongue was red; the rest of it was pale. The surface was granular with papillæ, some fungiform ones near the tip being especially prominent. There were no inflamed patches and only a few very shallow transverse furrows. The papillæ of the salivary ducts were not prominent and no secretion could be expressed from them. After moistening the tongue with water a very faintly alkaline reaction was obtained to litmus paper. The lips were dry and peeling. There were a few pustules about the forehead, the face and lips, and the hands and forearms. These were attributed to scratches received in gardening. The angle of the mouth on the left side was scarred. The skin was not unduly dry and the patient perspired freely on the least exertion. Last summer she had some swelling of the eye-lids which cleared up after a short time, otherwise she was very well at that time. I regret that I was unable to obtain a specimen of the patient's urine. She was not anæmic and there appeared to be no urinary disorder. She was not subject to parotitis and there were no signs of pressure on any part of the salivary apparatus. She had cooled her tongue with a solution of sodium carbonate followed by cold water. She has taken mercuric iodide in medium doses with quassia and describes herself as improving.

The condition appears to be a general absence of moisture from the mouth, with perhaps a slighter similar affection of the nose. One feels inclined either to attribute it to causes resident within the nervous system or else to regard it as allied to those granular atrophic phases of deficient secretion met with in the nose, fauces, pharynx, and conjunctiva. I am much indebted to Dr. Hall of Sheffield for kindly referring me to Professor Fraser's paper in the *Edinburgh Hospital Reports* for 1893, which contains a table of the nineteen cases recorded up to that time.

Whitby, Yorks.

YERBA SANTA IN INFLUENZA.

BY JOSEPH WESTMORLAND, L.R.C.P. EDIN., M.R.C.S. ENG.

DURING the year 1896 my son and I, at that time residing in California, decided to go on a hunting and fishing excursion up into the Sierra Madre range of mountains, a guide—an Englishman, who provided us with mules and burros to convey ourselves and baggage to our destination—accompanying us. On our way up the trail the guide pointed out to us many plants and shrubs, amongst others yerba santa (herb of the saints, as he named it), saying that it was the best thing he knew for any catarrhal affection, especially for a cough, and speaking highly of its beneficial effects on himself. He also told us that the Mexicans, or "greasers," as they are generally named, used it constantly for the above-mentioned purpose and considered that there was nothing equal to it. Shortly after my return home to Los Angeles from this expedition I was summoned to attend two young Englishmen who were suffering from smart attacks of influenza. After the febrile stage had subsided both of them were affected with the very troublesome cough which so often supervenes at this stage of the attack. Bearing in mind what I had heard about yerba santa when up in the mountains I decided to give it a trial; so I prescribed it for these patients, with the result that in both cases the cough was speedily relieved and soon cured.

Whilst out in California I prescribed it in a few other cases for the cough supervening on influenza with equally good results. This has led me to draw the attention of readers of THE LANCET to this little used plant. In the fourth edition of Martindale and Westcott's Extra Pharmacopœia, p. 341, the following passage occurs: "Yerba Santa (*Eriodictyon glutinosum* or *E. Californicum*).—Leaves are aromatic and sweetish, often agglutinated together; they are stimulant to mucous membranes of the bronchial tubes. Used for bronchitis, phthisis, and other catarrhal affections. Fluid extract, 10 to 40 minims. Is sold combined with extract of malt, as Malto-Yerbine. Dose, 1 to 4 drachms." It will thus be seen that it has also been used for bronchitis and phthisis. I directed my patients to take an ounce of the leaves of yerba santa, pour upon them one and a half pints of boiling water, then mix in about three ounces of honey and boil down to about three-quarters of a pint. Of this linctus

they took two or three teaspoonfuls every few hours or when the cough was at all troublesome.

Macclesfield.

ANEURYSM OF THE ABDOMINAL AORTA IN A CHILD.

BY ROBERT Y. AITKEN, M.D. GLASG.

ANEURYSM under the age of twenty years is rare, although instances have been recorded by Dr. A. Jacobi, and one occurring in a child, aged nine years, has been reported by Syme.

In the following case, which was under the care of Dr. J. S. Watson, the patient was a boy, aged nine years, who was admitted to the Blackburn and East Lancashire Infirmary on Jan. 10th, 1898. He was suffering from heart disease, both aortic and mitral valves being affected. He died on Feb 5th and at the post-mortem examination an aneurysm of the size of a golf-ball was found projecting from the anterior wall of the abdominal aorta at its bifurcation into the common iliac arteries. The aneurysm was full of soft blood-clot and the opening into the right common iliac artery was found to be blocked by an embolus. The aortic valves were much diseased, one of the flaps being perforated. At two points in the ascending aorta there were spots of atheroma which bulged slightly outwards and no doubt represented the commencement of other aneurysms. The usual causes of aneurysm in children are injury and embolus. Here the cause was obviously the latter. During life the aneurysm was not suspected. The child's only complaint was of pain in the chest and no change in colour or temperature was noticed in the leg.

Blackburn.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SIMULTANEOUS LIGATION OF THE POPLITEAL ARTERY AND VEIN; RECOVERY WITHOUT GANGRENE.

(Under the care of Mr. EDMUND OWEN.)

WE are able to publish this week two cases of an operation which is decidedly rare—namely, simultaneous ligature of the popliteal artery and vein, and in each case the operation was performed for injury of these vessels, though in one the ligatures were applied immediately after the accident, while in the other the vessels were not tied until a month later when an arterio-venous aneurysm had fully formed. The general opinion of surgeons up to a very recent date has been so decidedly adverse to simultaneous ligature of both the popliteal artery and vein that it has even been suggested that it would be well to amputate at once at the knee should both these vessels be wounded, and amputation at the hip has been proposed for wound of the femoral artery and vein. These views are in great part based on the results obtained in pre-antiseptic days. Gangrene was much more prone to follow simultaneous ligature of both the large vessels of a limb at a time when suppuration was almost certain to occur in the wound, as by inducing œdema it would add a further difficulty to the circulation in the part. The cases recorded show that on the whole gangrene is less likely to follow if the vessels are not tied at once but after an interval, so that the collateral circulation has had some time to be established. In most of the cases in which the popliteal artery and vein have been tied an aneurysmal varix or varicose aneurysm had already formed. Mr. Newbolt, as will be seen by the report which follows, has collected seven cases, and we may mention eight other similar cases. They are described by B. F. Curtis,[1] Scriba,[2] Félizet,[3] Trélat,[4] Reynier,[5] Reinhold,[6] and Chaput.[7] In all these cases a favourable result followed, no gangrene occurring. Even in Mr. Newbolt's list gangrene only followed in a case which occurred so long ago as 1851. It may fairly be concluded from a study of these 15 cases that the popliteal artery and vein may be simultaneously tied after injury, either at once or when an arterio-venous aneurysm has formed, with very much less risk of gangrene than has hitherto been considered probable. For the notes of this case we are indebted to Mr. E. W. Holycak, the dresser.

A married woman, aged thirty-five years, was admitted to St. Mary's Hospital in November, 1897, with necrosis of the lower end of the left femur. There was no history of syphilis or tubercle, but there was of injury, for at the age of fourteen years, when she was climbing over a gate, she got her leg caught between the two top bars and falling forward severely hurt her thigh. "Shortly afterwards she was operated on in the Reading Hospital and twelve months later several pieces of bone came away through sinuses persisting after the operation. Five years later a sinus formed on the outer and lower part of the thigh." When she entered St. Mary's Hospital there were three sinuses discharging and she said that they had been in that condition for "many years." The femur was greatly thickened. Mr. Owen cut down upon the bone between the ilio-tibial band and the tendon of the biceps and removed a sequestrum 4 in. long, and about two months later the woman left the hospital apparently convalescent. But as the sinuses continued to discharge she was readmitted, and on March 7th of this year Mr. Owen made a further examination, laying open the wound which he had previously made. On passing his finger inwards in front of the popliteal vessels he detected an opening in the shaft of the femur, but as it was impossible to deal with it from the outer side he made an incision down the front of the tendon of the semi-membranosus. The tissues about the femur were firmly matted together, and in endeavouring to raise them from the back of the femur the superior internal articular artery was torn out of its origin in such a manner that there was no alternative but to dissect out the popliteal artery from its bed and to tie it in two places, cutting it across at the wounded spot. When this was done it was found that the popliteal vein had been similarly damaged. It was therefore tied in two places and cut across. The operation on the bone having then been completed the wound was gently packed with gauze, the limb wrapped in cotton wool and comfortably and securely fixed on pillows, the foot of the bed being slightly raised. "The limb has been markedly anæmic and somewhat shiny, but sensation has never been lost. No pulsation could be felt in the anterior and posterior tibial arteries on April 16th. The cavity is granulating up and she is putting on flesh."

Remarks by Mr. OWEN.—On the conclusion of the operation, in the course of some clinical remarks I explained the seriousness of the disaster which had befallen the patient, and I deemed it fair to attribute it to the matted and unyielding condition of the tissues overlying the diseased bone, the result of an inflammation which had been lurking in that neighbourhood for over twenty years. I said that I feared gangrene of the limb was almost inevitable, but that it was just possible that under the influence of the long-continued inflammation there might be such a considerable development of new blood-vessels that collateral circulation had a slightly better chance of becoming established than if there had been no such antecedent. I need hardly say that as I visited the case day by day and noted the absence of signs of gangrene the relief which I experienced was considerable. Cases of recovery without gangrene of the limb after simultaneous ligation of the popliteal artery and vein are of sufficient rarity to render a record of them desirable, and it would be interesting to know to what extent the probability of so favourable an issue is likely to be modified by the circumstances in which the ligation is resorted to. I cannot conclude this report without the expression of thanks to my house surgeon, Mr. A. Brodribb, for the able help which he gave me in the case.

[1] American Journal of the Medical Sciences, 1891, vol. i., pp. 142 and 145.
[2] Deutsche Zeitschrift für Chirurgie, 1885, p. 513.
[3] Duplay and Reclus: Traité de Chirurgie, vol. viii., p. 977.
[4] Bulletin de la Société de Chirurgie, 1889, p. 153.
[5] Ibid., 1891, p. 804.
[6] Duplay and Reclus: Loc. cit., vol. viii., p. 977.
[7] Gazette des Hôpitaux, May 1st, 1894.

STANLEY HOSPITAL, LIVERPOOL.

A CASE OF ARTERIO-VENOUS ANEURYSM OF POPLITEAL VESSELS; LIGATURE OF POPLITEAL ARTERY AND VEIN FOUR AND A HALF WEEKS AFTER THE INJURY; RECOVERY.

(Under the care of Mr. G. P. NEWBOLT.)

CASES of arterio-venous aneurysm are always of interest and since the old custom of bleeding from the veins of the arm over the site of the brachial artery has practically become obsolete they are few and far between.

A man, aged twenty-three years, was admitted into the Stanley Hospital, Liverpool, on Jan. 27th, 1898, suffering from a pulsating tumour situated in the upper and outer portion of the calf of the right leg. The patient said that four weeks previously he struck his right leg against a long spicule of plate-glass and this inflicted a wound on the outer side of his leg. When the glass was pulled out very profuse hæmorrhage occurred; the blood was bright red in colour and he thought that he lost about "two quarts." The wound was attended to, the limb was bound up, and he went home in a cab. A day or two after the infliction of the injury he had cramp-like pains in the leg; these persisted, but the wound healed and he was able to get about, in fact, when Mr. Newbolt saw the patient he walked easily and well. He consulted Mr. Newbolt for the first time on Jan. 24th. There was then a recently healed cicatrix on the outer side of the right leg half an inch below the head of the fibula. A firm pulsating mass of the size of an orange occupied the upper and outer portion of the calf and extended upwards into the lower portion of the popliteal space. When he was admitted into hospital three days later the swelling was larger, the circumference of the leg being 14½ in. as compared with 12 in. on the opposite side. The tumour had distensile pulsation and there was a loud bruit, but no enlargement of the veins below and no œdema of the foot were noted. The posterior tibial artery pulsated but feebly in comparison with that of the opposite side. On raising the limb the swelling became somewhat smaller and on controlling the femoral artery the pulsation disappeared and the size of the tumour diminished. At this time Mr. Newbolt had no suspicion that the vein was implicated and thought that he had to deal with an aneurysm of the posterior tibial or popliteal. On Jan. 28th the patient was put under chloroform. On removal of the dressings it was evident that the size of the aneurysm had increased and there was very distinct pulsation at the lower part of the popliteal space on the inner side; the tumour here felt softer and was evidently spreading in this direction. The patient having been turned on his face and a tourniquet having been placed round the upper part of the thigh a free incision was made over the most prominent portion of the tumour and the outer head of the gastrocnemius was cut through except at its upper and outer side. The sac, which was very thin, was opened and about two handfuls of clot were turned out; sponges were then plugged into the wound. On removing them the artery was seen lying to the inner and posterior side of the sac and in its wall was a hole with rounded edges of the size of a large pea from which dark venous blood oozed. A probe was passed upwards and downwards and also for some depth inwards. The sac wall was very thin and was composed of the surrounding compressed tissues covered with a lining of fibrin. The main contents consisted of clotted blood, but there was also a good deal of fluid blood in the sac and this structure itself was pouched in several places. Mr. Newbolt now separated the artery from the vein, which lay collapsed to the inner side and overlapped the artery. Opposite the wound in the artery, however, the vein was adherent and could not be separated and a probe passed from the artery into the vein. In order to tie the artery above the wound in it Mr. Newbolt had to extend his incision upwards, exposing the peroneal nerve; the internal popliteal nerve, however, was not seen, being evidently pushed inwards. The artery was next divided and tied above and below with green gut ligature and the longitudinal slit in the vein was closed with a continuous catgut suture. This it may be said was difficult as the wound was a deep one and the light was failing. On loosening the tourniquet there was smart hæmorrhage from the vein and also from a large branch, probably the inferior sural. The vein was therefore ligatured and divided and all other bleeding points were secured. The wound being dry was now thoroughly cleansed from all clot and was lightly packed with cyanide gauze. The whole limb was enveloped in layers of wool and lightly bandaged. The patient was sent back to bed, the leg was raised and warm blankets and hot-water bottles were placed around it. Two hours later the foot was rather cold and no pulsation was to be felt in any of the vessels at the ankle. The operation took one and a half hours and Mr. Newbolt was ably assisted by his colleague Mr. Larkin. On Jan. 29th the patient was quite comfortable. The foot was warm, he could move the toes, and sensation was good. The wound was dressed. On the 31st the wound was dressed; it looked well and was freely open. After this date there was practically nothing to note. The patient made an uninterrupted recovery, the wound rapidly granulated and the temperature was never above 99° F. When Mr. Newbolt examined him on March 17th he was walking about with an elastic stocking on; there was very little tendency of the foot to swell on removing the stocking and the circulation was fairly good, though Mr. Newbolt could not detect pulsation in any of the vessels of the foot.

Remarks by Mr. NEWBOLT.—I have obtained notes of 6 cases in which this operation has been performed for wound of the popliteal vessels; 4 of these occurred in Great Britain, 1 in Germany, and 1 in France. In the 7 cases which I have tabulated several points are interesting. In the first place all the patients except the first made good recoveries and he lost his leg only. In 2 of the 7 immediate ligature was resorted to with good result. In Mr. Langton's case 9 days elapsed and in my own four and a half weeks passed before ligature was applied. Mr. Walsham, in a valuable paper[1] based on a case of ligature of the femoral artery and vein for wound of these vessels, makes the following remarks: "Ligature of the femoral artery and vein immediately after wound is much more serious than when an interval of a few weeks has passed. In 12 cases recorded of immediate ligature (that is, within twenty-four hours) 5 suffered from gangrene and died. In 20 cases after pressure had been applied for some time and the collateral circulation established only 5 suffered from gangrene, though 11 died altogether from various causes—such as secondary hæmorrhage, pyæmia, &c.; 4 cases of removal of tumour complicated by wound of artery and vein were not attended by gangrene, as the collateral circulation had already been established; 16 cases of wound of the femoral artery and vein treated by pressure alone all ended in arterio-venous aneurysm." He therefore draws the conclusion that when a large artery and vein such as the femoral are wounded the safer plan is to apply pressure for a few days until the collateral circulation is established and then to ligature the proximal and distal ends. Immediate ligature of both artery and vein is liable to be attended with gangrene although this risk is less than has been generally assumed. Again, Grillo in 15 cases of aneurysm tied both artery and vein without bad result. Hunter, in his first 3 operations, tied both artery and vein. This, therefore, also emphasises the fact that gangrene is not so common even after ligature of the main artery and vein in the lower extremity as is generally supposed. Mr. Jacobson in the last edition of his "Operative Surgery" says in speaking of wound of the popliteal artery: "It would be well if possible to get leave for immediate amputation if the vein was found injured also." In the case recorded by Mr. Annandale there was an absence of the peculiar thrill which has always been considered diagnostic of arterio-venous aneurysm. There was no dilatation of the canal of the vein and Mr. Annandale does not think that although a wound existed there was much communication through the wound between the vessels. My case rather confirms Mr. Annandale's as there was nothing typical of arterio-venous aneurysm until operation disclosed the state of affairs and the vessels were unaltered in calibre.

If I may draw conclusions from seven cases all occurring in young adults I should say that the operation is not so serious as one would naturally think and that the prognosis will depend greatly upon the amount of blood extravasated in the tissues around. It will of course always be wise to point out to the patient that amputation may be necessary. Finally, after recovery the veins of the leg are prone to become varicose and this is the case in one instance in which the femoral vessels were tied some fourteen years ago, the

[1] Transactions of the Royal Medical and Chirurgical Society, 1888.

SEVEN CASES OF WOUND OF THE POPLITEAL ARTERY AND VEIN TREATED BY LIGATURE OF BOTH ARTERY AND VEIN.

No.	Reference.	Sex.	Age in years.	Surgeon.	Nature and situation of the wound.	Immediate treatment and results.	Date of ligature of the popliteal vessels after injury.	Remarks.	Result.
1	Transactions of the Royal Medical and Chirurgical Society, 1851, p. 327.	M.	17	Cock.	Punctured wound in the lower third of the thigh.	Pressure for twelve days; hæmorrhage; ligature of the femoral artery; arterio-venous aneurysm formed.	Eleven years after.	Incision into the abscess formed in connexion with aneurysm; profuse hæmorrhage.	Amputation of the leg; recovery.
2	THE LANCET, April 24th, 1875, p. 568.	M.	10	Annandale.	Wound inflicted with scissors in the popliteal space.	Pressure and bandages; arterio-venous aneurysm formed in three days.	Three months.	No typical arterio-venous thrill.	Recovery.
3	Bulletin et Mémoire, April, 1883, p. 264.	M.	17	Verneuil.	Punctured wound in the popliteal space.	Pressure; wound healed; arterio-venous aneurysm formed (aneurysmal varix).	Three years.	No gangrene; secondary hæmorrhage on the 23rd day; cautery.	Recovery.
4	THE LANCET, Jan. 1st, 1887, p. 12.	M.	21	Teale.	Vessels wounded in removing sequestrum from the posterior surface of the femur.	—	Immediate ligature.	—	Recovery.
	Unpublished. 1888.	M.	17	Langton.	Stab in the popliteal space.	Pressure for nine days; hæmorrhage; ligature of the vessels.	Nine days.	Three years after hurt leg whilst jumping; bled from the vein which was probably opened by the scar tearing; pressure; well a year later.	Recovery.
6	Centralblatt für Chirurgie, 1897, S. 1131.	F.	32	Klemm.	Pistol bullet in the popliteal space.	—	Immediate ligature.	Loud-blowing systolic murmur heard over the site of the wound.	Recovery.
7	—	M.	23	Newbolt.	Wound caused by spicule of glass in the popliteal region.	Pressure; arterio-venous aneurysm formed.	Four and a half weeks after.	No typical arterio-venous thrill.	Recovery.

limb otherwise being perfect. Ligature of the artery did not stop bleeding from the vein either in my case or in Mr. Walsham's femoral case, though Halford's experiments on rabbits teach us that this is so, and Langenbeck also makes the statement that ligature of the artery often stops hæmorrhage from the vein. The continuous suture of the vein failed, I think, because the glass probably penetrated the posterior wall also and thus inflicted two wounds in the vein only one of which was closed. The slit was too long to be picked up and tied with a ligature.

With regard to treatment, immediate ligature was successful in the 2 cases in which it was carried out and also in the third case, in which it was done nine days after the accident. In the other four, in which pressure and expectant treatment were carried out, there was hæmorrhage in one and in all the others arterio-venous aneurysm formed, needing operation; in one of these the leg was lost. In my own case there was a large collection of blood extravasated and this must have impeded the collateral circulation to a certain degree, though leaving the wound open and clearing out the clot of course relieved matters. There must often be considerable doubt as to whether both vessels have been wounded; but I think, taking all things into consideration, that given a wound of both vessels I should at once cut down and tie the artery and, if possible, sew up the vein. Failing this I should ligature the vein also. An account of the case was read before the Liverpool Medical Institution.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Tuberculous Stricture of the Intestine.—Columnar-celled Carcinoma of the Œsophagus.—Duct Papilloma followed by Colloid Carcinoma.—Contraction of the Stomach.—Aneurysm of the Aorta Rupturing Externally.—Interlobular Cirrhosis of the Liver.—Œsophageal Cancer Ulcerating into the Aorta.—Cerebral Hæmorrhage.—Exhibition of Specimens.

A MEETING of this society was held on April 19th, the PRESIDENT, Dr. J. F. Payne, being in the chair.

Dr. CHARLES POWELL WHITE (Birmingham) showed a specimen of Stricture of the Intestine due to Intestinal Ulceration. The intestines were those of a man, aged fifty-two years, who died from intestinal obstruction. There were numerous ulcers throughout the whole length of the intestines; they were irregular in shape and showed a great tendency to extend around the bowel. The bases of the ulcers were somewhat thickened and in a few of them minute tubercles could be seen. There were four dense cicatricial strictures in the small intestine. Just above the tightest of these, which would not admit a cedar pencil, was a collection of small ulcers, one of which had perforated and given rise to septic peritonitis. The cæcum was extensively ulcerated and just above was a cicatricial stricture of the colon. There were no old adhesions between the intestines and neighbouring parts and there was no sign of tuberculosis elsewhere.—Mr. D'ARCY POWER asked whether the tuberculosis was believed to be primary. He mentioned that Louis XIII. of France died from acute peritonitis due to a similar affection of the intestine.

Dr. WHITE also showed a specimen of Columnar-celled Carcinoma of the Œsophagus. The patient was a man aged forty-seven years. The specimen showed a mass of new growth springing from the anterior wall of the œsophagus just above the cardiac orifice. The mass measured 2 in. long, 1½ in. wide, and 1 in. in depth, and it occupied the lumen of the tube. There were one or two enlarged glands in the neighbourhood of the cardiac orifice. Microscopically it was a typical columnar-celled carcinoma.

Dr. C. E. M. KELLY and Dr. D'ESTE EMERY gave the notes of a case in which a Duct Papilloma of the Breast was followed by Colloid Carcinoma which finally disseminated and caused the patient's death. In 1890 the patient, who was then thirty-nine years of age, had the breast removed for a tumour which proved to be duct papilloma. In 1894 two more tumours appeared and on removal in 1896 they were found to be colloid carcinoma, and the recurrence of colloid carcinoma took place and in 1898 she died with secondary growths in various parts of the body. There were disseminated knots

of colloid cancer in both lungs and a large growth of colloid cancer in the sternum; in the liver, however, where many secondary deposits were found, there was no trace of colloid, the cancer being apparently of the ordinary spheroidal-celled type. The most extraordinary change was in the skull, in which half the frontal bone was replaced by a dense membrane about ¼ in. thick, which was composed of fibrous tissue with alveoli of spheroidal cells, the bone having disappeared except at the edges of the depression, where it was infiltrated with new growth. There was no trace of colloid change in the skull.—Mr. RAYMOND JOHNSON said that he remembered the removal of the breast by Mr. Berkeley Hill. The tumour was a small one midway between the nipple and the edge of the gland and on squeezing it there was a blood-stained discharge from the nipple. It was in a cyst and was of a delicate feathery structure and microscopically had the characters of a simple papilloma. The subsequent growths had nothing in common with this original growth and he thought that they were not recurrences of it. It was more probable that the small tumours near the scar were new developments of cancer in some outlying lobule of the gland which had escaped removal at the time of the operation.—Mr. BETHAM ROBINSON was inclined to take the same view. He referred to a case which he published some years ago in which the growths in the axilla appeared to be quite different to the original one in the breast. This was owing to the glandular recurrences having undergone myxomatous degeneration so that it required careful searching to find an alveolar structure. He thought care should be taken in giving a prognosis not to place too much reliance on a favourable microscopic examination.—Dr. EMERY, in reply, said that there was nothing in the sections of the secondary growths which resembled duct papilloma and he thought that the subsequent growths were independent.

Dr. BERTRAM HUNT showed a case of Extreme Contraction of the Stomach. The specimen was taken from the body of a man, aged fifty-seven years, who died with gastric symptoms, the illness lasting seven months. The stomach was converted into a tubular organ, the walls being greatly thickened, especially at the centre and pyloric end. The cavity was so reduced that it could not contain more than 1½ oz. of fluid and the lumen in the centre would only just allow the passage of a No. 11 English catheter. Microscopical examination showed that the thickening was chiefly in the submucous and muscular coats and was due to diffuse infiltration by glandular carcinoma, which had undergone extensive colloid degeneration. Many considerations tend to show that the majority of these cases of contracted stomach are due to malignant disease and that many of the cases described as simple cirrhosis or fibrosis ventriculi were really due to cancerous infiltration. The following facts especially support this view: (1) the occurrence of the condition in elderly patients and the short duration of the symptoms, the average duration of ten collected cases being ten months; and (2) the fact that in these cases of contracted stomach growths are often found in other organs not prone to primary malignant disease, such as the mesenteric glands, liver and peritoneum, this association being found in eleven collected cases.

Dr. LEE DICKINSON showed an Aneurysm of the Aorta which ruptured externally. The specimen was obtained from a man, aged thirty-nine years, who had lived temperately and quietly and was free from atheroma and had not had syphilis. It was a very large aneurysm, coming from the first part of the arch of the aorta, which made its way through the sternum and ribs, forming a secondary sac in front of the chest. It proved fatal by external hæmorrhage. The chief interest of the specimen lay in the unusual delicacy of the coats and narrowness of the calibre of the aorta throughout, a condition which Virchow described as hypoplasia and connected particularly with chlorosis and hæmophilia. It was probable that hypoplasia of the aorta deserved recognition as an occasional cause of aneurysm.

Dr. F. PARKES WEBER exhibited a Liver showing an early Interlobular type of Cirrhosis from a case of suppurative pylephlebitis. The fibrosis of the liver could not be made out macroscopically, but microscopically there was a considerable increase in the fibrous substance surrounding the small branches of the portal vein. The distribution of the cirrhotic process was typically the unilobular form described by Charcot and Gombault in their original papers of 1876; the bile capillaries were apparently increased in number. Suppuration in connexion with the pylephlebitis had caused pressure at the hilum of the liver. This had caused intense icterus during at least the latter part of the illness and may possibly have induced the cirrhosis. If the latter hypothesis be the correct one the liver affords a typical example of commencing unilobular cirrhosis caused by obstruction to the flow of bile. In animals two or three days' obstruction to the bile flow (by ligature of the duct) may be sufficient to cause microscopical changes in the liver of a type analogous to those found in the present case—namely, apparent increase in the number of bile capillaries and increase in the amount of interlobular connective tissue. On the other hand, the question arises whether the increase of connective tissue in the present liver be not of earlier origin than the pylephlebitis. So sharply defined are the fibrous interlobular areas that one is reminded of the appearances seen in certain cases of so-called "cystic disease of the liver," such as the case recently shown by Dr. G. F. Still. It is, however, not likely that the fibrosis in the present case is of congenital origin, as it appears to be in cystic disease.

Dr. A. E. GARROD showed a specimen of Perforation of the Aorta by a Malignant Ulcer of the Œsophagus. The patient was a man, aged sixty-two years, who died almost suddenly from hæmorrhage into the stomach. At the necropsy an epitheliomatous ulcer 3 in. across was found affecting the œsophagus about 5 in. from the crico-arytenoid fold and about on a level with the bifurcation of the trachea. It affected chiefly the anterior wall; there was no stenosis. From the floor of the stomach there was a fistulous channel communicating with the descending part of the aorta by a small orifice. There was very little infiltration of the surrounding structures. The stomach contained two pints of blood, but only a little had passed into the duodenum, showing that the hæmorrhage must only have begun a short time before death.—Dr. A. F. VOELCKER said that there was a specimen in the Middlesex Hospital Museum which was almost exactly similar. It was taken from a man, aged fifty-five years, who died from sudden hæmorrhage. Dr. Voelcker remarked on the immunity from infiltration which was usually enjoyed by the arteries although they might be surrounded by growth as in the cases of recurrence in the glands of the neck. The large arteries were seldom invaded, although the veins were often thrombosed.

Dr. L. FREYBERGER showed a Brain with three consecutive hæmorrhages and a Heart (from the same case) showing a well-developed Musculus Papillaris on the Mitral Valve. The patient, a woman, aged forty-three years, was admitted to the Great Northern Central Hospital on Feb. 14th, 1898, under the care of Dr. Clifford Beale. On Dec. 20th, 1897, she complained of violent headache, which came on quite suddenly; soon afterwards she fainted and remained unconscious for two hours, during which time the muscles of the right side of the face and both arms were twitching violently. When she came to there was no paralysis noticed. She was quite well again after six days' illness. Seven weeks after the first attack (on Feb. 7th, 1898) she again complained of severe headache and for a few hours had violent convulsions of the muscles of the right side of her face and body, in the course of which she bit her tongue through, but she was not unconscious. Again there was no paralysis; but after this last attack the patient remained delirious and kept screaming and shouting all this time. Both parents and a brother died from kidney disease. In the hospital she talked and rambled continually but returned sensible answers to questions. On examination she was found to be amblyopic; the pulse was regular and heaving, there were hypertrophy of the heart and a loud systolic murmur at the apex and a ringing second sound in the aorta. No motor paralysis could be made out. On March 17th—i.e., thirty-one days after admission—she fell out of bed while eating her dinner; she was found conscious, lying on the floor, but could not get up. Half an hour afterwards she became suddenly deathly pale and unconscious; the left side of her face and the left arm and leg became completely paralysed and she died a few hours afterwards. At the post-mortem examination three hæmorrhages were found in the brain, one of the size of a cob-nut in the right temporal lobe; the clot was amber-coloured, the brain tissue around was straw-coloured, firm, and dry; a second clot, of the size of a Tangerine orange, and of a greyish-brown colour and gelatinous consistency, was

situated in the left occipito-temporal lobe near the calcar avis; a third large clot (weight 3½ oz.), soft, and of a dark purple colour, was found in the external capsule; the caudate and lenticular nucleus and the optic thalamus were partly destroyed and partly flattened out by the pressure of this huge mass of blood-clot. There was much atheromatosis of the basal arteries. The kidneys were both small and granular. The heart, which was largely hypertrophied, presented an interesting anomaly: from the top of the left lateral papillary muscle a cone-shaped muscle was seen stretching across the ventricular cavity on to the aortic cusp of the mitral valve; it measured ⅝ in. in length and ¼ in. at its base and occupied the place of a tendinous chord. This continuation as it were of the papillary muscle right on to the mitral valve is somewhat rare; it represents a condition present during early fœtal life when a sponge-work of muscular trabeculæ fills the space between the ventricular wall and the primary atrio-ventricular valve.

The following card specimens were exhibited:—

Dr. C. D. GREEN: (1) Stomach with two Perforating Ulcers and a Fistulous Communication with the Colon; and (2) Fibroma of the Nipple.

ÆSCULAPIAN SOCIETY OF LONDON.

Rupture of Tubal Fœtation at the Eighth Week; Laparotomy; Death.—Laparotomy as Treatment in Tuberculous Peritonitis.—Fatal Acute Cardiac Dilatation due to Alcohol.

A MEETING of this society was held on April 15th, Dr. B. G. MORISON, the President, being in the chair.

Dr. J. R. T. CONNER read notes of a case of severe Abdominal Pain in a woman occurring three times between the sixth and eighth week of pregnancy and at the third accession she was blanched and collapsed. Later in the day of the third attack she was operated upon, when the fœtus in its membranes, the placenta entire, and blood-clot from the pelvis of about 1200 c.c. were removed. No drain was used. She rallied from the operation, but the temperature began to rise, reaching 38·3° C. on the fourth night, when delirium was present. The pulse kept always above 100 per minute, and the mental state was that of mania. On the fifth day after operation a decidua was passed per vaginam. Fever continued, reaching on the fifteenth day 40·5° C., and the patient died on the twenty-fifth day.—Mr. A. Q. SILCOCK regarded the result as due to septicæmia.

Mr. A. Q. SILCOCK read a paper on the Treatment of Tuberculous Peritonitis by Laparotomy, in the course of which he quoted statistics from continental authorities and concluded by expressing his belief in favour of abdominal incision. The indications for operation he held to be were when the peritoneum was predominantly affected, when pus or other fluid was free in the abdomen, when a tuberculous focus could be removed; the contra-indications he considered to be general tuberculosis, intestinal ulceration, unless the ulcer has perforated, and advanced pulmonary tuberculosis. He advocated incising in the mesial line below the umbilicus, washing out the abdomen with sterilised water, the avoidance of antiseptics to flush the abdominal cavity, and the use of iodoform gauze as a drain changed every twenty-four hours. He related a case of a child, aged six years, in whom he had so operated for general miliary tuberculous peritonitis, who recovered rapidly and now, eight years later, was well.

Mr. W. CAMPBELL M'DONNELL related a case of Acute Cardiac Dilatation due to alcohol in a man, aged thirty years, without valvular lesion, the liver being unaffected as shown by post-mortem examination.

BRITISH GYNÆCOLOGICAL SOCIETY.

Enucleation of Uterine Myomata.—Exhibition of Specimens.

A MEETING of this society was held on April 14th, Dr. MACNAUGHTON-JONES, President, being in the chair.

Mr. BLAND SUTTON opened a discussion on the subject of the Enucleation of Uterine Myomata arising out of a paper read by Dr. W. Alexander at a previous meeting of the society. He said that continental operators had found that enucleation was attended with more disastrous results than hysterectomy and had one by one given it up. He had himself adopted enucleation in 8 cases; they were all successful and the operation itself was as easy as the enucleation of a cyst from the broad ligament; but there were four important objections to it: (1) the difficulty of hæmorrhage caused by oozing; (2) the protracted convalescence; (3) the length of the operation; and (4) the troublesome sinus. On the other hand, hysterectomy could be done in half an hour; in eighteen days the patient was able to walk about; there was no anxiety about hæmorrhage and there was no sinus. If the two latter factors could be made as satisfactory in the case of enucleation this would be a good operation. Another objection to enucleation was that in most cases fibroids developed after the child-bearing period and the uterus was then a non-vital and unimportant organ. Personally he much preferred hysterectomy, leaving one or both ovaries. The latter was an important point, for he felt sure that a patient was much better off with two ovaries and no uterus than with a uterus and no ovaries.

Dr. W. SMYLY (Dublin) agreed with Mr. Bland Sutton that enucleation was good in a limited number of cases, but that where the woman was past the child-bearing period and the uterus was a useless organ hysterectomy was better. Enucleation was specially indicated in the case of a young woman with one or few myomata. He had operated in five cases; one died from sepsis and the other four recovered and had remained well. Another objection to enucleation was the risk of other fibroids developing later; but perhaps the strongest argument against it was the fact that Martin of Berlin, its originator and main developer, had abandoned it of late.

Dr. GRANVILLE BANTOCK remarked that the novelty in Dr. Alexander's suggestions was not the enucleation itself, but its application to multiple fibroids. He would ask how a case would be dealt with in which there was one fibroid in the anterior and one in the posterior wall. The removal of a dozen or more nodules was a work of supererogation, for such a uterus could be of no use to the patient. He was convinced that there was a tendency to operate too much on fibroids; in many cases they gave rise to no symptoms and the patients were able to bear children, whilst very few cases destroyed life. In view of these facts he thought they ought to stay their hand. The more experience he had the less he was inclined to operate.

Mr. BOWREMAN JESSETT also urged that there should not be too much hurry in removing fibroids; but when interference was necessary he thought it was easier and better to take away the whole uterus than to enucleate.

Mr. J. FURNEAUX JORDAN (Birmingham) asked how it was proposed to check hæmorrhage. In a case with multiple nodules he thought it impossible to bring the edges to the abdominal wound and also to bring the deep surfaces into apposition, and unless this could be done he thought hysterectomy was the easier operation.

Dr. HERBERT SNOW observed that the operation for the enucleation of *multiple* fibroids must stand or fall by its claim to conserve the child-bearing organs. What reason was there for thinking that a uterus so far diseased could resume its functions?

Dr. HEYWOOD SMITH was one of those who thought that hysterectomy was a better operation than enucleation in most cases; if enucleation were done the tincture of matico was a styptic which could be relied on. As regards pregnancy with fibroids, all depended on the position of the tumour; when in the fundus there was no reason why pregnancy should not end safely at term; but in the cervix there was considerable danger.

Mr. CHRISTOPHER MARTIN (Birmingham) said that the reduction of mortality had led many surgeons to operate unnecessarily. But granted a suitable case he thought that if there were more than one nodule enucleation was more risky than hysterectomy and the cure was not certain. He had lately to perform hysterectomy in a case in which a distinguished surgeon had performed enucleation five years previously; no doubt at the time there were no nodules left, yet after twelve months the symptoms began again necessitating the second operation.

Dr. C. H. F. ROUTH put in a plea for less heroic measures. He quoted with approval the practice of the late Mr. Baker Brown as illustrated by the case of a woman with three fibroids of the size of oranges projecting from the sides of the uterus into the vagina. He simply cut through them without trying to enucleate them and they disappeared. Modern surgeons would probably have done a more complete operation with no better results.

Dr. F. EDGE (Wolverhampton) remarked that while they

were anxious to preserve organs they were more anxious to preserve life and he thought the mortality of enucleation was twice as great as that of hysterectomy.

The PRESIDENT thought enucleation had been abandoned both here and on the continent. In the paper under discussion one case was reported as having died from the operation, but there were three post-mortem examinations and he thought they ought to look at the ultimate results.

Dr. ALEXANDER, in reply, thanked the Fellows for the way in which they had received his paper and for their frank criticisms. He did not advise operation for all cases of fibroids and he did not advise enucleation in every operative case, but he thought it would at least give them an alternative to hysterectomy, and that in being a non-mutilative operation it presented a marked advantage over total removal of the uterus.

The following card specimens were shown :—

Dr. MACNAUGHTON-JONES: Hæmorrhage into the Ovary and Cystic Ovary causing Dysmenorrhœa.

Mr. J. FURNEAUX JORDAN: Unruptured Tubal Gestation.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

AT a meeting of this society held in the out-patient room of the Leeds General Infirmary for the exhibition of cases of clinical interest,

Mr. LITTLEWOOD showed the following cases:—1. Intra-peritoneal Rupture of the Bladder, seen with Mr. W. A. Stott. The patient, a man, aged twenty-eight years, was operated on thirty-six hours after the injury. The abdomen was opened and three or four pints of urine were evacuated; there was some peritonitis. The rupture in the bladder was about one and a half inches long, in the middle line, terminating about the peritoneal reflexion; this was stitched up with 8 or 10 interrupted catgut sutures, including all the coats with the exception of the mucosa. The peritoneum was drained for forty-eight hours by means of a Bantock's tube. The patient passed urine six hours after the operation and no catheter was passed. The patient was up at the end of three weeks with the wound soundly healed. 2. Bullet Wound of the Sigmoid Flexure. The patient, a man, aged twenty years, was operated on six hours after the accident. An incision was made through the abdominal wall through the track of the bullet when the bullet was found to have entered the peritoneal cavity, perforated the sigmoid flexure, and lodged in the sub peritoneal tissues over the iliacus muscle. The bullet was extracted and the two wounds in the sigmoid flexure were stitched up by Lembert's sutures. The peritoneum was drained for forty-eight hours. The bowels were opened six days after the operation and the patient left the infirmary on March 14th with the wounds healed. 3. Ununited Fracture of the Femur, wired. A man, aged sixty-five years, had a spiral fracture through the middle of his right femur eleven weeks before the operation. The femur was wired on March 20th, 1897. The cause of non-union was a large piece of muscle between the fragments. He had now firm union and went about with a stick. 4. Excision of the Head of the Humerus for Old-Standing Dislocation. A man, aged forty-eight years, dislocated his left shoulder in September, 1897. Five attempts at reduction were made and the head of the humerus was excised on Nov. 15th, 1897. It was then found that the neck of the scapula had been fractured and the glenoid cavity was obliterated. The patient has now a useful limb. 5. Two cases of Thyroid Cysts removed by Symonds's Method. 6. Some cases of Joint Tuberculosis treated with Iodoform Injections.

Dr. TREVELYAN showed (1) six cases of Locomotor Ataxia, two complicated with aortic disease, one with optic atrophy, one of possible traumatic origin, and two undergoing exercise treatment; a photograph of two cases occurring in husband and wife was also shown; (2) a case of Infantile Hemiplegia with Fits and Disordered Movements; and (3) a case of Infantile Spastic Paraplegia with Fundus Changes, suggesting a possible syphilitic origin for the nervous disease.

Mr. WARD showed the following cases:—1. A boy, aged thirteen years, suffering from Ununited Fracture of the Left Tibia and Fibula with Skiagram. The original fracture occurred in 1889 and since then the patient had had the bones resected six times and wired on four occasions with a negative result. 2. A man, aged forty-one years, who had had Rodent Ulcer of the Orbit and Face excised, followed by two plastic operations, with a series of Photographs showing the various stages. The duration of the disease was ten years, the patient having undergone five previous operations. 3. Three men, aged thirty-four, fifty-five, and forty-seven years respectively, who had had proctectomy performed for Malignant Disease of the Rectum, intra-peritoneal lumbar colotomy having been performed prior to the major operation in each case. There had been no return of the disease and the patients were gaining weight and following their employment.

Dr. CHURTON showed a woman, aged thirty-five years, who while under treatment for chronic rheumatism and mitral disease contracted Syphilis. A secondary rash had appeared three weeks ago. After ordinary treatment for a fortnight all medicine by the mouth was stopped and 4 minims of "grey oil" were injected into a gluteal muscle. The rash, which had been spreading over the face and back, although fading on the chest, was now rapidly fading everywhere. In several cases of visceral syphilis this method had been found convenient; in none had there been any marked pain or other undesirable result.

Other cases and specimens shown were :—

Dr. CHURTON: A New Method of Testing for Indican.

Dr. TREVELYAN: (1) A case of Syphilis of the Larynx, Mouth, and Nose; and (2) a case of Double Abductor Paralysis of the Larynx.

Mr. MAYO ROBSON: (1) Needle in the Knee-joint removed by operation; (2) Pyonephrosis; Renal Calculus; Nephrolithotomy; (3) two cases of Ascites apparently cured by Laparotomy; (4) Gluteal Aneurysm; Ligature of the Common Iliac Artery; (5) Ovarian Cyst with Tubercular Peritonitis; Ovariotomy; and (6) Gallstone Impacted at the Papilla of the Common Duct; Duodeno-choledochotomy.

Dr. BARRS: (1) A case of Diphtheria treated by Antitoxin and Tracheotomy in which membranous casts of the trachea were coughed up; and (2) a series of Clinical Photographs shown by the lantern.

Mr. H. LITTLEWOOD: Lumbar Nephrectomy for Malignant Disease.

Mr. WARD: Sarcoma of the Fibula.

Dr. HELLIER: (1) A case of Spastic Paraplegia; and (2) a case of Extreme Hydrocephalus.

Mr. W. H. BROWN: (1) Carcinoma of the Sacrum in a Child; (2) Fracture of the Acromial End of the Clavicle; (3) Abdominal Swellings in an Infant; and (4) two cases of Compound Depressed Fracture of the Skull not operated upon.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Osteo-Arthritis.—Surgical Treatment of Pyloric Obstruction.

A MEETING of this society was held on April 14th, Dr. MACFIE CAMPBELL, the President, being in the chair.

Dr. G. STOPFORD TAYLOR showed a fair-complexioned girl, six years of age, suffering from an attack of Urticaria of one month's duration, commencing shortly after an attack of measles. White wheals of the size of a bean appeared upon the cheeks, buttocks, legs, and forearms; those on the cheeks and arms became rapidly pigmented—urticaria pigmentosa; and those on the buttocks became hæmorrhagic—urticaria hæmorrhagica. The eruption was rapidly subsiding under an anti-scorbutic diet and lime juice. He also showed a case of Purpura as a contrast case.

Dr. C. MACALISTER exhibited lantern slides of a post-mortem examination on a case of Complete Transposition of the Viscera.—Dr. GORDON GULLAN mentioned a similar case that occurred in the Royal Infirmary under the care of Dr. Caton; the transposition was complete and the patient had been left-handed; no distinct difference was found in the development of the cerebral convolutions of the two sides.

Dr. C. MACALISTER also read a note on Osteo-arthritis, illustrated by a series of lantern slides showing the several varieties. He had seen good results follow the administration of ox blood dried in vacuo and given in the form of tabloids.—Dr. BRADSHAW alluded to the views of Bannatyne and Wohlmann that osteo-arthritis was due to a specific micro-organism which they had found in the synovial membrane and fluid of affected joints. Acting on this he had

found benefit from the administration of creasote and thought that the good results following the ox blood treatment were quite consistent with the microbic theory, as the blood might contain some antidote to the toxins secreted by the organisms.—Dr. CARTER, Dr. GRÜNBAUM, Mr. RAW, and Dr. WARRINGTON spoke.

Mr. PAUL read a paper on the Surgical Treatment of Pyloric Obstruction, with an account of 20 cases and of a new method of performing Gastro-enterostomy. The cases consisted of 3 of Loreta's operation, 5 of pyloroplasty, 2 of pylorectomy, and 10 of gastro-enterostomy. The heaviest mortality occurred in the last class. He thought Loreta's operation was now superseded by the much better pyloroplasty. Pylorectomy had only a limited application; the cases did not come under surgical treatment sufficiently early. For gastro-enterostomy he considered that no thoroughly satisfactory operation had yet been devised and suggested the following. An incision is made through the musculo-peritoneal coats of the bowel, which are then reflected with a blunt dissector and the denuded submucosa rubbed with a stick of zinc chloride. The stomach is next treated in the same way except that the outer coats are excised and not simply reflected. A continuous suture is now run around the areas operated upon connecting the stomach and bowel and a few Halstead sutures are added when necessary. The results of experiments on dogs by this method of anastomosis were given; anastomosis occurred in about twenty-four hours and a good opening was produced.—Mr. RUSHTON PARKER observed that Mr. Paul had dealt very ably with a somewhat extensive and many-sided subject. He would not attempt to go into more than a few points raised, having at a recent meeting expressed his own views in relation to several cases in which he had himself performed pyloroplasty, not only in cicatricial stenosis but in cases of malignant disease. It was clear that pyloroplasty must be of limited application in malignant disease and that gastro-enterostomy was the operation most likely concerned. At the same time Mr. Parker's view was that the scope for ingenuity, and consequently interest, offered by malignant disease fell far short of that deserved by other cases and he had frequently refrained from extensive operation of quite possible success on that account.—Dr. CARTER and Dr. ROSS joined in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimen.—Some Points in the Etiology of Typhoid Fever.

A MEETING of this society was held on March 31st, the President, Dr. SINCLAIR WHITE, being in the chair.

Dr. ARTHUR HALL showed a case of Xerostomia in a woman, aged forty-nine years. The condition had lasted for a year and had been quite unrelieved by any form of treatment.

Mr. ARCHIBALD CUFF showed (1) a case of Resection of the Astragalus; and (2) a patient who had been rapidly relieved of a Psoas Abscess.

Mr. PRIESTLEY showed a specimen of Aneurysm of the Abdominal Aorta.

Dr. ROBERTSON read a paper on Some Points in the Etiology of Typhoid Fever. He pointed out that direct infection accounted for a much larger number of cases than was generally supposed—probably about as many as 10 per cent. of the total number of cases were due to this cause. A great deal of attention had very properly been given to the prevention of water-borne typhoid fever. The much more difficult subject of endemic typhoid fever has not received the attention which its importance seemed to merit. Probably as much as from 80 to 85 per cent. of the cases of typhoid fever which occurred in this country were not water-borne and were not due to direct infection. Dr. Robertson related his experiments, which went to show that the typhoid organisms could live for very long periods in the soil and that it appeared to be essential for their growth that they should be fed with fresh supplies of organic matter at intervals. These conditions were just those found in the unsanitary conditions which were most often claimed to have produced the diseases—viz., gross soil pollution. From such areas the organism was easily spread by wind into the food-supplies of persons living in houses near. Statistical evidence went to show that persons living in areas where soil pollution occurred were much more frequently attacked than persons in clean areas. In large public institutions endemic typhoid fever was practically unknown.

The PRESIDENT, Dr. JAMES MARTIN, Dr. F. H. WADDY, Dr. WILKINSON, Dr. LEONARD GILES, Dr. ARTHUR HALL, and Dr. MEREDITH RICHARDS joined in the discussion.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Adherent Placenta.

A MEETING of the above society was held on April 6th, Dr. CATTLE, President, being in the chair.

The PRESIDENT reported the result of the deputation to the Watch Committee concerning the question of the delivery of lectures on sexual subjects in public.

Dr. HEELIS read a paper on Adherent Placenta. He ascribed as causes of it previous endometritis and in primiparæ the condition producing membranous dysmenorrhœa. Cases in point were cited. The natural removal of retained adherent placenta was carried out by decidual cells playing the part of osteoclasts and phagocytes. The dangers of retained placenta are hæmorrhage and sepsis, either occurring after abortion or at full term. Small portions of adherent placenta after an abortion may set up severe hæmorrhage, but large portions will not necessarily cause septic mischief. The treatment recommended was the complete evacuation of the uterine contents, curetting if necessary, and subsequent injection of iodoform emulsion and plugging with iodoform gauze. An operation for retained uterine contents should be carried out, however, under the strictest antiseptic precautions so as to prevent consequent septic troubles. A mixture of quinine, ergot, and digitalis administered after the operation is of some value to secure continual contraction of the uterus.—A discussion followed in which Dr. CATTLE, Dr. HANDFORD, Dr. WOOD, and Dr. BOLTON took part and Dr. HEELIS replied.

Dr. HANDFORD showed a microscopical specimen of Urine containing the Bilharzia Hæmatobia.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Isolation after Diphtheria.—Epidemic of Influenza in a School.—Development of the Embryo.

THE seventh meeting of the session of this society was held in the Medical Library of University College on April 13th.

Mr. C. A. MORTON showed a patient from whom the upper end of the Fibia was Removed for Sarcoma and who was shown at a meeting of the society a year ago.

Mr. F. LACE showed a specimen (with microscopic slides) of Duct Papilloma of the Breast.—Dr. AUST LAWRENCE spoke on the subject.

Mr. PAUL BUSH showed a large Tumour of the Vertebræ which had all the appearance of carcinoma under microscopic examination; it occurred in a young girl and at the post-mortem examination no other primary growth could be found.—Mr. MUNRO SMITH discussed the pathology of the specimen which he considered was a true carcinoma.

Mr. PAUL BUSH also showed a Tumour of the Ovary weighing 4½ lb. which he had successfully removed during an acute attack of peritonitis due to twisting of the pedicle. The tumour had been noticed for about ten years. The microscopic slides showed it to be a fibromyoma undergoing well-marked myxomatous degenerations.—Mr. MUNRO SMITH, Dr. P. W. WILLIAMS, Dr. STACK, and Dr. AUST LAWRENCE discussed the case.

Dr. J. O. SYMES showed numerous Surface Plate Cultures from Vaccine Lymphs.—Mr. H. WATHEN and Mr. EWENS remarked on the subject of human and vaccine lymphs.

Dr. T. FISHER showed a series of Pathological Specimens recently added to the Bristol Royal Infirmary Museum.

Dr. B. ROGERS read a paper on Isolation after Diphtheria in which he advocated a more frequent and regular bacteriological investigation of the discharges of those recovering.—A long discussion on the period of isolation required after

this disease followed, in which Dr. MICHELL CLARKE, Dr. P. W. WILLIAMS, Mr. H. WATHEN, Dr. SYMES, Dr. ELLIOTT, Dr. SKERRITT, Dr. PARKER, and Dr. SHINGLETON SMITH took part.

Mr. J. TAYLOR read a paper on an Epidemic of Influenza in a School; this was illustrated by lantern slides.—Dr. SKERRITT and Mr. H. WATHEN discussed the paper.

Mr. MUNRO SMITH gave an interesting demonstration of the Development of the Embryo, illustrated by numerous beautiful micro-photographs, which were thrown on the screen by the oxy-hydrogen light.

FORFARSHIRE MEDICAL ASSOCIATION.

Exhibition of Cases and Specimens.—Tropical Abscess of the Liver.—Injury to the Lower Lumbar Vertebræ.

A MEETING of this society was held at University College, Dundee, on April 1st, Dr. A. CAMPBELL, President, being in the chair.

Dr. MACEWAN showed a case of Reproduction of the Humerus after Operation for Acute Necrosis and also a case after Estlander's operation.

Mr. D. M. GREIG showed a case of Congenital Malformation of the Anus rectified by operation; the rectum opened in front of the posterior fourchette.

Mr. GREIG also showed four Abdominal Cases: (1) a case of recovery after operation for Volvulus; (2) a case after operation for Appendicitis with Retro-cæcal Abscess; (3) a case after cœliotomy for Abdominal Pain; and (4) a case of Incurable Malignant Tumour in the Abdomen in which the tumour had diminished somewhat and the patient had put on weight.

Dr. BUIST showed a series of Specimens treated by Tores' Method.

The PRESIDENT read notes of a case of Tropical Abscess of the Liver. The patient, a woman, aged fifty-one years, had spent eighteen years in Calcutta enjoying good health till she had a severe attack of malarial fever. Her condition showing no improvement after three months she was therefore ordered home. On Aug. 17th, 1897, the patient was found to be much exhausted, the temperature was 103° F., and the liver was enlarged upwards, there being no pain, no diarrhœa, and no jaundice, but sweats and chilliness. Towards the end of August the patient had a sharp attack of perihepatitis. Aspiration was done at first without success, but on Sept. 18th three pints of purulent fluid were withdrawn. The dulness, which had after this tapping diminished, again increased. On Sept. 25th a portion of the seventh rib was excised in the right nipple line, the liver was incised, and the abscess cavity was evacuated. A drain was inserted into the most dependent part between the eighth and ninth ribs in the posterior axillary line. The drain was removed in December and the patient is now as well as ever.—Dr. MACEWAN spoke of a case he had had under his care.—Dr. MACKIE WHYTE referred to the absence of fluctuation and also to the absence of dysentery in the case read.

Dr. PIRIE read notes on a Simple Method of Clinical Bacteriology and showed several micro-photographs and also tubes of cultivations.

Dr. FOGGIE read notes of a case of a man who had received an Injury to the Lower Lumbar Vertebræ by a fall from a scaffolding. Paraplegia from the hips downwards had existed at first, but the various movements at the hip and the knee-joints were soon restored, while the initial retention of urine and the constipation after passing through a stage of incontinence showed now a modified control. Muscular movements below the knees and reaction to the faradaic current were still absent. Neither the knee-jerks nor plantar reflexes had as yet returned. There was well-defined total anæsthesia around the anus and in front and also lower down over both heels. Partial anæsthesia existed over all the skin below the knees except on the inner sides and was connected by a narrow band running up the back of the thighs, with upper totally anæsthetic area. Thermo-anæsthesia was practically co-extensive. Vaso-motor and trophic changes were present. The primary lesion had affected the lumbar region of the cord or its roots as high as the third segment or root, but the permanent lesion had been almost limited to the sacral region of the cord or its roots. Possibly the injury was one of the cauda equina.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Exhibition of Cases and Specimens.—Osseous Union of Transverse Fracture of the Patella.

A MEETING of this section was held on March 25th, Dr. J. M. PURSER, the President, being in the chair.

Dr. E. H. BENNETT exhibited an example of Rupture of the Duodenum from the kick of a horse. In the absence of any definite symptoms an exploratory laparotomy was performed without any lesion being discovered. At the post-mortem examination it was found that the portion of the duodenum which lay against the spine and outside the peritoneum had been ruptured and that the intestinal contents had escaped along the spine downwards as far as the pelvis.

Dr. J. W. MOORE showed a specimen of Cancer of the Œsophagus and Perforation of the Right Subclavian Artery by a Secondary Growth. The patient was a man, aged fifty-six years, who died from torrential hæmorrhage, after suffering from dysphagia for seven or eight months and subsequently from laryngeal paralysis due to pressure on the left recurrent laryngeal nerve, from fœtid sputum and breath, and from other pressure symptoms caused by a squamous cancer which involved the œsophagus at the level of one inch above the diaphragm; the immediate cause of death was hæmorrhage, due to perforation of the right subclavian artery by a secondary cancerous tumour.

Mr. WHEELER exhibited a patient who had been trephined for a Depressed Fracture of the Skull caused by a fall from the top of a tramcar. His symptoms were profound coma, complete paralysis, stertorous respiration, and laboured and slow pulse (50 per minute). The surface of his body was warm and perspiring, both his pupils were dilated, his reflexes were lost, and his fæces and urine were retained; there was no hæmorrhage from his ear, mouth, or nose. An extensive depression could be easily detected upon the left side of his head in front of the parietal eminence. A large triangular piece of bone was removed as were two smaller pieces with several spicula. From the superior portion of this large triangular piece of bone the superior longitudinal sinus had to be separated. There was considerable hæmorrhage from a large cerebral vessel as well as from wounds in the dura mater. Ten minutes after the operation the patient conversed with his master. He is now quite recovered except for the loss of sight in his left eye.

Mr. WHEELER also showed specimens of extensive Multiple Rupture of the Liver and Kidney. The patient was a child, aged six years, who was run over by a cart and was admitted to the City of Dublin Hospital on March 10th at 3 30 P.M. apparently with little the matter, as the child ran about the accident ward. There was no external mark. At 4·15 P.M. the child, lying in the bed, became obviously ill; shortly afterwards it exhibited all the signs of collapse, and three hours later, at 7.10 P.M., the patient died.

Mr. WHEELER also showed a large sarcomatous tumour originating in the sphenoid bone removed from a man, aged twenty-five years. Mr. Wheeler trephined this patient by his own operation in December, 1897, opening the mastoid cells and the tympanum, and exposing at the upper arc of the trephine circle the dura mater, which allowed the temporal lobe to be explored. He recovered rapidly and progressed to convalescence, feeling much relieved from the pain. The discharge ceased, there was less contraction of his masseter muscles, and the pains in his right face were very much lessened, but the facial paralysis remained unaltered. In February, 1898, the pain again troubled him and, in fact, returned as before the operation just described. His masseter muscles again became rigid and contracted and he now complained of pain in the temporal region anterior to, and on a level with, the superior margin of his ear. He was trephined (by Mr. Wheeler) over the seat of the pain in March. A careful examination was followed by a negative result; the man expressed himself much relieved from the pain, which had been acute; he lived until March 8th and apparently died from pressure on the region of the medulla. On post-mortem examination it was found that the tumour was of vast extent, pressing into the ethmoid bone in front and into the pterygoid regions on the right side; behind it involved the basilar process of the occipital bone and the occipito-atlantoid joints. There was no eye trouble,

although the third, fourth, fifth, and sixth nerves passed through the tumour.

Dr. JOHN KNOTT read notes of a case of complete Osseous Union of Transverse Fracture of the Patella.

Reviews and Notices of Books.

Epidemic Diphtheria; a Research on the Origin and Spread of the Disease from an International Standpoint. By ARTHUR NEWSHOLME, M.D., M.R.C.P. Lond. London: Swan Sonnenschein and Co. 1898. Price 7*s.* 6*d.* net.

THIS is a valuable contribution to the epidemiology of a disease which has apparently become increasingly prevalent in populous places where half a century ago it was practically unknown. The method adopted by the author to determine the extent of its diffusion consists in the collation from all quarters of the globe of mortality statistics of diphtheria, which he presents in the form of charts all drawn to the same scale and representing the death-rate per 100,000 living in each place for each of the series of years during which such statistics are available. He thereby dispenses with columns of figures and enables the reader to perceive at a glance the actual and comparative prevalence of diphtheria in a large number of centres of observation. The application of the study of mortality statistics to the science of epidemiology must become increasingly valuable, since year by year these returns enable the survey to be widened. For although, strictly speaking, the number of deaths from an infectious disease do not invariably concord with actual prevalence, owing to variations in fatality and virulence in different places and at different periods (and, it may be added, also the effects of treatment, since the introduction of antitoxic serum has admittedly diminished the fatality of diphtheria), yet there is on the whole a sufficient degree of concordance to justify inferences as to prevalence to be drawn on a wide scale from mortality statistics. Until notification of diseases becomes universal, and has been in force for a long series of years, it would be impossible to obtain any other standard of comparison than that which is derived from the death-rate. In eleven chapters, each profusely illustrated by the charts referred to, Dr. Newsholme records the statistical returns of diphtheria (sometimes inclusive of "croup," sometimes differentiated from this form of the disease) of many of the important cities of the United States and Canada; of England and Wales, Scotland and Ireland; of France, Italy, Holland and Belgium; of Germany, Austro-Hungary and Russia; of Scandinavia; of Africa and Asia; of Australia and New Zealand. It is indeed a valuable collection, one which encourages the hope, in these days of international scientific congresses, that some system of international registration of disease may in due time be established. It will be found that the periods over which the records extend vary considerably in the different localities, but it is evident from them all that diphtheria is a disease which is endemic in all cities, and that there is not one in which the mean death-rate is not from time to time so greatly exceeded as to mark such years as epidemic years, the duration of such "epidemics" being as variable in extent as their virulence is in severity. It is clear, too, that there is a tendency in any given place for epidemics to recur in cycles, and that at certain periods even the increase is so general as to justify the phrase "pandemic" to be applied to the widespread manifestations. Another striking fact is the manner in which in contiguous towns an epidemic year in one is succeeded in the following year by an epidemic in another; whilst to take the instance of London—a vast congeries of districts—the manner in which the present epidemic that culminated in 1893 advanced from one district to another is most suggestive. All this and more is admirably illustrated and clearly expounded by Dr. Newsholme, and if we refrain from citing figures it is only because the multiplicity of instances which fill his pages renders it impossible to do justice to his work. Nevertheless it may be said that the degree to which diphtheria prevails in this country is strikingly less than its prevalence in America or on the continent of Europe. Nor are the epidemic years accompanied by such a great increase in mortality as appears in the latter. It may be noted in passing that of all the countries investigated Ireland is the most favoured in respect to the small amount of diphtheria to which it is subject.

A very interesting subject of study is the manner in which the disease diphtheria came to be recognised as a distinct entity, for although in the twelfth chapter Dr. Newsholme traces its chronology back to remote times it was not until 1855 that the term appeared in the death returns of England and Wales and not until 1859 that it was registered in London. There can be no question at all that "croup," which figures largely in the death roll of the fourth and fifth decades of the century, that "cynanche maligna," and probably also many cases returned as "scarlet fever," were really what are now recognised as diphtheria. Indeed, Dr. Newsholme points out that the striking rise in the "croup" death-rate in London in 1847, coinciding as it did with an epidemic of influenza, was probably due to an epidemic of diphtheria, whilst the enormous rise in the deaths from diphtheria in England and Wales during 1858 and 1859 is led up to by an increase dating from 1855 of the allied affections. At the same time, with all allowances for changes in nomenclature, it must be admitted that diphtheria has become more and more of an endemic disease since the establishment of freer intercourse and facilities of communication between cities, whilst factors for the epidemic cycles that recur with such variable and sometimes marked frequency may be found in the facilities for personal infection of susceptible subjects, such as is afforded by school attendance, although Dr. Newsholme would by no means regard the latter as a main cause of epidemics. He takes a wider view of the subject, as an epidemiologist should do, and it is instructive, if somewhat discouraging, to find that perhaps the chief influences of the prevalence of this dreaded disease are beyond human control. He shows by careful research that diphtheria prevails most in dry seasons, that in nearly every place an epidemic is preceded by a series of years in which the rainfall has been deficient and the ground-water has therefore become of a low level, and that there is less diphtheria in districts where the rainfall is excessive—e.g., Ireland—than where it is scanty. Hence the inference that the diphtheria bacillus is a saprophyte as well as a parasite and that the conditions favouring its multiplication and perhaps its virulence are mainly those of dryness of soil. Of course such a conclusion does not get rid of the element of personal infection, to which, indeed, the *spread* of the disease is mainly due, but it does suggest that the recurrence of periods of excessive prevalence may be determined by an increase in amount and virulence—whereby the numbers of the "susceptible" are also increased—of the diphtherial microbe. In his closing remarks Dr. Newsholme says that such a conclusion should not depress us, since we must recognise that diphtheria is spread chiefly by personal infection, which is "immensely more potent in epidemic than in inter-epidemic years—a fact which should lead to redoubled efforts to prevent personal infection during such epidemic periods rather than to a fatalistic inertia. Similarly redoubled efforts are required to prevent ground-air from gaining admission into houses and to render more wholesome the soil in districts in which diphtheria has become endemic." We take leave of this book by gratefully acknowledging the service which its

author has rendered, at what must have been the expenditure of no little labour, to epidemiological science, and we may express the hope that similar studies of other specific diseases may come to advance our knowledge of the problems which they present.

Scientific Memoirs by Medical Officers of the Army in India. Edited by Surgeon-Major-General J. CLEGHORN, M.D. St. And., C.S.I., Director-General of the Indian Medical Service. Part X. Calcutta: Office of the Superintendent of Government Printing, India. 1897. Price 4 rupees.

WE are always glad to receive these scientific memoirs because the articles which they contain, in addition to exhibiting a strictly scientific spirit, and a reliable, painstaking method of work, are a mark of the scientific activity that prevails among the members of an important medical service. We congratulate that service on possessing the writers of the various papers in Part X. of this series. The first is a contribution by Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E., F.R.S., on Choleraic and other Commas, on the Influence of Certain Conditions in Determining Morphological Variations in Vibrionic Organisms. The second is, Notes on the Malarial Parasite as observed in the Blood during Life and in the Tissues Post Mortem at Lahore, Punjab, by Surgeon-Captain Murray, M.B. The third is on the Influence of Variations of the Ground-water Level on the Prevalence of Malarial Fevers, by Surgeon-Captain Leonard Rogers, M.B., B.S. Lond., F.R.C.S. Eng., I.M.S. This excellent paper has been already published and noticed in THE LANCET of March 12th, 1898, p. 706. The fourth and fifth papers are by Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E., F.R.S.; one is a Report on the Results of Experiments on the Action of Various Reported Antidotes to Snake-venom conducted during the Season 1895-96; the other on Certain Diseases of Fungal and Algal Origin Affecting Economic Plants in India. Those who are interested in the bacteriological studies of cholera and the comma bacillus and other micro-organisms connected with that disease will do well to peruse the results of the latest researches and observations of Professor D. D. Cunningham recorded in his article in the present part of this series of Scientific Memoirs. We must not forget to add that the plates and diagrams illustrating the different papers are very good.

Yellow Fever in the West Indies. By IZETT ANDERSON, M.D. Edin., Extraordinary Member of the Royal Medical Society of Edinburgh; Honorary Member of the Institute of Jamaica; formerly Resident Surgeon of the Colonial and Seamen's Hospital, Georgetown, British Guiana, &c., &c. London: H. K. Lewis. 1898. Price 3*s.* 6*d.*

THIS little treatise embodies the results of the author's experience after thirty-four years' hard professional work in the West Indies and previously in a Government appointment in a large hospital in British Guiana. Dr. Anderson in his preface gratefully alludes to the circumstance that he was fortunate in having had practical instruction in yellow fever from able and experienced men before he had to treat his first cases, and he refers to the difficulties with which the inexperienced practitioner has to contend who is called upon to treat the disease without any previous clinical knowledge of it. The author's remarks in this respect are not only applicable to yellow fever but to diseases of tropical and subtropical climates generally. We are glad to see that efforts are being made in this country to remedy this deficiency in medical education, and that lecturers on these diseases have been appointed at some of the metropolitan hospitals and medical schools, as at St. George's, St. Mary's, and the Middlesex. The book contains, as might be expected, but little on the pathology and bacteriology of yellow fever; it consists mainly of reminiscences of a clinical and therapeutical nature and of impressions derived from the author's practical acquaintance with that disease. In the first chapter the health conditions of the West Indies formerly and at the present time are briefly described and they furnish a striking testimony to the prophylactic results of progressive medical and sanitary work. The change is a very remarkable one, for formerly, owing to a disregard of obvious insanitary conditions and considerations of personal hygiene and defective medical knowledge, the mortality among British troops and Europeans generally was enormous, whereas under improved sanitation, improved habits of life, a clearer appreciation of the predisposing causes of disease, and better methods of treatment the death-rate has been steadily diminishing, until the West Indies may now be reckoned as among the most healthy of our British colonies, whither, as we know, tourists and persons in delicate health often nowadays proceed as a winter resort. Practically speaking, we may say that about the best thing to do in the event of an outbreak of yellow fever on shipboard is to put to sea at once and run towards the north. Chapter II. deals briefly with the geographical distribution of the disease and its causes, reference being made incidentally to the bacteriological observations of several writers, and to those of Sanarelli of Monte Video and Havelburg of Rio Janeiro in particular, regarding the existence of a specific organism as the essential cause of yellow fever. In Chapter III. the susceptibility to attack is dealt with and it is pointed out that while natives and negroes have a relatively small susceptibility to yellow fever they are nevertheless occasionally attacked by it. In Chapters IV. and V. the symptoms and course of the disease and the state of the urine in yellow fever are discussed; the observations regarding the latter point are valuable. The remaining chapters deal with the clinical phenomena, mixed forms, diagnosis, and treatment of the disease, and the concluding one briefly discusses the contentious question, so long and hotly disputed, as to whether yellow fever is contagious or not. The author is, on the whole, a non-contagionist, and as regards fomites as a means of its spread he quotes with approval the views of Professor William Bailey, of Louisville, Kentucky, on the "Etiology of Yellow Fever," published in THE LANCET of Sept. 6th, 1879. While Dr. Izett Anderson cannot be said to have added anything particularly new in regard to our knowledge of yellow fever or its treatment, his small volume may be accepted as, at any rate, an honest record of personal experience in regard to a disease which he had unusual opportunities of practically studying during his professional life in British Guiana and the West Indies.

JOURNALS, REVIEWS, &c.

The Practitioner for April is a good number. The editorial "Month" contains some good stories about the late Sir Richard Quain and Sir William Jenner. We are sorry to see, however, in one of these stories the solecism "and which" used without a preceding relative. There is an admirable letter quoted from a Philadelphian physician addressed to a Philadelphian paper on the enormity of inserting advertisements of quack medicines, abortionist preparations, and the like. Mr. Ballance reports a case of removal of a Ruptured Spleen followed by Recovery, and Dr. C. E. Michael has an interesting paper on the Complications attending the Serum Treatment of Diphtheria. Other papers are by Dr. Rose Bradford, on a Form of Bright's Disease occurring in Young Women; and by Dr. E. Maddox on Circumlental Photography. The Medico-Literary Causerie deals with the Shrine of Asklepios at Epidauros. A new feature of the journal is a

Literary Supplement, which will be issued in future every three months.

West London Medical Journal.—The opening article is a paper on the Transmission and Dissemination of Cancer, with which Mr. C. A. Ballance introduced a discussion on the subject at the West London Medical Society. It contains a summary of the experiments made by himself and Mr. Shattock in the hope of cultivating parasites, either protophyta or protozoa, from malignant new growths. All the results were negative, and all endeavours to inoculate lower animals with cancer were also unsuccessful, but Mr. Ballance nevertheless believes that the living nature of the virus of cancer will eventually be demonstrated. In the "Mirror of Practice" Dr. Seymour Taylor records an interesting case of successful treatment of the morphia habit.

Heilstätten-Korrespondenz (Sanatorium News).—The current number contains a variety of miscellaneous information relative to establishments for the treatment of phthisical patients. The opening paragraph is an extract from an address by Dr. Dettweiler of the sanatorium at Falkenstein, the general purport of his argument being that it is a mistake to suppose that high altitudes are specially beneficial in the treatment of phthisis. In another part of the paper it is stated that the late Mr. Adolf Machlup has bequeathed 217,000 florins to the Hungarian Red Cross Society for the erection of a sanatorium.

Mercy and Truth.—Dr. A. Cook publishes a continuation of the account of his work among the wounded in Uganda. A report written by a native medical practitioner named Ting Sin King, who works under the Rev. J. Martin at Kucheng, in China, is printed in the original Chinese, together with a translation.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D. Lond., and J. N. LANGLEY, Sc.D. Vol. xxii., No. 3. London: C. J. Clay and Sons. Price 6*s.*—This part contains the following articles: 1. G. N. Stewart, Professor of Physiology in the Western Reserve University, Cleveland, U.S.A.: Researches on the Circulation Time and on the Influences which Affect it. Part 4. The Output of the Heart. He estimates it at about 80 c c. or about 4½ oz. per heart-beat with a pulse-rate of 72, but finds that the output per second may vary considerably even when the pulse-rate is approximately constant, whilst on the other hand the output per second may remain approximately constant while the pulse-rate undergoes considerable variation. 2. F. Gowland Hopkins and Francis W. Brook: On Halogen Derivates from Proteids. 3. S. J. Meltzer, M.D., of New York: On the Paths of Absorption from the Peritoneal Cavity. He considers that his experiments prove in opposition to those of Messrs. Starling and Tubby that absorption takes place by the lymphatics in preference to the blood-vessels. 4. Wakelin Barratt, M.D. Lond.: On the Elimination of Water and of Carbon Dioxide from inflamed Skin. Dr. Barratt found that in dry dermatitis caused by carbolic acid the quantity of both H_2O and CO_2 excreted is at first decreased, the former largely, the latter slightly. In the case of CO_2 the quantity excreted seems subsequently to be rather increased. 5. J. N. Langley: On the Regeneration of Pre-ganglionic and of Post-ganglionic Visceral Nerve Fibres. The majority of the fibres regenerate within a month of the section; the return of function begins as early as from the eighth to the twelfth day. 6. John Haldane, M.D. Edin., and J. Lorrain Smith, M.D. Edin.: On the Absorption of Oxygen by the Lungs.

The Phonographic Record for April combines with an entertaining paper on the Light Side of Medicine instruction in the shape of phonographic notes, a history of some medical words, and a plea for the use of phosphorus by Dr. Lundie. We are told that many phosphorus pills on the market having undergone oxidation are inert, but that when a pill of unchanged phosphorus can be procured good results have followed its use in cases where a nerve tonic is required and strychnine is too stimulating, sleeplessness and hunger being the indications for its use. Dr. Gray has resigned the treasurership of the Society of Medical Phonographers and Mr. Norman Porritt takes his place.

New Inventions.

A NEW APPARATUS FOR MEASURING THE HEIGHT OF PATIENTS.

MESSRS. MAW, SON, AND THOMPSON of Aldersgate-street have just submitted to us a new and very convenient apparatus for measuring the height of patients. It consists essentially of the usual horizontal rod sliding on a graduated standard which is attached by hinged brackets of stout brass to a polished walnut-wood panel about 3 ft. 6 in. in length. This panel is fastened by screws or otherwise to the back of the consulting-room door or to any suitable part of the wall. The object of the revolving brackets is to permit the horizontal rod when not in use to be turned to one side out of the way flat against the door or wall. The graduations of the rod extend from 4 ft. to 7 ft. The total weight of the apparatus is only a few pounds as there is no pedestal. The price is one guinea.

THE BRITISH PHARMACOPŒIA.

II.

IN THE LANCET of April 16th we gave a general summary of the changes made by the General Medical Council in the new British Pharmacopœia and we printed a list of the drugs and preparations omitted and also a list of the new drugs and preparations appearing for the first time in their official position.

A study of these lists will convince the thoughtful reader of the great care and thoroughness shown in the recent revision, and comparing the changes with those made upon former occasions he cannot fail to observe how bold and radical has been the aim of the new committee of the Council entrusted with the work.

It cannot be denied that in many respects our national Pharmacopœia was far from being a credit to British medicine and it was held by some teachers and authorities that each revision left matters in some respects in a worse position than before. This was notably the case with the 1885 volume. The revisers upon that occasion introduced a host of comparatively worthless preparations and weighted the book with them to such an extent that the practitioner was seriously embarrassed in prescribing and the student found his task of learning the subject of materia medica made more irksome than ever. This was mainly owing to the fact that little attempt was made towards uniformity in strength or dosage and no serious attempt was made to eliminate the great mass of worthless agents and obsolete preparations. Indeed, many of the new additions of that period were quite as objectionable as the ancient cumberers of the ground which had discredited the 1867 volume.

A glance at the following figures will prove this. Thus in 1885 the list of additions numbered no less than 114 new drugs or preparations, whilst the omissions only numbered all told 22. There is a verdict passed upon these additions which possibly may have never occurred to the minds of the members of the General Medical Council or of the revising committee and it proves how superficially the work of revision had been carried on up to the present attempt. It will be found that the present revisers have now rejected over 30 of these additions or supposed improvements and made important changes in many of the remainder. Indeed, some of the additions made at the comparatively recent date of 1890

have been now banished to obscurity—i.e., syr. ferri subchlor. and liq. morph. sulph.

It was therefore evident that things were drifting into chaos and confusion and a revision upon the old lines would have probably made the British Pharmacopœia a dead letter. It is with a feeling of great relief that we study the new volume, for it is evident that the new committee have carried out their work in an entirely different spirit and they deserve the gratitude of the entire profession. We offer them our hearty congratulations upon the result of their labour nor do we propose to qualify our praise by pointing out faults and blemishes still remaining. It is our intention to point out rather how the new changes will affect the practitioner and aid him in his struggle against difficulties in his daily work. At the same time we may be permitted to offer suggestions which will be of value as indicating how further progress may be achieved in making the British Pharmacopœia more valuable to him. At the outset it will be apparent that the committee have departed from the old policy of crowding in new preparations without making room for them. As we pointed out in THE LANCET of April 16th the book is of the same size as before, but if we exclude the appendices and index it is much reduced when compared with the size of the last issue. This is explained by the fact that the additions number only 80, while the omissions reach 188, as against 22 made by the 1885 revisers.

When the present revision was in the air two years ago it was urged by several writers that the British Pharmacopœia should be so altered as to be made more attractive and useful to practitioners. It is a strange and even startling fact that only a small percentage of medical men ever see even the outside of the volume. We know also that the student of medicine seldom has an introduction to it except through the text-books on materia medica. This is a condition of matters which should not exist and certainly some means should be employed to alter it. The practitioner when interrogated about it states that the book is of no use to him: he prefers to buy a text-book which embodies all that it contains and which gives him much more assistance about dosage, &c.

It may be worth while to look at the new volume from this standpoint and see if it will be likely to tempt the prescriber to add it to his shelf. One vital alteration has been made which renders the volume of much less assistance to the busy medical man. Formerly under the heading of each drug was printed a complete list of its preparations and their strengths, together with a list of every preparation into which it entered, though the preparation was called by a different name. At a glance if the practitioner consulted the volume he would see everything he required, now he must look at the drug under its heading and then turn to a very elaborate and most carefully compiled index, from which he must again turn to the different preparations. If the student wishes to find into what preparation a drug such as acetic acid enters he may spend some days before finding them all out. There is now no means of making up the subject of materia medica from the British Pharmacopœia until the student labours for weeks and makes out the various lists for himself after much toil and loss of time. This innovation, we fear, will prevent the work making any headway to popularity notwithstanding its manifold improvements. If the committee could have seen their way to put the preparations of each drug under the heading of the drug as is done, for example, in Squire's "Companion to the British Pharmacopœia" the work would have been of enormous value to practitioners and students. As it is we fear it must remain till next revision a volume almost entirely patronised by pharmacists. There is no reason why the reader should have to turn to about twenty-five different places to look for the different preparations of opium—these might all be given upon succeeding pages under "Opium." The busy practitioner does not see why all the tinctures must be printed together; in prescribing he needs a bird's eye view of all the preparations of each drug and their constituents. Notwithstanding this difficulty in the matter of rapid reference we take the opportunity of urging every medical man to have his Pharmacopœia at his elbow in his consulting-room and we would advise teachers of materia medica to recommend their students to use the work in following lectures and especially in studying the physical characters of the specimens of roots, barks, crystals, &c. In no other work are these so carefully and accurately defined.

Fortunately for the practitioner there is no change in the system of weights and measures: he may rejoice that a long respite is given him before the metric system will come into force in prescriptions. In the new work the metric system has been introduced wherever possible, and in some cases to be pointed out later the prescriber must be put on his guard about some difficulty arising from its introduction as influencing the strength of preparations. The weights which have been sanctioned in 1864 are still official and it remains one of the strangest of phenomena that few practitioners of medicine have a clear idea of the weights used by the chemist in compounding or dispensing their prescriptions. There is still no official weight between 1 gr. and 1 oz. (which contains 437·5 grains). When the physician writes a recipe containing the symbol ℈ the British Pharmacopœia still directs that 20 gr. should be dispensed, and if the symbol ʒ be employed in a recipe it is still to be taken as meaning 60 gr. if it stands after a solid substance. If the reader wishes to realise the condition in which this subject of weights is at present we would suggest to him a simple experiment. Let him ask the first half-a-dozen Licentiates of the Pharmaceutical Society whom he meets what number of grains they would weigh out for a saline substance in a prescription ordered by the symbol ℥. Substances like sulphate of magnesia, chlorate of potassium, chloral hydrate, iodide of potassium, &c., are prescribed many thousands of times every week in England in this way and very often the physician (if he has any *definite* idea of the number of grains which his patient should get in his mixture) is labouring under a misapprehension and sometimes the chemist is hazy about the matter. The British Pharmacopœia still recognises no symbol for fluid measures under one pint except the English contractions—min., fl. drm., fl. oz. Many chemists have never seen a recipe containing these symbols or contractions. It is more than ever desirable, therefore, in prescribing solids to discard the old troy symbols and to order always the amounts or weights in grains according to the avoirdupois system, which begins with the troy grain and ends in the avoirdupois pound of 7000 gr., the only intermediate weight being the ounce of 437·5 gr., written oz.

Next to weights and measures comes the important subject of dosage. The practitioner will find that the doses in the new volume differ materially from those in the 1885 Pharmacopœia. When referring to important preparations we shall draw attention to the alteration of dosage, but here it will suffice to point out the general nature of the changes made: 1. The doses of the new British Pharmacopœia will be found to be much more *uniform*. 2. They are much less *inconsistent* than before. Thus, if we take the different preparations of a drug it will be found that the dose has now been calculated upon the basis of the strength of the preparation. Formerly it was not unusual to find that the dose of a crude drug was only a fraction of the dose of the same drug in some of its preparations. This inconsistency was very noticeable in the digitalis and ergot preparations. 3. The doses are, as a rule, much smaller, the intention being to give average doses; but in some instances this has been carried too far; the drug in the smaller dose prescribed is uncertain or inert—for example, the dose of Rochelle salt is given as from 120 to 240 gr. and of antifebrin as from 1 to 3 gr. 4. A distinct departure has been made in many instances in giving two sets of doses, one for a single administration and one for repeated administration as in the magnesia and many other preparations. 5. Lastly, an honest attempt has been made to bring the doses of the various groups of preparations into a more satisfactory condition; for this the practitioner should be profoundly thankful. In the 67 tinctures, for example, the dose is either from 5 to 15 mins. or from 30 to 60 mins., with the one solitary exception of the case of tincture of iodine. This exception could easily have been removed by calling the tincture of this substance a weak liquor and removing it entirely to another group. It is not a tincture in the ordinary sense of the term. In the group of extracts the practitioner will find great assistance in the new dosage.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The forty-ninth annual meeting of the governors and subscribers of the above hospital was held in the Bell Medical and Surgical Library on Tuesday, March 8th. The number of in-patients treated during the past year has been 2047 and the number of out-patients 13,382. The income has been £9253 14*s*.

THE LANCET.

LONDON: SATURDAY, APRIL 23, 1898.

IT is impossible to deny that the action of the General Medical Council in November last in formulating a Notice to registered medical practitioners in advance, as respects clearness and stringency, of previous notices of the sort has been generally regarded by the profession and the public with satisfaction. Even unqualified assistants themselves have not ventured to question the abstract justice and reasonableness of such action on the part of the Council. No doubt to many men of this class it has come as a severe if somewhat belated reminder that they were in a false and unsatisfactory position. The Council for many years connived almost completely at the use of unqualified assistants until reminded by the Home Secretary of the day that it was responsible for scandals which arose out of their employment and that it had the power to deal in a disciplinary way with registered practitioners whose countenance alone kept the class of unqualified assistants in existence. For many years more, down indeed to the present time, the Council has acted with remarkable leniency and toleration towards the class of unqualified assistants and has virtually only punished the practitioner for using such in very gross cases—for the most part in cases of covering, where the unqualified assistant was left practically in complete charge of patients or in the management of a branch practice with little or no supervision by his principal. It is notorious that until very lately it was not uncommon for several large separate practices under the name of one registered practitioner to be practically conducted by unqualified assistants. The fact is that the sense of hardship produced by the recent action of the Council has been occasioned mainly by its past slackness in regard to this great evil, so that unqualified assistants came to think themselves an indispensable and almost a recognised class. The slackness of the General Medical Council in this matter was injurious alike to the public and the profession and it has been cruel in its operation on the unqualified assistants, who have come to regard themselves almost as having rights and claims similar to those which practitioners before the year 1815 had when the Apothecaries Act came into force. This view is quite untenable. The Medical Acts would be stultified if under the thin cover of supervision by a registered practitioner unqualified assistants were to be foisted on the public. The public would be defrauded and very great injustice would be done to young practitioners who attain a place in the Medical Register by years of hard study and after undergoing the ordeal of many examinations. Accordingly, the action of the Council has been generally approved and will, doubtless, be steadily maintained.

Our readers will have seen[1] that a movement is on foot in favour of a strictly limited section of the class of unqualified assistants. It is proposed to petition the General Medical Council to authorise the examining bodies, or certain of them, to hold, if they please, one or more special examinations, during the present year alone, for the benefit of such unqualified assistants as, firstly, are over forty years of age, secondly, have completed the medical curriculum, and, thirdly, are of satisfactory moral character. It is essential that in sanctioning any such accommodation to unqualified assistants the Council should stipulate for conditions which imply that the non-qualification of men has arisen rather from their misfortune than from their fault. It is easily conceivable that there are not a few men who have been hindered by little fault of their own from obtaining diplomas which would have entitled them to registration. Want of health, want of means, failure of parental help at an inconvenient stage of their career, and such like things, are only too common and happen often to students of good character and of good ability. It cannot be to the interest of the profession to throw these men adrift into the ranks of illegitimate practice and if any reasonable plan can be adopted for legalising their position few will object to its adoption. It is significant of the impression that such a step would be consistent with justice that it is approved and promoted by registered medical men. It is not asked that such an exceptional gate of entrance to the profession should be kept open for more than the present year. It would be no kindness to the class whose legalisation is contemplated to keep it open for any length of time. They must clearly realise that the profession is to be closed quickly and completely to all who have not complied with the requirements of the examining bodies and the General Medical Council. But it does seem to us that the petition in favour of this limited class of unqualified assistants may be seriously entertained by the Council without detriment to the public or the profession.

[1] THE LANCET, April 9th, 1898, p. 1013.

WE remember holding a conversation some years ago with a distinguished American in which allusion was made to the want of friendly feeling exhibited by the newspaper press of the United States towards this country, the reason of which was inexplicable to us. The feeling of England to the United States, we urged, has always seemed to be most friendly; the official representatives of that country were very popular in London society, and Americans were everywhere received in England on terms of the frankest friendship. Our American friend in effect replied: "Never mind these surface exhibitions of apparent hostility, for they are but apparent, not real. If your people were in a great strait and were making a hard fight—which you would—against any big coalition against you there would be no holding my people; there would be such a flood of feeling in your favour as would sweep everything before it." We believed that at the time and we believe it now. There is, and always has been, an underlying conviction on this side of the Atlantic that, in spite of all our differences and diversities and methods of procedure, the Anglo-American race is one; that in our love of a just and law-abiding rule, in our love of freedom, independence, and progress we recognise and are

working up to the same standards; and that, in fact, blood is thicker than water.

As we have so often said we have happily nothing whatever to do as medical and scientific journalists with politics, but it is difficult to prevent a subject that meets the eye in every newspaper at the present moment from obtruding itself into our thoughts and influencing our sentiments. It is also impossible for people in this country not to feel some sorrow and sympathy with Spain, with all her historical traditions and past power, placed as she now is in the most difficult and trying situation possible. But looking to the future good of humanity, and believing, as we do, that the sincerest and best people, at any rate, in the United States, are moved by a spirit of unselfish indignation at the protracted misrule of Spain in Cuba, we cannot withhold our sympathy with them and the cause they are championing, or avoid perceiving that it is for the good of the world that such cruel misrule should be brought to an end. If Spain had long ago spontaneously adopted the course she is now prepared to accept the case would have been different, but her concessions come too late. Our contemporary, the *Spectator*, correctly hit off the situation, we think, when it said that Spain has some supporters in this country because she is thought to be so weak and the States so strong. "The real test of public opinion, however, is the admitted fact that the Government, even if they wanted to, which they certainly do not, could not show the slightest hostility to the States without creating an opposition so strong that it would bring them to ruin." What precipitated matters, no doubt, was the *Maine* disaster and the belief in the United States that its cause was not purely accidental but attributable to the culpability or negligence of the Spaniards—a view which has not been proved and which the Spanish Government scornfully repudiates. It is, we think, easy to trace one of the causes of the somewhat tentative and contradictory lines of policy put forward in the United States. They have never relinquished the object in view—namely, the complete evacuation of the island of Cuba by Spain, but the hope has nevertheless been entertained that this object might be somehow attained without war. Mr. MCKINLEY has made that much apparent. While it was very important to guard against the idea that it was only a case of NABOTH'S vineyard—a case of land-grabbing—it was also necessary to protect the United States Government against being entangled in the meshes of a doubtful Cuban Republic constituted by insurgents.

From 1823 to the present time the history of Cuba has been one of chronic discontent and periodical insurrection against Spanish rule, and it was, we repeat, inevitable that the United States would intervene to put an end to the terrible state of things there if the Spanish Government could not pacify its Cuban subjects. It is scarcely likely that Spain under existing circumstances could now submit to give up Cuba altogether and withdraw her forces from the island (by which alone war could have been averted), for such a course would probably give rise to a revolution and endanger the present dynasty, but she may be glad to do so under cover of a defeat. We can only hope, so long as the final step remains to be taken and war between the United States and Spain has not been actually declared, that it may yet be averted, but the bare hope is all that remains. All the indications, it must be confessed, point in one direction only—that of war; and we suspect that it will prove a very grave undertaking for even so powerful, but unprepared, a nation as the United States. Military and naval experts are already busying themselves with conjectures about its probable course and results. It is quite possible that some decisive naval action may take place at its commencement, but if the result of it were even adverse to the States it could not end the war. Be all this as it may, however, there is a medical aspect of the question which may turn out to be a most important factor. All past experience testifies and everybody knows how much depends upon the season at which war is waged in hot countries. Cuba has the reputation of being a hot, unhealthy, malarious island, where yellow fever may be said to be endemic and occasionally to prevail with epidemic violence. The unhealthy season is notoriously the hot and rainy one, and the healthy is that of the colder months of the year. The losses from fever and dysentery, from the time of ALBEMARLE'S naval expedition in 1762 to that of the large Spanish expedition against the Cuban insurgents of quite recent times, have been excessive. We all know that the death-rate among the large Spanish force was great, although we do not know statistically how great it was; but it was as nothing compared with the total inefficiency caused by sickness, or with the number of sick soldiers in the military hospitals in the island during the hot and rainy season and the large amount of invaliding which followed. We do not, of course, know what is the size of the military force which the United States contemplate landing in Cuba, but there is already a large Spanish army present in the island, and any expeditionary force sent from America, or army of occupation required for holding Cuba until peace and good government have become established, will presumably have to be large. There is no doubt that the United States Government will take all possible care of its soldiers as far as sanitary precautions and the provision of excellent hospitals are concerned, but we fear that the sickness and loss of life will in any case be large and that it may, on the outbreak, and in the presence of any epidemic disease, be excessive.

THE March issue of the *Sanitary Journal*, contains a characteristic article by Dr. J. B. RUSSELL, entitled "Public Health and Social Problems." It appears to have been delivered as an address to a students' society in Glasgow University, and though we fully recognise the ability of undergraduates to appreciate a good thing, it almost seems that the lecturer might have found at least a larger and a wider, if not a more appreciative, audience. But when we recollect that that gem of public health literature, the address on "Life in one Room," was originally given to some local mutual improvement society, we begin to see that the question of an audience is a secondary one with Dr. RUSSELL, even when he has something very particular to say. Briefly, the thesis of the present paper is that sanitation is doing a great deal to remove the chief causes of discontent on which modern socialism is founded, that it is capable

of doing still more, and that it is at least a more practical if not essentially a better remedy. "The difference," says Dr. RUSSELL, "between all those social architects and the sanitarian is this: the sanitarian is like the lifeboat or the lifebelt to the drowning man—'a very present help'; the theorist is like the lecturer on the art of swimming—any good he may do is in the future. He certainly will not help the drowning man." As to the causes of increased population in certain parts of the country we read that "Glamorganshire presents the most remarkable illustration in the country of a purely rural county, slumbering, so to speak, over untold wealth, entirely unconscious of its existence, and transformed by its discovery into a sweltering land of coal-mines, ironworks, copper- tin- and lead-smelting works, its shores lined with docks and bristling with the masts of ships. Such is the wondrous tale, excelling all the marvels of Aladdin's lamp, which is hidden in the dry bones of this bit of statistics, that between 1801 and 1891 the population of Glamorganshire increased 835 per cent." Having shown how largely the population of Great Britain has migrated from the country to the town Dr. RUSSELL points out what this migration means socially and politically as well as sanitarily:—

"As I look at these percentages creeping up from decade to decade they become not merely sanitarily but socially and politically eloquent. They mark the emancipation of the people from obscurity.

> Not kings and lords, but nations,
> Not thrones and crowns, but men.

It is difficult for an agricultural population to realise its strength. But in cities the numerical superiority of those who are employed over those who employ cannot be hid and must suggest thoughts. Physical aggregation promotes moral association. Following Watt's discovery there comes a period of English history which the historian demarcates as 'The Conflict with Democracy, 1789-1827.' We are not here and now concerned with politics, but multitudes have a profound, even a pathetic, interest to the sanitarian, and as I consider them from my point of view I cannot shut my eyes to their fortunes and misfortunes, their virtues and their vices. I see them wakened up by the Revolution in France, then becoming definitely visible through the 'hurricane eclipse' of the Napoleonic wars; fighting for their country as vigorously in the factory and workshop, with the help of steam, as their brothers under arms in the Peninsula or afloat with Nelson; starving when the peace they had helped to win left the Continent free to compete with them in the arts of peace; in the blindness of despair, burning mills, clamouring for the suffrage, rioting, ridden down by the cavalry at Peterloo; gradually gaining the protection of the Factory Acts and emancipation from the new slavery of the apprenticeship system, secured from starvation by the abolition of the Corn Laws and the adoption of free trade; finally, struggling through Chartist riots towards political enfranchisement and the Ballot Act. There, masters of their own destinies, we may leave the Democracy."

Another fine passage begins as follows:—

"What is the fulness of the meaning of a lowered death-rate? How can I bring it home to you? Marshal all the physical facts which constitute the scientific conception of summer and winter, and how much nearer are you to knowing what they are? A few hours more or less of sunlight, a few degrees more or less of heat, a few inches more or less of rain; a mile or two of velocity, a pound or two of pressure more or less of the wind, and a point of change in the direction from which it comes, that is all the difference, and yet summer is life and laughter, winter is death and tears. It is much the same with the statistical expression of the movements of public health—a unit or two or only a decimal fraction of a unit more or less, that is all, whether we adhere to the simplicity of a death-rate or resort to the intricacies of a life-table."

Space prevents us from quoting further, but we trust that Dr. RUSSELL or the publishers of the *Sanitary Journal*[1] will be so inundated with requests for copies that it will be necessary to reprint the lecture for general circulation. It should have been given as the opening address of a Social Science Congress or from the presidential chair of the British Association for the Advancement of Science.

Annotations.

"Ne quid nimis."

THE CONTROL OF PUBLIC WATER-SUPPLIES.

Is it not time that the quality of public water-supplies throughout the country should be placed under the same legislative control and check which obtain at the present time in regard to food and drugs? A short yet very comprehensive Act involving but little need of additional organisation would appear to be all that is required. Big supplies like the metropolitan supply are, as is well known, periodically and minutely examined, but the public water-supply of the majority of provincial towns is not as a rule subject to the same officially conducted examinations. Yet if such a scheme were established throughout the country we should undoubtedly possess in it a power to prevent as far as is humanly possible the occurrence of epidemics of water-borne disease. Is not this the lesson which we ought seriously to take to heart from the great epidemics at Maidstone, Lynn, and elsewhere. The purity of a water-supply is one of the most vital matters concerned with the health of the community and, oddly enough, the community in this matter has but feeble protection afforded to it by its own specific laws. How far under the present *régime* protection is secured may be gathered from the utterly incongruous state of affairs which is brought to view when cases of dispute as to the purity of certain supplies come before public notice. First and foremost there is the totally erroneous idea frequently harboured by town councillors and others in authority that Somerset House is the tribunal in such cases. It is true that the Somerset House laboratory is for the present the place of reference for disputed samples taken under the provisions of the Food and Drugs Act, but the officials at Somerset House are widely deviating from their proper sphere and function when they take upon themselves to give a final decision as to the fitness or unfitness of a given source of water-supply. And if these officers go upon the lines which they have evidently adopted in recent cases they may produce endless mischief and undo much of the excellent work undertaken at great pains by our sanitary officers. To take one example. In THE LANCET of March 26th we referred to the extraordinary opinions expressed by the members of a certain town council as to the action of their surveyor who, when submitting a sample of water to the analyst, afforded him certain information upon the source of the water and upon the probability of contamination. The majority

[1] Wm. Hodge and Co., Glasgow.

joined in reprimanding the surveyor for furnishing the analyst with particulars concerning the source. One remarked that "the analyst ought not to know where the water came from" and another that "it was a most outrageous thing that the water should be sent for analysis as this was." "Surely the analyst could find out impurities without leading strings." "Germs might have existed only in imagination in these circumstances." An appeal was made to Somerset House, as is usually done in view of the widely prevailing but ignorant idea, first, that Somerset House is the proper tribunal and secondly, that a chemical analysis alone is sufficient to enable a sound opinion to be given as to the suitability of a water for drinking purposes. We then said that "it is certainly to be hoped that neither the analysts at Somerset House nor any other analyst will venture to express an opinion upon the safety of a water without knowing something of the source from which it is derived." Now, in matters of this kind the Somerset House chemists have frequently posed as referees and their dictum has been accepted by justices, while no inquiry was undertaken by them with that detail which is absolutely necessary into the source and environment of the water. To speak plainly, the chemists at Somerset House have no business to give a pronouncement on these questions at all. The consideration of water-supply is altogether outside their duties and the sooner the public and our justiciary learn this the better for the community. Such incidents make it more urgent that the Government should soon appoint and recognise a court of decision connected with the Local Government Board or a newly-constituted board of health, whose duty it shall be to undertake cases of reference of this sort and inquire practically into cases of dispute with the view of a settlement which shall be satisfactory and reassuring to the community at large.

THE NEED FOR REVACCINATION.

In the singularly able "memorandum" on the Government Vaccination Bill which Dr. Bond has prepared for the Jenner Society, and which, we trust, will be widely circulated, there are some remarks upon the necessity for instructing the public upon vaccination which we heartily endorse. The case for revaccination, too, is so well put that we may quote it in full.

"The experience of every epidemic, and last but not least of that at Middlesbrough, shows conclusively that if we wish to protect the community against these increasingly frequent scourges we must take as much trouble to promote revaccination as we have hitherto taken to promote infant vaccination. So long as the public are led to believe, as they have been hitherto, that vaccination in infancy is the only thing about which the State need take any care, so long will epidemics of so-called 'vaccinated' adolescents and adults and of unvaccinated or badly-vaccinated children be the opprobrium of our country. There is only one way of effecting this, and that is by requiring, so far as is practicable, every child who enters a school to be efficiently vaccinated, and that before it leaves school it shall be equally efficiently revaccinated. It is to the revaccination of her adolescent population that Germany owes the remarkable immunity from epidemics of small-pox which she has for the last twenty years enjoyed rather than to her compulsory vaccination in early childhood. For it is the adolescents and adults whose early protection in infancy has become attenuated by age who are most exposed to the risks of small-pox. If we could secure their protection by revaccination at the end of the school age, as well as that of the children at the commencement of it, we need not trouble ourselves much about the infants. We have been misled in this respect by false inferences from the experience of Jenner and the early vaccinators. When infants were the chief sufferers, because the adult population was in a large degree protected by having had the disease, the discovery of a means by which these unfortunate little victims could be almost absolutely protected naturally led to an undue estimate of the value of infant vaccination, especially as its effects were assumed to be more lasting than they really are. But we have now to deal with altogether changed conditions. Where infant vaccination is fairly well maintained, as it has been in Middlesbrough, it is the adults who have not been revaccinated who are now the chief source of danger—a danger which can only be avoided by investing every young person with the same degree of protection which we have for the last half century conferred upon the greater portion of our infant population."

THE UNIVERSITY OF LONDON.

We regret to find that the Government has decided to postpone the consideration of the London University Bill until the Committee stage of the Irish Local Government Bill—which will begin on Tuesday next—has been disposed of. As the Irish Local Government Bill is the principal measure of the session this means a long postponement, probably until after the Senatorial election, which is fixed for May 16th. The death of Sir Richard Quain has created a vacancy on the Senate which Convocation will fill, according to precedent, by a graduate in arts or law. Two candidates—Mr. James Bourne Benson, LL.D., B.A., and Mr. Fletcher Moulton, B.A.—have issued their addresses and the election will turn solely on the London University Bill, which Dr. Benson supports and Mr. Moulton opposes. The reconstitution of the University on a dual basis for external or non-collegiate students and internal or collegiate students is the only alternative to two universities—one teaching and examining and the other examining only. It is impossible for the present condition to continue, for the metropolis must have a local teaching university. As is well put in a circular signed by the representatives of the London teaching institutions of university rank who waited on the metropolitan Members of Parliament on March 28th, "teaching educates; examinations do not educate; degrees do not educate; they are of value only as tests and certificates of an education which the University teaching alone imparts." We trust that the Government will see that with the Bill as now submitted to the House of Commons stands or falls the whole feasibility of reconstituting the existing University as a teaching university for London. It would be a severe blow to the reform of higher education in London if the labours of the last twelve years were to be rendered fruitless.

QUACKS AND QUACKERY

In a Brisbane newspaper, dated Feb. 26th, is a presumably editorial article headed "Quacks and Quackery." With most of the sentiments therein expressed we are in cordial agreement, though they are set forth embellished with flowers of rhetoric to which we in this less romantic land are but little accustomed. "If we abhor," says the writer, "the respectable commercial swindler, we absolutely loathe the quack. The quack is in the lowest layer of the human dunghill. ..... Wherever one sees the glitter of brag one is justified in suspecting the absence of *bona fides* and should search, so to speak, for the horns, hoofs, and tail of the advertiser. When added to the glitter aforesaid there is also accompanying evidence that the alleged curer is merely a bird of passage, roosting like a buzzard in our midst until he shall have secured a bellyful of garbage, one may take the horns, hoofs and tail for granted." The article goes on to ask whether it would not be possible to penalise persons not duly qualified from pursuing the occupation of real or pretended curing of diseases. "This would not affect genuine patent medicine inventors ..... for the restrictions and conditions surrounding the granting of a patent are in themselves some sort of guarantee

that the public health is safeguarded. Further, could not all self-advertising dealers ..... 'pill' vendors, &c., be compelled to take out licences?" Now, would anybody believe that on the very same page with this impassioned article is a half-column advertisement of the well-known type, containing the well-known lies, of Dr. Williams's Pink Pills? As Mr. Yellowplush remarks, "I coodn't suppose anythink mussenary in a littery man," so perhaps the editor of the paper in question would do well to revise his advertisement columns.

THE AUTUMN CONGRESS OF THE SANITARY INSTITUTE.

As we have already been able to announce, the autumn congress of the institute will be held this year in Birmingham, under the Presidency of Sir Joseph Fayrer, commencing on Sept. 27th. The Council hope that all the members will endeavour to be present and that many will contribute papers so as to make the congress of the institute thoroughly successful. We are asked to announce that the programme, showing the arrangements already made, will appear in the journal of the institute. All further information concerning the programme, the reading of papers, &c., can be obtained from Mr. E. White Wallis, the secretary, by applying to him at 72, Margaret-street, W.

THE BETTER CONTROL OF ANTHRAX.

A RECENT communication on the subject of anthrax, which was addressed to the *Times* by Sir Herewald Wake, raises the question whether it is not practicable to exercise a more thorough control over this disease than is at present the case. Sir Herewald Wake refers to an outbreak which apparently occurred last autumn on a farm on his own estate in Northamptonshire by which six head of livestock were affected and by which probably a young woman on the farm lost her life; two men seem also to have been attacked but both recovered. The main point, however, upon which the writer of the letter insists is that this outbreak was caused by a previous but unreported outbreak of the disease on the same farm, and the omission of the occupier to report this first outbreak, and the system which allows of such omission, are severely condemned. Unfortunately anthrax is not alone liable to these sins of omission and to a large extent the same objections can be raised against our whole system of notification as carried out under the Notification Act. Unless, for instance, we can bring home to a parent, or other person responsible for notification, the fact that a case of infectious disease notifiable under the Act has been intentionally concealed we can obtain no redress. Can this defect in the case of animals suffering from anthrax be remedied? Sir Herewald Wake thinks that an improvement would be effected if, in order to bring to light doubtful cases it were enacted that if such a case turned out on examination to be anthrax, moderate compensation, which he suggests should be one-third of the value of the first animal attacked, should be paid. This certainly seems to be a reasonable suggestion and one for which something is to be said: it is not open to the objection which a proposal to pay a certain fee for the notification of all doubtful cases would be. Obviously every encouragement should be given towards ascertaining the early existence of anthrax, as the amount of mischief which might conceivably be done by an unrecognised case from the specific pollution of a grazing meadow is considerable. It does, too, seem to us to be a most important point that proper precautions as regards disinfection, &c., should be taken in outbreaks such as that under consideration, in which the circumstantial evidence points to the existence of certain previous cases. It is perfectly true that in some instances the bacilli of anthrax are after a few days destroyed by putrefactive organisms, so that absolute proof of a pre-existing case cannot be obtained; but this fact should not in our opinion justify the omission of proper precautions to prevent the inferentially invaded locality from continuing to act as a source of danger. Precautions such as we suggest would certainly be taken by a medical officer of health when dealing with a probable source of infection.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT.

WE print on page 1137 a memorandum which was issued from the Home Office during the week dealing with these new and important appointments. We are glad to recognise that the scale of fees approved by the Treasury is a liberal one. Applications for the appointments should be addressed to the Home Secretary (*vide* p. 1138).

EARLY PREGNANCY.

DR. SAGE of Bordeaux recently delivered by means of forceps a girl, aged thirteen years and six months, of a male child at term weighing 8½ lb. The mother seems to have become pregnant a month after her first menstrual period. There was nothing abnormal regarding the puerperium. This has led Dr. Sage to look up the subject of early pregnancies, which are less common in France than in other European countries. He has been unable to find any mention of a case occurring at so early an age as his own in recent medical literature, the earliest being at the age of fourteen years and one month. In a medical dictionary published in 1823 mention is made of girls having been received into the Paris lying-in hospitals at thirteen years of age, and during the Revolution at eleven years and even before that age. The earliest cases recorded in other countries are Molitor's case in Luxemburg, where a child, aged eight years and three months, became pregnant and was delivered of a mole containing a dead fœtus seven months afterwards (this was in 1877); Outrepont's case (1825) of a German girl, aged nine years, who aborted in her fourth month; Haller's case in Switzerland of a girl born in 1751 and delivered in 1759; and Dodd's case in England (1881) where a Yorkshire girl, aged nine years and eight months, was delivered of a living child at term. Here the young mother had menstruated from twelve months of age. In Neale's Digest a reference is given to another case at eight years.[1]

BILATERAL HOMONYMOUS HEMIANOPIA.

DR. KARL KÄSTERMANN of Hamburg has recently contributed to the *Monatsschrift für Psychiatrie und Neurologie* a very interesting paper on this subject, of which an abstract appears in the *Neurologisches Centralblatt*. He relates the history of two cases of double-sided homonymous hemianopia in one of which a careful microscopical examination was made. He has collected 27 cases from the literature of the subject and he finds that as a rule the optic discs in such cases were normal, that the acuity of vision was rarely impaired, that the pupils usually react normally and that the action of the external ocular muscles is not interfered with. Colour-sense was, as a rule, retained, but usually there was interference with the memory for places and with the patient's power of localising himself. Mind-blindness and hemiplegic weakness both occurred. Some patients were rendered totally blind, but as a rule the fixation point, with a more or less extensive peripheral area, was retained. The peculiarity of one of Dr. Kästermann's own cases was the loss of the whole of the field with the exception of a peripheral homonymous

[1] See Medical Times, vol. i., 1878, p. 276.

zone of the left field. In this case there was at first homonymous hemianopia and subsequently an attack of left homonymous hemianopia producing blindness. With this second attack there was disturbance of the patient's recollection for places and also symptoms of mind-blindness. At the necropsy areas of softening were found in both occipital lobes. In the region of each calcarine fissure there was an area at the floor of the fissure which had escaped. Dr. Kästermann from his researches concludes that the area subserving the visual fields is the cortex in and around the calcarine fissure and that disturbances of recollections of places, &c., depend upon lesions of the posterior lobes. In all cases in which there was permanent disturbance of place recollection there were found lesions in both occipital lobes.

AN UNFOUNDED CHARGE.

ONE of those unpleasant incidents which are only too common in the life of a medical man was the subject of inquiry before a Birmingham police-court when Mr. L. V. Parry, a surgeon of Asylum-road, was brought up charged with committing a criminal assault upon a woman named Matthews. The prosecuting solicitor said that since the case had been put into his hands he had examined the witnesses for the prosecution and was of opinion that the evidence did not support the charge. The prosecutrix had been treated for hysteria, the evidence of two important witnesses disagreed, and he asked the Bench to withdraw the case. The magistrate said: "The case is withdrawn and the defendant is discharged. Such cases frequently occur. It is one of the dangers of medical life and the court feels much sympathy with any gentleman subjected to such a charge as this. No doubt the lady believes what she says. Mr. Parry, you are entirely and completely exonerated." Mr. Parry has our sincere sympathy in having been exposed to such an ordeal. Such a charge is very easy to bring and not always easy to refute and the mere appearing in answer to such a charge is most disagreeable, to say nothing of the expense and waste of time which is involved in addition.

VITAL AND VACCINATION STATISTICS IN SCOTLAND.

THE Scottish Registrar-General's Report on births, deaths, and marriages in 1897 and vaccination in 1896 has now been issued. The birth-rate was 30·5 per 1000, the death-rate 18 7, and the marriage-rate 7·3. For registration purposes Scotland is divided into principal town districts, containing towns with over 25,000 inhabitants; large town districts, containing towns with between 10,000 and 25,000; small town districts, containing towns with between 2000 and 10,000; and mainland rural and insular rural districts. The birth-rate in the principal town districts was 31·9, in the large town districts 32 4, in the small town districts 31·1, in the mainland rural districts 27 4, and in the insular rural districts 21 4. The illegitimate births were 6·98 per cent. of the total, the rate in the various counties ranging from 3 8 in Shetland and 4·1 in Ross and Cromarty to 13·5 in Caithness (which geographically is midway between Shetland and Ross and Cromarty), 13·5 in Elgin, and 14 1 in Wigton. The divisions with the highest rate of illegitimacy are the North-eastern, 11·8, and the Southern, 11·7. The total rate of 6·98 per cent. for the whole country is the lowest since the coming into operation of the Registration Act in 1855. The highest rate was 10·2 in 1866 and since that time there has been a very steady though very gradual decline. The death-rates per 1000 were 20·8 in the principal town districts, 18·7 in the large town districts, 17·7 in the small town districts, 16·3 in the insular rural districts, and 16 2 in the mainland rural districts. The vaccination statistics for 1896 show that of 129,245 births 110,033 were successfully vaccinated, 12,181 died before vaccination, in 2843 the vaccination was postponed, 544 were found constitutionally insusceptible, 286 were insusceptible owing to previous vaccination, and 3358 had removed from the district before vaccination or were otherwise unaccounted for. The percentage of cases unaccounted for was 2·598, or reducing the total by deduction of the deaths before vaccination 2 868. These percentages are a little higher than the average of the previous ten years, which were 2·404 and 2·653 respectively. There has, however, been very little variation in the decade. The lowest default (omitting the deaths before vaccination) was 2·365 in 1894 and the highest 2 897 in 1889. Some extracts are given from local registrars' notes which help to explain even the small existing default. At Lochbroom an epidemic of measles was responsible; at Waternisch there was delay not in vaccination but in certification; in North Harris the severity of the weather had caused the vaccinator to postpone his work till spring; and at Lasswade and Liberton many families had removed owing to the closing of oil works. Even in Scotland, however, there seems a slight tendency to the spread of the anti-vaccination craze and one or two recent imprisonments, with their consequent *éclat*, may have the same evil effects as have sometimes followed such occurrences in England. Would it not be advisable that the Scottish Vaccination Act should be amended by abolishing repeated penalties?

THE MICROSCOPE AND THE EARLY STAGES OF CANCER.

THAT microscopic examination is a valuable aid in the diagnosis of cancer and in doubtful cases a decisive test is generally held. Such is not the view of Mr. Hutchinson. In a recent number of his *Archives of Surgery* he insists that the microscope can give no aid in the recognition of the precancerous stages of cancer. For a long time he has been a warm advocate of early operations and in certain cases of their performance before absolute certainty in diagnosis can be felt. He states that in well-pronounced conditions microscopic examination is not needed and in doubtful ones it cannot assist. Characteristic appearances in the mode of growth and the manner of ulceration are almost always obvious to the instructed eye before the histological conditions have become such that they can be trusted. Thus, according to Mr. Hutchinson, in their early stages cancerous growths are not histologically cancer; chronic inflammatory changes almost invariably precede for a longer or shorter period those which are definitely malignant. A negative result with the microscope often begets a false security and leads to a loss of time which it is impossible to retrieve. Mr. Hutchinson finds that this is constantly occurring; in the previous month he saw four such cases. A man had a large and most characteristic epithelial cancer in his soft palate in a stage almost too late for excision. Eighteen months previously a portion had been cut away which on microscopical examination was pronounced not to be cancer. Mr. Hutchinson asks, Would it not have been better to have removed the whole? In a case of ulcer of the tongue the patient was assured as the result of microscopical examination that he was not suffering from cancer, but two months later the contrary was proved. On one occasion Mr. Hutchinson removed the whole tongue for what he believed to be a broken-down cancerous mass which had suppurated. An experienced pathologist who examined the specimen assured him that there was no cancer but simply an abscess cavity. Within a few months, however, the glands enlarged and in less than a year the patient died. In a case of cancer in the palm of the hand occurring after prolonged administration of arsenic, microscopic sections were made which were

examined by various authorities in America, in this country, and on the Continent, with the result that most diverse opinions were given. Several insisted that the disease was syphilis and not cancer. Mr. Hutchinson asserts also that the discrimination between syphilitic changes and inflammatory hypertrophy is also beyond the powers of the microscope; there may be features which may guide the judgment but they are often fallacious and he who trusts to them will make blunders.

WHY INQUESTS ARE HELD.

ACCORDING to the *Manchester Evening Chronicle* Mr. Sidney Smelt has been explaining to a coroner's jury at Manchester for what purpose inquests are held. He said that they were not scientific inquiries into the cause of death, though many people thought that such was the case, and unfortunately the idea had been fostered by medical men. Whether they wanted to obtain scientific knowledge from such inquiries or whether they desired to get fees for giving evidence was best known to themselves. In no sense was a coroner's inquiry a medical inquiry and medical men had nothing to do with it except to give evidence when called upon. Inquests were held to find out whether anybody was to blame for death, and he was sure the public, for whose protection they had been established, would strongly oppose the holding of them for scientific purposes. If they were to have scientific inquiries they must have them in every case of death. It was not right that medical men should force themselves upon a jury merely because death had been sudden. Such was not the intention of the Legislature. Nobody ever imagined that a coroner's inquest was a scientific inquiry; but as Mr. Smelt allows that their object is to find out whether anybody is to blame for the death, how is this desirable result to be arrived at without medical evidence as to the cause of death? Supposing the body of a person is found in a stream or a pond, who is to say whether he or she was alive or dead when he or she got in to the water except a medical man? Of course if a man is cut to pieces by a train or a tramcar there is no need of medical evidence, but there is great need in cases of bodies found dead or in the case of persons who have died without proper qualified medical attendance. We should be glad to know, too, what Mr. Smelt means by implying that medical men force themselves upon a jury? It is the duty of the coroner to summon medical evidence if he thinks proper.

CEREBRAL HÆMORRHAGE IN EARLY LIFE.

FROM time to time cases have been published by competent observers of cerebral hæmorrhage in early life on which the necropsies threw no light. Neither the organs nor the vascular system showed any signs of disease. Here is an unsolved pathological problem. In the *West London Medical Journal* Mr. Maitland Thompson has recorded the following case. A strong and healthy boy, aged thirteen years, had a mild attack of varicella. At the end of a week he complained of slight headache and photophobia and vomited. He became comatose; the right pupil was widely dilated and the left was contracted. Convulsions set in and he died ten and a half hours after the seizure. The vessels of the dura mater and the pia mater were much congested. The right lateral ventricle was full of blood clot and the brain substance was ploughed up in the neighbourhood of the temporo-sphenoidal lobe, the hæmorrhage having probably come from the lenticular striate branch of the middle cerebral artery. All the organs, the heart, and the arteries were healthy. It seems to us difficult to avoid the conclusion that the varicella was in some way a cause of the hæmorrhage. Trivial as the disease usually is, it is in rare instances attended by serious and fatal complications. In an annotation in THE LANCET of Oct. 9th, 1897, we called attention to varicella gangrenosa which may prove fatal to previously healthy children and for which a microbial origin has been suggested. Similarly a microbial affection of a cerebral artery leading to perforation and hæmorrhage might be invoked in this case and the same explanation might be extended to other cases of this class.

THE STATE CHILDREN'S AID ASSOCIATION.

THE State Children's Aid Association, of which the Right Hon. Lord Herschell is chairman, has just issued its first annual report. The main object of the association is to obtain individual treatment for children under the guardianship of the State, the secondary object being to obtain for the State further powers of control over neglected children. A Bill for the better control of Poor-law children was drafted under the direction of the association and introduced by Mr. Ernest Flower, M.P., into the House of Commons towards the close of the last session. This year it will be again before the House. It is interesting to note that this association has been somewhat instrumental in prevailing upon the Metropolitan Asylums Board to build an Ophthalmic Hospital School at Brentwood in small cottages, each cottage not to contain more than ten children, and the whole institution to be limited to 270 inmates. In tendering his resignation as chairman of the association at the close of the year Lord Peel wrote: "Whether inside or out of Parliament the effect of the association will command the sympathy of all who desire to improve the condition and elevate the character of thousands of children, who have the strongest claims to intelligent and careful treatment." And with this we cordially agree. The report can be obtained, price 3*d*., at the office of the State Children's Aid Association, 61, Old Broad-street, and also at Messrs. King's, King-street, Westminster, S.W.

PHYSIOLOGY OF THE SPINAL CORD IN AMPHIBIA AND REPTILES.

SOME interesting observations on the time occupied in the performance of reflex acts of the spinal cord in animals amongst amphibia and reptiles have recently been made by Herr Adolf Bickel and have been reported in the *Physiologische Archiv* of Pflüger. Herr Bickel was led to undertake his researches from the perusal of those of Rosenthal on the same subject. Rosenthal found that the time was dependent partly on the strength of the stimulus, partly on the part of the periphery to which the stimulus was applied, and partly upon the seat of termination in the nerve centres of the sensory nerve excited. In Herr Bickel's first set of experiments winter frogs were employed, in a second set lizards, and in a third set tortoises. In one series of frogs the cerebrum and cerebellum were removed, leaving only the medulla oblongata and the cord; in another series the medulla oblongata was also removed, so that the animal was left with only the spinal cord; and in a third set the cord was divided between the fourth and fifth vertebræ. In the former set pulmonary respiration was not interfered with, whilst the animals exhibited great motor activity, creeping restlessly about the basin in which they were kept, and in the course of a few days they as usual showed greatly increased reflex excitability of all the limbs. In the second set of frogs, in which the cord had been divided just below the calamus scriptorius, respiration was again not interfered with, but the capability of movement in the anterior limbs was slightly impaired; the hind limbs were usually kept drawn up, but their motor mechanism was not interfered with. In the third set the animals lived and usually, as in the last set, kept the hind

limbs adducted and responded in the most lively manner to stimulation. On testing the time occupied in the performance of reflex acts in these several sets of animals Herr Bickel found that in those frogs in which the cord was divided between the fourth and fifth vertebræ the time elapsing between the commencement of stimulation of the toes and the reflex act of muscular contraction was considerably *greater* than in those in which the cord had been divided at the calamus scriptorius. On the other hand, there was only a small reduction in the time which elapsed between stimulation and motor reaction in animals which possess spinal cord *and* medulla and those which only possess the spinal cord. Expressing the facts in somewhat different language, it may be said that the reaction time, with equal strength of stimulus, identical point of stimulation, and equal amount of reflex contraction, is in the frogs of the first group very little shorter than in the second, whilst in both these groups it is much shorter than in the third group.

THE WESTMINSTER HOSPITAL.

ON May 11th a concert is announced to be given at St. James's Hall in aid of the funds of the Westminster Hospital. The concert differs from the usual run of such events in that it is practically a kind of "three choirs estival," for three societies are going to give their help—namely, the Westminster Orchestral Society, the Reigate Choral Society, and the Streatham Choral Society. An interesting provisional programme has been issued and we may hope that the proceeds of the concert will go far to relieve the committee of the hospital from their pressing financial difficulties. The greatest care will be taken to produce the concert upon the most economical terms so that the hospital may benefit as much as possible. The concert is under the direct patronage of H.R.H. the Princess of Wales and T.R.H. the Duke and Duchess of York. The good work which the Westminster Hospital does is well known and since its establishment in 1719 it has treated one and a half millions of patients. Tickets may be obtained from Mr. Basil Tree's office at St. James's Hall or from Messrs. W. E. Hill and Sons, 140, New Bond-street, and on and after May 1st the price of numbered tickets will be increased from 7*s.* 6*d.* to 10*s.* 6*d.* and from 5*s.* to 7*s.* 6*d.* respectively.

THE LONDON POST-GRADUATE COURSE.

ON Monday, May 2nd, the summer term will commence. There will be classes at the Hospital for Diseases of the Skin, Blackfriars, on Skin Diseases; at the London Throat Hospital, Great Portland-street, on Diseases of the Throat, Nose, and Ear; at King's College on Bacteriology; at the Parkes Museum on Hygiene and Public Health; and at Cleveland-street on General Medicine and Surgery. A course on Mental Diseases will be given at Bethlem Hospital from Aug. 2nd to Aug. 12th. Fees may be paid and entries made on application to Dr. Fletcher Little, secretary, 32, Harley-street, W.

THE VACCINATION BILL AND PUBLIC BODIES.

THE following resolutions were adopted at a conference of delegates representing various societies interested in public health and recently convened by the Incorporated Society of Medical Officers of Health:—

"That evidence of efficient vaccination should be afforded on the admission of a child to a public elementary school.

"That the Vaccination Bill should contain a definition of 'efficient' vaccination.

"That the powers and duties with regard to vaccination should be transferred from the Poor-law to the sanitary authorities.

"That the Government should pay for vaccination performed by general medical practitioners, subject to the vaccination being done in accordance with the regulations of the Local Government Board and being open to inspection.

"That it is essential that the State should take steps to require the revaccination of all persons on their attaining the age of twelve years.

"That the age limit within which a child should be vaccinated after birth should be six months."

The Sanitary Committee of the most numerously populated parish in England—that of Islington—has resolved to advise its vestry to petition the Local Government Board to supply two great defects in the Bill. The committee is moved in this matter by its medical officer of health, Mr. A. E. Harris. In a memorandum to his committee Mr. Harris expresses general approval of the Government Bill, including the repeal of the cumulative fines and the extension of the age limit. Such friendly feeling towards the Bill as a whole adds to the strength of the petition which the Sanitary Committee has advised the vestry to present in favour of certain amendments. The following are the resolutions of the Sanitary Committee:—

"Resolved that the vestry be recommended to petition the Local Government Board in favour of parents and guardians being required to have their children revaccinated when they arrive at a period of life between ten and twelve years of age."

"Resolved that the vestry be recommended to petition in favour of the transference of the administration of the Vaccination Acts from the boards of guardians to the sanitary authorities."

If the vestry of Islington adopts the recommendation of its Sanitary Committee it will set an excellent example to the sanitary authorities throughout the country.

THE PROPOSED PERMANENT FEVER HOSPITAL FOR CHISWICK.

WE have received a copy of the memorandum of objections to the proposed fever hospital for Chiswick, which memorandum has been submitted to the district council. While the objectors disclaim any objection to isolation they contend that a permanent hospital is unnecessary. There has been, they say, a steady and persistent decrease in the death-rate from scarlet fever, it having fallen from 0·98 per 1000 in 1860 to 0·24 per 1000 in 1890. Also in the county of Middlesex for the year 1895 the deaths from scarlet fever were in hospital districts 0 130 per 1000 and in non-hospital districts 0·0703. The latter argument, we must confess, fails to impress us, since it is clear that the incidence of scarlet fever on any one district must vary from year to year, and an outbreak in one hospital district might very materially influence the figures for the whole of the hospital provided districts. Furthermore it is to be expected on general principles, though we are not familiar with all the conditions obtaining in the urban districts of Middlesex, that hospitals are provided in those districts most likely to require them—i.e., in or for populous localities where the chances of infection are considerably greater than in more sparsely populated urban districts, and this fact alone would tend to increase the incidence of the disease on the districts in question. While, too, sympathising with the ratepayers in reference to a prospective increase in their rates we feel compelled to point out that experience goes to show the superiority of *permanent* buildings over those termed *temporary*. The latter are difficult to keep either cool in summer or warm in winter, they rapidly become dilapidated, and, what is a most important issue, they are never popular with the patients. Two points with all isolation accommodation are to make it non-repellent, so that persons in an infectious condition may not avoid it, and to have it in readiness beforehand. The proposed site, between the junction of two railways, does not sound restful, though it has to be admitted that certain of the Metropolitan Asylums Board Hospitals are

very near to railways. The fact of a board school being near the site would not in our opinion, unless it is proposed to use the hospital for small-pox, militate against it. There is no evidence indicating that hospitals other than those used for small-pox are detrimental to the surrounding population.

THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.

WE are authorised to say that there is no truth in the statement recently widely circulated in the lay press—namely, that the election of Sir William Turner as President of the General Medical Council would involve his resignation of the Chair of Anatomy at Edinburgh University and also his taking up his residence in London. No conditions were attached by the Council to his appointment as President.

"A QUESTION OF FRANCHISE."

IN a recent leading article we referred to the fact that the Corporate and Medical Reform Committee had presented a petition to the Council of the Royal College of Surgeons of England claiming that the right of electing a representative of the College on the General Medical Council belonged to the Fellows and Members of the College and not to the Council and asking the Council to receive a deputation on the subject. The Council of the College have replied that they "see no reason to alter the mode of election which has been in force for the last forty years and consider that no useful purpose would be served by receiving a deputation." A protest against this action of the Council is being prepared by the petitioners for signature.

SMALL-POX IN MIDDLESBROUGH, KENTUCKY, U.S.A.

IT is a remarkable coincidence that small-pox is epidemic in Middlesbrough, Kentucky, U.S.A. An account of the epidemic is published in the official Public Health Report of the United States for the week ending March 25th, 1898. The disease was imported from Birmingham, Alabama, and the first case occurred in October, 1897. The State Board of Health took charge of the epidemic on Feb. 28th, 1898, declaring the disease epidemic, and since that time there have been 169 cases and 2 deaths to March 14th, 34 of the cases being those of white men and 135 those of negroes; one of the latter was that of a child one day old, the eruption appearing at the same time on mother and child. On March 13th there were 49 cases of variola and 23 suspects in the pest-house and 400 suspects quarantined at their homes. The population numbers about 4200 and about half are negroes. The town, we are told, "has been absolutely quarantined since Feb. 28th, no one being allowed either to enter or leave it. Sixteen guards, one day and one night, guard each of the eight roads leading to the town, and no tickets are allowed to be sold either to or from the town and practically there is no travel. Since the Board of Health took charge 1960 people have been vaccinated and forcible vaccination is still progressing. ..... Middlesbrough was a 'boom' town started some ten years ago and several million dollars were invested here in various enterprises. In two or three years the 'boom' collapsed and left the town stranded with a heavy debt. When this epidemic came it found the town without a dollar in the treasury. The place is practically owned by two or three companies and everybody works on a salary. These companies paid up their taxes in advance and, all having been expended, there were no funds for the city to draw on. The county, which is also heavily in debt, has been haggling with the city in regard to an appropriation, but none has been made. The city script is worthless and the grocer who has been furnishing the supplies refuses longer to accept it. The physicians and guards are practically getting no pay. Under these circumstances the State Board of Health threatened to withdraw all guards and physicians and quarantine the entire county unless the county provided funds to care for the epidemic." On March 14th, the day of the report, the patients were without food. "Numerous little towns and villages within a radius of twenty miles have instituted 'shot-gun' quarantine, and will allow no one to enter or leave them, though they have no small-pox in them. ..... Some of these places will not allow anyone to get off the train."

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN.

THE festival dinner of this institution (of which Her Majesty the Queen is a patron and the Lord Mayor of London the president) was held at the Hotel Cecil on Wednesday, April 20th, Sir Edwin Durning Lawrence, Bart., M.P., the treasurer, presiding. Situated as it is in the Waterloo-bridge-road this hospital naturally ministers to the medical and surgical needs of large numbers of the poor women and children of South London. The number of in-patients amounts to some 486 yearly, while the average number of beds occupied is 44. The yearly average attendance of out-patients is over 8000. This means a large expenditure and it is earnestly to be hoped that there will be a hearty response to the appeal of the committee for funds. In proposing the toast of the evening the chairman said that "in many respects the south side of London was the poorest. In Lambeth especially there were many cases of real misery, more so than in East London, but the ordinary income of this hospital was barely enough to support the institution for a third of the year. If the public only realised the value of the services which the hospital rendered to the south of London greater support would be forthcoming." Mr. J. F. Eastwood, the treasurer, supported the chairman's earnest appeal, remarking that the hospital required at least £2000 more a year in annual subscriptions. Subscriptions to the amount of nearly £700 were announced by the secretary in the course of the evening. The health of the chairman was proposed by Dr. Septimus Sunderland and some compliments to the press terminated the proceedings of an interesting evening.

THE POLLUTION OF THE RIVER BRENT.

THE pollution of the River Brent is again exciting the interest of those who live in what has been described as the "healthy and pleasant neighbourhood" on its banks, and Mr. W. L. Williams, chairman of the Financial Committee of the Hanwell and Urban District Council, has written to the *Times* to state his views as to the course which should be adopted to lessen or abolish the nuisance which it must be admitted exists at the present time. The general question of the purity of the streams which discharge into the Thames is one of very great importance to the people of London as well as to those who live in the immediate neighbourhood of the streams themselves. At the present time the Brent is not the only tributary of the Thames which is grossly polluted. The Lee and the Wandle are both in a disgraceful state. It is a good and hopeful sign that people on the boards of local authorities are beginning to take some intelligent interest in the matter of the pollution of the streams in their districts. The difficulties which have to be overcome in preventing pollution are not small, while unfortunately the conflicts between neighbouring sanitary authorities often cause much delay in carrying out reforms. No reform can be easily carried out without a

general consensus of opinion in its favour and we always welcome the awakening of public opinion in a district in favour of improved sanitary conditions. In the case of the Brent the chairman of the Hanwell County Council makes some practical suggestions for the remedy. He thinks, in the first place, that the Thames Conservancy Board should stop the pollution of the stream by the addition to it of crude sewage. In the second place he suggests that strict supervision should be exercised over the effluents of the sewage farms which discharge into the stream. His third suggestion is that should these suggestions not be carried out a sewer should be constructed through the whole course of the Brent Valley to convey from the district the matter which now causes so much nuisance. With regard to the third proposition, however, no suggestion is made as to the ultimate destination of the sewage conveyed. We make no attempt to deal fully with these suggestions, but there can be no doubt that crude sewage should not be discharged into the rivers, that sewage effluents require strict supervision, and that the state of some of the sewage effluents which discharge into streams near London constitute an absolute disgrace to the responsible sanitary authorities.

THE ASSOCIATION OF PUBLIC VACCINATORS.

THE following have been elected to form the Council of the above. Mr. C. C. Claremont (St. Pancras), Dr. T. Cotton (Islington), Dr. S. Hague (Camberwell), Mr. V. A. Jaynes (St. Olave's), Mr. J. Loane (Whitechapel), Mr. F. H. Oliver (Shoreditch), Mr. J. F. Staines (St. Giles's), Mr. A. G. Wells (Fulham), Dr. A. E. Cope (St. George's), Mr. E. C. Greenwood (St. Marylebone), Dr. C. Lloyd Jones (St. Saviour's), Dr. G. A. Miskin (Lambeth), Dr. J. T. Rowland (Chelsea), and Mr. M. Townsend (Kensington). President: Mr. E. C. Greenwood. Vice-Presidents: Dr. E. Robinson (Birmingham), Mr. T. Garrett Horder (Cardiff), Mr. Wm. Skinner (Sheffield), and Dr. Frank Hawthorn (Newcastle-on-Tyne). Treasurer: Dr. G. A. Miskin (Slade House, 173, Kennington-road, S.E.). Secretaries: Mr. V. A. Jaynes (157, Jamaica-road, S.E.) and Dr. A. E. Cope (28, Bessborough-gardens, Westminster, S.W.). The President of the Local Government Board has promised to fix a day before the committee stage of the Bill is reached to hear the views of the public vaccinators on the proposed changes in the law. The honorary secretaries will be glad to receive any press-cuttings or statements of personal experience which will help the deputation in representing their case before Mr. Chaplin. The recommendations of the Council are now printed and may be had on application to the secretaries, to whom also the annual subscription of 5*s.* may be paid. It is highly desirable that the association should be representative of as many public vaccinators as possible. We have received a copy of "Suggestions and Recommendations in view of the Vaccination Bill now before Parliament," drawn up by the association, upon which we propose to comment in a future issue.

THE PLUMBERS REGISTRATION BILL.

THE amended draft of this Bill will, it is hoped, remove the regrettable opposition which the Bill has hitherto encountered. It is deserving of notice that the Worshipful Company of Plumbers have shown an unusual amount of public spirit in its promotion and of tact in their endeavours to overcome opposition and to present an effective measure thoroughly in accord with the wishes of the plumbing trade as a whole, while at the same time one which should meet the susceptibilities of other existing bodies interested in technical education. In a measure of this kind unanimity is essential to success, and powers are to be granted to the proposed council to accept the examinations of certain approved bodies as qualifying for registration, provided—and this is a most important clause—that such examinations shall include practical tests of workmanship in addition to theoretical knowledge. Exception was taken last year to the constitution of the proposed general council and to its assumption of educational functions, which objections are met by the present Bill. The council in the present Bill is composed of master and operative plumbers elected under regulations of the respective Local Government Boards of England, Scotland, and Ireland, while power is given to the council to appoint members from various sanitary, architectural, and other bodies, the following being mentioned in the schedule: the Incorporated Society of Medical Officers of Health; the Royal Institute of Architects, Ireland; the Royal Institute of British Architects; the Royal Institute of Public Health; the Sanitary Association of Scotland; and the Sanitary Institute, London. A measure the object of which is one so closely associated with the improvement of the public health is deserving of support from all sections of politicians. Unfortunately it is difficult to get the plumber taken seriously. He has so long been a target for weak and threadbare jokes that the most modest of wits is tempted to have a passing shot at him. It might, however, be well to bear in mind that there are hundreds of these men at work throughout the country the result of whose daily labours means health or sickness, life or death, to thousands of their fellow creatures annually. The desirability of ensuring in them some measure of efficiency may surely be considered a matter worth serious attention.

A COURSE of lectures on Diseases of Tropical Climates will be delivered by Dr. Patrick Manson, Lecturer on Tropical Medicine to the School, in the Medical School of St. George's Hospital, on Tuesday, May 17th, and every succeeding Friday and Tuesday, till July 22nd, at 5 P.M. each day. The course is intended for medical men about to practise in the Tropics or in Eastern Asia. Cards of admission may be obtained from Dr. Isambard Owen, the dean of the school.

WE learn that the members of the council of Charing-cross Hospital have recently decided to establish a Roentgen Department on an extensive scale. Mr. Mackenzie Davidson, whose work in this branch of science is well known, has been appointed to take charge of the department. Rooms in immediate proximity to the operating theatre of the hospital have, we understand, been set aside for the purpose.

THE annual dinner of the Army Medical Department will be held on Monday, June 13th, at the Whitehall Rooms, Hôtel Métropole, at 7.45 P.M. All communications should be addressed to Brigade-Surgeon-Lieutenant-Colonel J. Hector at 135, Brigstock-road, Thornton Heath, Surrey, who, as on previous occasions, is undertaking the duties of the organisation.

AT the annual dinner of old students of King's College, London, to be held at the Holborn Restaurant on Monday, June 13th, the Bishop of London will take the chair. All communications should be made to Mr. William Vincent, honorary secretary of the Dinner Committee, and addressed to King's College, London, W.C.

THE annual meeting of the Factory Girls' Country Holiday Fund, of which H.R.H. the Princess Christian is patron, will be held at the Mansion House to-day (Friday) at 3 P.M., when the Right Hon. the Lord Mayor, M.P., will preside.

THE annual meeting of the Children's Fresh Air Mission will be held in the Court House, St. Andrew-street,

Holborn-circus, on Thursday, April 28th, at 4 P.M. Mr. Walter Hazell, M.P., will preside.

HER MAJESTY THE QUEEN, who is the Patron of the Royal Hospital for Diseases of the Chest in the City-road, has contributed £25 to the Festival Dinner Fund.

WE are able to state that the recent differences with the honorary medical staff which have existed at the Royal Hants County Hospital, Winchester, have been satisfactorily adjusted.

H.R.H. THE PRINCESS OF WALES will open the new laboratories of the London School of Medicine for Women in Handel-street, Brunswick-square, next July.

THE ROYAL COMMISSION ON TUBERCULOSIS.

(PRELIMINARY NOTICE.)

THE report of the Royal Commission on Tuberculosis was laid on the table of the House of Commons on Tuesday evening. By the terms of reference the Commissioners were to inquire into what administrative procedures are desirable for controlling the danger to man of using as food the flesh and milk of tuberculous animals, and what should be the action of responsible authorities in condemning as food-supplies animals or carcasses of animals which exhibit a tuberculous condition. With such wide terms it will readily be seen that the report must not be dealt with in a summary manner, but on every side the evidence taken by the Commissioners as well as their recommendations will call for careful consideration. The Commissioners heard witnesses from the principal cities and counties and from the butchers' and farmers' societies all over the kingdom, and also visited the principal slaughter-houses and dairies, in addition to which many visits were paid to similar institutions on the continent for the purposes of obtaining information and making valuable comparisons. Two or three of the principal conclusions at which the Commissioners have arrived as the result of their labours may be mentioned. They record their sure belief that the contamination of milk plays far the greatest share in the infection of man by tuberculosis through his food-supply, while they consider that the inspection of the milk in this country amounts practically to nothing at all. With regard to meat inspection they find that its value varies (as would be expected) with the class of men employed as inspectors, Edinburgh being particularly fortunate in possessing the most competent staff. The Commissioners are satisfied that in the hands of a competent veterinary surgeon tuberculin is a well-nigh infallible test for tuberculosis and lay stress on the facts which they have been able to elicit with regard to the possibility of eliminating tuberculosis from infected herds.

We may briefly refer to some of the more important recommendations. With regard to slaughter-houses it is recommended that public slaughter-houses should become obligatory in urban districts, and that all carcasses should be examined by inspectors and stamped if they are passed as sound. Meat slaughtered elsewhere than in a public slaughter-house and brought into an urban district for sale must undergo inspection, while to avoid the sending of diseased animals into rural districts to be slaughtered it is proposed that the County Councils and analogous authorities in Scotland and Ireland should make arrangements to inspect the meat sold in villages.

The Commissioners recommend that in future no person be permitted to act as a meat inspector until he has passed a qualifying examination on the signs of health and disease in animals, dead and alive, which are destined for food, as well as on the rough anatomy of the body. They recommend that the Local Government Board should issue full instructions to the inspectors as to the seizing of carcasses, and they suggest that until such instructions are issued the entire carcass should be seized (*a*) when there is miliary tuberculosis of both lungs; (*b*) when tuberculous lesions are present on the pleura and peritoneum; (*c*) when tuberculous lesions are present in the muscular system, or in the lymphatic glands embedded in or between the muscles; and (*d*) when tuberculous lesions exist in any part of an emaciated carcass. But (*a*) when the lesions are confined to the lungs and the thoracic lymphatic glands, (*b*) when they are confined to the liver, (*c*) when they are confined to the pharyngeal lymphatic glands, or (*d*) when they are confined to any combination of the foregoing but are collectively small in extent the carcass, if otherwise healthy, need not be condemned, but every part of it containing tuberculous lesions must be seized. But any manifestation of tuberculosis in the pig is sufficient to warrant the seizing of the whole carcass.

With regard to milk it is recommended that notification of all diseases of the udder should be made compulsory; that milk vendors should be required to supply information as to the source of their milk upon the demand of the local sanitary authority; that all cowsheds and byres should be registered and that for the future they should not be permitted within 100 ft. of any dwelling house; and that all cowsheds should be properly floored, drained, and supplied with water for flushing purposes and be constructed in accordance with definite rules as to cubic contents of air, as to light and as to ventilation.

With regard to the elimination of bovine tuberculosis the Commissioners recommend that stock-owners be encouraged to test their animals by the offer of a gratuitous supply of tuberculin and the gratuitous services of a veterinary surgeon, the expenses entailed being defrayed by the Board of Agriculture in England and Scotland, and by the Veterinary Department of the Privy Council in Ireland. It is, however, to be made a condition that tuberculin is to be supplied only to such owners as will undertake to isolate reacting animals from healthy ones.

THE WORKMEN'S COMPENSATION ACT, 1897.

THE following memorandum, dealing with the appointment of medical referees, was issued during the week from the Home Office:—

The Secretary of State proposes shortly to proceed to appoint medical referees under the Workmen's Compensation Act, 1897.

Duties.—The principal duty of the medical referees will be to act as the advisers in medical matters of the committees, arbitrators, and county court judges, who are empowered to decide all questions arising in proceedings under the Act. For this duty they will be paid by the Treasury.

The ordinary procedure will be as follows. If after hearing the evidence brought by both sides doubt remains upon some medical point material to the case the committee, arbitrator, or judge may at their discretion make a reference to the referee directing him to examine the injured workman and to make a written report on a specified question or questions. As a rule the applicant will be required to attend the referee for examination at a time and place to be fixed by the referee; but in some instances, where the workman is unfit to travel, it will be necessary for the referee to visit him. In all cases the referee will make, in the first instance, a written report answering the question or questions propounded by the committee, judge, or arbitrator. Only in cases of special difficulty, before a county court judge or county court arbitrator, will the referee, after his written report has been considered, be asked to attend at a subsequent hearing to be held at a day and hour fixed by arrangement with him.

There will further be some cases in which applications will be made to the medical referees directly by the workmen. In certain circumstances a workman who is in receipt of an allowance under the Act is entitled to submit himself for examination to a referee for the purpose of obtaining a certificate as to his condition, which will be conclusive evidence in an arbitration under the Act.

Distribution of appointments.—The appointments will be made according to the county court circuits, referees being appointed for each of the 55 circuits into which England and Wales are divided. According to the circumstances of each

circuit it will either be subdivided and one or more of the referees assigned to each district, or arrangements will be made by which the referees will take the cases arising in the circuit according to a fixed rota. This arrangement will not, however, be binding on the county court judge or county court arbitrator, who is left free in each case to select such of the referees for the circuit as he sees fit, though he will probably in many cases be guided by the general arrangement.

Similar arrangements will be made for Scotland and Ireland, but the details are not yet settled.

In the first instance it is probable that only one or two referees will be appointed for some of the circuits, the ultimate arrangement being left to be determined when experience shows what is the number and distribution of the cases arising under the Act. For the same reason all appointments made will, in the first instance, be provisional and subject to revision if experience of the working of the Act should show that any rearrangement of duties or of the mode of payment is required.

Qualifications.—The Secretary of State, accepting and fully concurring in the recommendations of a committee appointed by him, which has examined the whole subject with great care, and has had the advice both of county court judges and of high medical authorities, deems it essential that the referees should be men of independent position and high standing in their profession so as to command the confidence of all parties in disputes under the Act; and should, moreover, have such experience of the class of questions arising as will enable them to decide with authority points in which there may be divergence of medical evidence.

Other things being equal, preference would therefore be given to those holding important hospital appointments or having had other special opportunities of gaining wide experience of accidents and their consequences, and to those who are not closely identified, by the nature of their practice or otherwise, with the classes affected by the Act.

Most of the cases arising under the Act will be of a surgical character and the majority of the referees must therefore be selected with special regard to this circumstance, but the Secretary of State will, where necessary, make provision also for cases of other kinds, whether purely medical or involving questions in the ophthalmic or other special branches of practice.

Fees.—The following scale of fees has been approved by the Treasury:—

For a first reference, to include examination and written report	2 guineas.
For a further written statement on the same reference	1 guinea.
For a second or subsequent reference in the same case	1 guinea.
For attendance at the proceedings on the request of a county-court judge or county-court arbitrator at a time and place to be arranged	3 guineas.

Where the medical referee has to travel to a place distant more than two miles from his residence there will be a further fee calculated at the rate of 5s. for each mile of distance. The Secretary of State may in some cases fix a "centre," other than the referee's residence, from which distances are to be measured.

The fee for the examination of a workman in receipt of an allowance, who submits himself voluntarily, is payable, not by the Treasury, but by the workman, who may be required to pay a reasonable fee before the examination is made.

Applications for the appointments should be addressed to the Home Secretary and should be sent under cover to the Private Secretary to the Secretary of State, Home Office, London, bearing on the envelope the words "Medical Referee," and should state the applicant's qualifications, age, &c., his residence, and the county court circuit to which he wishes to be attached.

Home Office, April 19th, 1898.

SOCIETY FOR THE STUDY OF INEBRIETY.—The annual meeting of this society was held in London on April 14th, the President, Dr. Norman Kerr, being in the chair. Lady Elizabeth Biddulph, who had just returned from Egypt, stated that the battle of Atbara had been fought without alcohol.—Dr. R. W. Branthwaite read a paper on Some Points in the Treatment of Inebriety, Surgeon-Lieutenant-Colonel Pringle, Surgeon-Major Poole, Dr. Longhurst, Dr. Hazell, Dr. A. Smith, Dr. James Stewart, Mr. Riley, and others taking part in the discussion.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE eighteenth meeting of the Royal Commissioners was held at the Council Chamber of the Westminster Town Hall on April 18th. At the commencement of the proceedings all the Commissioners were present with the exception of the Right Hon. J. W. Mellor and Sir John Dorrington. Mr. Cripps, Q.C., left soon after the commencement of the sitting and Sir George Barclay Bruce was not present after the luncheon adjournment. The whole of the sitting was occupied by the examination of the City Remembrancer.

The evidence given referred to the charges made by the New River Company to the citizens of London for the water they supplied and the witness later sketched a scheme of control which a committee of the Corporation of the City of London thought might be worthy of the attention of the Commissioners. Towards the end of the sitting evidence was given with regard to the sinking fund which is invested in the water companies' stocks by the Chamberlain of the City of London.

With regard to the charges the CITY REMEMBRANCER mentioned the case of a bank of which the rateable value was £5167; the charge made for water by the New River Company was £97 16*s.*, while the charge they were authorised to make was stated to be £155. Another case was given in which the rateable value was £3522. At 3 per cent. the water rent amounted to £105, but the Company entered into an agreement to supply the premises for an annual sum of £70 13*s.* The amount paid by the customers in the City of London was a matter of negotiation. Each case, the witness believed, was treated on its merits and no special fixed abatement was made. In answer to the CHAIRMAN the witness stated that he could not say how much was paid in water-rents by the citizens, that he did not know what amount was saved annually by the deductions in the water-rents made by the special bargains between the customers and the New River Company, and that therefore he was unable to say how much more the citizens would have to pay if the charges were levied at the full rateable value, as they are in the case of people living in other parts of London. The witness was unable to give the price paid by the citizens per 1000 gallons of water supplied. The City of London held that an equalisation of water-rents would be disadvantageous to all those parts of London in which the rateable value was high and the population comparatively low. At the present time a very large amount of money was paid by the City of London for the benefit of other districts. The City paid one-eighth of the total rates. No less than £214,705 a year were paid to the School Board, £107,000 a year were paid to the Metropolitan Common Poor Fund, and £104,073 were paid for the "equalisation of rates" for expenses incurred under the Public Health (London) Act of 1891.

In answer to Mr. DE BOCK PORTER the witness said that from the point of view of the citizens the amount which they would have to pay for water was the most important point which they had to consider, and they were of opinion that the results of purchase would in that respect be disadvantageous to them. It was a general opinion in the city that the New River Company treated the water consumers reasonably and fairly in the matter of the charges made. The City Corporation, however, would favour the adoption of a special water rate for offices and banks if such an arrangement could be carried out in a fair manner. In answer to the CHAIRMAN the witness said that it had occurred to the Corporation to negotiate for the purchase of the New River Company. He did not think that the City authorities would have any objection to his saying why the negotiations had failed, but he objected to answer the question without the consent of the representatives of the New River Company.

Mr. POPE, Q.C., who appeared for the New River Company, said he did not know to what the witness was referring.

The CITY REMEMBRANCER said that the negotiations for purchase to which he had referred were carried on some years ago before he held his present office and that a "personal element" had entered largely into the matter, so that he did not feel justified in giving further information on the subject. With regard to the purchase of the water companies'

undertakings, if they could be bought at a reasonable price and if the Corporation of London could ensure in advance that they would be fairly represented in the management of the water-supply and ensure a satisfactory rate of water rents for themselves, they would prefer purchase to control; but if the price paid were extravagant or the Corporation were not sufficiently represented in the management of the supply they would prefer control. With regard to control the witness suggested that the companies should be grouped. For this purpose he suggested that of the companies north of the Thames the New River and the East London companies should form one group, and the West Middlesex, Grand Junction, and Chelsea companies a second group. On the south of the Thames the Southwark and Vauxhall and the Lambeth companies should be united and the Kent Waterworks company left to supply its own district. Each group should be managed by a Board of Control elected on a basis of population and of rateable value. The witness suggested that the companies should combine voluntarily. This scheme, the witness said, had been considered by a committee of the Corporation and not by the Court of Common Council. The powers which it was suggested the Board of Control should have would have reference to the storage capacity of the reservoirs, to the purity of the supply, and to the pressure at which the water was supplied. It would be necessary for each area to have its own water examiner. The Board should have the power at present possessed by the official auditor of accounts and power to appeal to the Railway Commissioners. The witness suggested that each board should consist of about 48 members and that they should not be paid. He said that these suggestions were not to be considered as a "cut-and-dried policy." The Corporation of London had not understood that they were expected to come before the Commission pledged to any particular policy. The scheme which he had sketched was, he was instructed, thought worthy of consideration, but the proposals as he had stated them were not arranged in a final form.

After the adjournment evidence was given with regard to the sinking fund. The witness could not give definite information as to the exact amount of the different stock which was held. A list of the securities was promised.

On behalf of the London County Council Mr. BALFOUR BROWNE cross-examined the witness with regard to the relations which had existed between the City and the London County Council, with regard to the proposal that the companies' undertakings should be purchased, and with regard to the details of the scheme of control which the witness had suggested.

A REPORT OF THE RESULTS OBTAINED IN THE WEEKLY USE OF GLYCERINATED CALF VACCINE DURING THE YEAR 1897.

BY the courtesy of Mr. Thomas Bond, surgeon, A Division, Metropolitan Police, we have been enabled to inspect a statement showing the failures experienced by him in his weekly use of glycerinated calf lymph during the whole of the year 1897. In order to render the work more reliable and therefore more valuable a supply of vaccine from a source not before supplied to him was, as a rule, the first used in the morning's work, so that men in whom it failed (if any) should not be again attempted a second time with the vaccine which had previously failed. This arrangement not only tended to render the system of revaccination by Mr. Bond as effective as possible, but really placed the vaccine itself upon trial and confirmed the quality of the vaccine used by the only reliable test—actual trial by human vaccination—for however good vaccine appears to be when gathered the result in actual use is the only test of its real character.

Mr. Bond's regulations are that the vaccination of each man shall be attempted. The inspection of the men takes place upon the same day of the week following the vaccination and the facts brought to notice by those inspections are certainly interesting and instructive. A number of men vaccinated from the same calf will appear, some of them having typical vesicles in each place of insertion; then one man will show no signs of vaccination of any kind who upon inquiry will almost certainly prove to have been revaccinated in the army and fully protected. Such cases appear under P. in the statement, but if the man who has shown signs of insusceptibility is not considered insusceptible he is again attempted from some vaccine not before used, and if another failure follows he is justly considered protected provided the vaccine used in the second attempt proved itself active upon others attempted with him at the time of that second trial. But supposing the second attempt produces a satisfactory vaccination the case appears as a failure in the first attempt under F. These cases of failure are of course rare, for vaccination from vaccine having failed which was proved so thoroughly effective upon others at the time of the first attempt, it is not reasonable to expect a second similar attempt could succeed unless the failure was due solely to some accident in the operation.

The percentage of failures is calculated by deducting from the number attempted (M.) the number protected (P.), the remainder, = R, being considered the number susceptible and $\therefore \frac{F}{R} 100$ = percentage of failures. On reference to the statement it will be seen that the greatest number of failures was from a vaccine aged 46–53 days. Of vaccine of this age one lot came from Calf No. 18, giving M. 10, S. 3, P. 1, F. 6 in May. The other lot came from Calf No. 66 in December, gave M. 4, S. 3, P. 1, F. 9, so that the percentage of failures with vaccine of the age in question was as seen in the summary. The vaccine tried in May had previously been tried in April with uniform success.

The summary of the statement shows 2·19 per cent. of failures from 898 revaccinations attempted during the year. An analysis shows that glycerinated calf vaccine has been produced which will remain equally active throughout the whole year and which is not injuriously affected by the heat. We understand that the arrangement now in operation will be continued to the end of the present year.[1]

Tabulated Statement, Summary of Totals, &c.

Age of vaccine at trial.	M.	S.	P.	F.	Percentage of failures.
1 to 7 days	93	78	15	—	—
8 ,, 14 ,,	189	157	31	1	0·63
15 ,, 21 ,,	265	228	30	7	3·00
22 ,, 29 ,,	200	175	24	1	0·56
30 ,, 37 ,,	96	80	13	2	2·43
38 ,, 45 ,,	32	24	8	—	—
46 ,, 53 ,,	13	6	1	6	50·00
54 ,, 61 ,,	—	—	—	—	—
62 ,, 69 ,,	11	9	2	—	—
Totals	898	757	124	17	2·19

Total attempted (M.) 898
Deduct total protected (P.) 124
774

Total failed (F.) = 17.

$\therefore \frac{1700}{774}$ = 2·19 per cent.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on April 14th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

The report of the Jacksonian Committee was received and adopted and the Council awarded the Jacksonian Prize to Mr. Percy Furnivall, F.R.C.S. Eng. The subject was "The Pathology, Diagnosis, and Treatment of the Various Neoplasms met with in the Stomach, Small Intestine, Cæcum, and Colon." The Collegial Triennial Prize was not awarded. The Jacksonian Committee submitted two

[1] The vaccine used was obtained from the Association for the Supply of Pure Vaccine Lymph.

subjects for the Jacksonian Prize in 1899 and the following was adopted: "The Pathology, Diagnosis, and Treatment of Inflammatory Affections of the Nasal Fossæ and the Associated Sinuses and Air Cells." The Council decided that the subject for the next Collegial Triennial Prize should be: "The Thyroid Gland—its Structure, Comparative Anatomy, and Physiology."

A report from the Committee of Management was received and adopted; it contained a recommendation that Winchester College should be added to the list of institutions recognised as places of instruction in chemistry, physics, and practical chemistry, and it also contained a recommendation that the time spent on the study of chemistry, physics, practical chemistry, and biology in a recognised institution should be allowed to count as part of the first year of professional study.

A report from the Committee on the Midwives Registration Bill was received and approved; it was as follows:—

The Committee, having carefully considered the Bill, are of opinion that it does not provide sufficient protection to lying-in women and adequate safeguards in the interest of the public health, and accordingly recommend that the Council should not give it their support.

The Council directed that Mr. J. Rowland Humphreys, honorary secretary of the Midwives Bill Committee, should be informed of the decision at which the Council had arrived.

It was also resolved that a special meeting of the Council should be held on Wednesday, May 4th, at 3 P.M., to consider the report of the General Medical Council on the Midwives Bill.

A letter was read from Mr. Francis Fowke, general secretary of the British Medical Association; it was accompanied by documents relating to the Midwives Bill, but their further consideration was postponed.

The PRESIDENT, on behalf of himself and the vice-presidents, reported that they had taken into consideration the petition from Members of the College resident in Italy on the subject of the proposed legislation of the Italian Government respecting the practice of medicine and surgery by foreigners, and that they had drawn up a letter on this subject to be sent to the Secretary of State for Foreign Affairs. The letter was approved and it was agreed that the petitioners should be informed of the steps which had been taken.

The Council proceeded to the further consideration of the petition from certain Fellows and Members of the College, claiming that the right of electing the Representative of the College to the General Medical Council is, by Section 7 of the Medical Act, 1886, vested in the Fellows and Members of the College, calling upon the Council to make arrangements to hold an election and enable the Fellows and Members to choose a Representative, and asking to be received and heard in support of their petition. The Council resolved that the petitioners should be informed that the Council see no reason to alter the mode of election which has been in force for the last forty years, and consider that no useful purpose would be served by receiving a deputation from the petitioners in reference to their claims.

The Secretary stated that the appeal against the assessment of the College for corporation duty would probably be heard on April 25th.

The Council proceeded to elect to the Fellowship two Members of twenty years' standing, and Mr. Charles Sissmore Tomes, M.R.C.S. Eng., L.D.S., F.R.S., of London, and Mr. William Dunnett Spanton, F.R.C.S. Edin., M.R.C.S. Eng., of Hanley, were elected.

Mr. BANKS moved that the Council do take into consideration the question of authorising a special robe to be worn by the Fellows of the College. The matter was referred to a committee.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6629 births and 4201 deaths were registered during the week ending April 16th. The annual rate of mortality in these towns, which had been 21·5 and 20·2 per 1000 in the two preceding weeks, further declined last week to 19·5. In London the rate was 19·1 per 1000, while it averaged 19·8 in the thirty-two provincial towns. The lowest rates in these towns were 12·5 in Preston, 12·6 in Portsmouth, 13·6 in West Ham and 14·8 in Swansea; the highest rates were 24·6 in Oldham, 25·6 in Gateshead, 26·0 in Newcastle-upon-Tyne, and 27·5 in Liverpool. The 4201 deaths included 487 which were referred to the principal zymotic diseases, against 538 and 516 in the two preceding weeks; of these, 219 resulted from measles, 114 from whooping-cough, 69 from diphtheria, 33 from scarlet fever, 29 from "fevers" (principally enteric), 22 from diarrhœa and 1 from small-pox. No death from any of these diseases was recorded last week in Preston; in the other towns they caused the lowest death-rates in Plymouth, Salford, Burnley, and Blackburn; and the highest rates in Gateshead, Halifax, Cardiff, and Leicester. The greatest mortality from measles occurred in Leeds, Brighton, Wolverhampton, Bristol, Halifax, and Leicester; from scarlet fever in Derby; and from whooping-cough in Gateshead and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 70 deaths from diphtheria included 34 in London, 7 in Cardiff, 4 in West Ham, 3 in Croydon, and 3 in Birmingham. One fatal case of small-pox was registered in Newcastle-upon-Tyne, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, April 16th, was 2384, against 2371, 2377, and 2421 at the end of the three preceding weeks; 217 new cases were admitted during the week, against 191, 239, and 234 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 451 and 372 in the two preceding weeks, further declined last week to 305, and were 81 below the corrected average. The causes of 75, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Leeds, Hull, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Burnley, Bradford and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·2 and 24·1 per 1000 in the two preceding weeks, further declined to 22·5 during the week ending April 16th, but exceeded by 3·0 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·0 in Leith and 19·6 in Greenock to 23·8 in Perth and 30·3 in Dundee. The 680 deaths in these towns included 27 which were referred to whooping-cough, 17 to diarrhœa, 14 to measles, 11 to scarlet fever, 6 to "fever," and 4 to diphtheria. In all, 79 deaths resulted from these principal zymotic diseases, against 82 and 105 in the two preceding weeks. These 79 deaths were equal to an annual rate of 2·6 per 1000, which was 0·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 25, 21, and 44 in the three preceding weeks, declined again to 27 last week, of which 13 occurred in Glasgow and 5 in Edinburgh. The 14 deaths referred to measles showed a decline of 10 from the number recorded in the preceding week, and included 12 in Glasgow. The fatal cases of scarlet fever, which had been 7, 12, and 4 in the three preceding weeks, rose again to 11 last week, of which 7 occurred in Glasgow. The 6 deaths referred to different forms of "fever" exceeded the number recorded in any recent week and included 3 in Dundee; and of the 4 fatal cases of diphtheria 2 were registered in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 178 and 157 in the two preceding weeks, rose again to 164 last week, and slightly exceeded the number in the corresponding period of last year. The causes of 35, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 35·1 and 24·3 per 1000 in the two preceding weeks, rose again to 27·1 during the week ending April 16th. During the thirteen weeks of last quarter the death-rate in the city averaged 32·4 per 1000, the rate during the same period being 21·7 in London and 20·3 in Edinburgh. The 182

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1898.

(Specially compiled for THE LANCET.*)*

SANITARY AREAS.	Estimated population in the middle of 1898.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,504,766	3	1449	1047	6	170	6	25	477	—	3183	7·4	—	647	63	205	286	2	35	—	49	1287	3·0	8970	20·8	141
West Districts.																										
Paddington	127,480	—	23	16	—	6	—	—	18	—	63	5·2	—	21	2	4	8	—	2	—	1	38	3·1	229	18·7	98
Kensington	172,174	—	46	26	5	6	—	2	18	—	103	6·2	—	41	3	4	10	2	—	—	2	62	3·8	327	19·8	174
Hammersmith	107,370	—	24	20	—	4	—	—	4	—	52	5·1	—	55	2	5	2	—	1	—	—	65	6·3	261	25·3	172
Fulham	125,275	—	67	32	—	5	—	1	13	—	118	9·8	—	14	2	6	4	—	—	—	1	27	2·2	239	19·9	142
Chelsea	96,713	—	36	22	—	5	—	—	11	—	74	8·0	—	22	—	3	1	—	3	—	4	33	3·6	216	23·3	149
St. George Hanover-square	80,608	—	21	4	—	2	—	—	2	—	29	3·8	—	11	2	—	2	—	1	—	—	16	2·1	126	16·3	94
Westminster	52,574	—	10	12	—	1	1	—	4	—	28	5·6	—	15	—	3	3	—	—	—	1	22	4·4	144	28·6	263
St. James Westminster	22,200	—	1	7	—	—	—	—	1	—	9	4·2	—	2	—	—	—	—	—	—	—	2	0·9	41	19·3	66
North Districts.																										
Marylebone	140,483	—	27	22	—	7	—	1	16	—	73	5·4	—	24	1	6	7	—	3	—	3	44	3·3	258	22·1	132
Hampstead	78,785	—	18	13	—	1	—	—	4	—	36	4·8	—	6	—	—	7	—	—	—	1	14	1·9	111	14·7	116
St. Pancras	243,416	—	67	47	—	14	1	3	25	—	157	6·7	—	17	4	16	5	—	2	—	—	44	1·9	420	18·0	132
Islington	344,616	—	100	66	—	9	—	1	34	—	210	6·4	—	91	3	10	36	—	1	—	4	144	4·4	670	20·3	174
Stoke Newington	34,660	—	8	1	—	—	—	—	3	—	12	3·6	—	6	—	2	1	—	—	—	1	10	3·0	48	14·4	71
Hackney	219,630	—	98	109	—	14	—	1	26	—	248	11·8	—	16	2	19	14	—	5	—	1	57	2·7	370	17·6	124
Central Districts.																										
St. Giles	37,519	—	4	3	—	2	—	—	5	—	14	3·9	—	11	—	1	—	—	1	—	—	13	3·6	93	25·8	161
St. Martin-in-the-Fields	12,424	—	1	—	—	1	—	—	2	—	4	3·4	—	—	—	1	—	—	1	—	—	2	1·7	22	18·5	43
Strand	23,284	—	4	8	—	1	—	—	—	—	13	5·8	—	4	—	—	—	—	—	—	—	4	1·8	64	28·7	167
Holborn	30,056	1	5	18	—	1	—	—	4	—	29	10·1	—	6	—	4	1	—	—	—	1	12	4·2	78	27·1	202
Clerkenwell	66,130	—	30	26	—	1	—	—	5	—	62	9·8	—	6	—	6	2	—	—	—	1	15	2·4	134	21·1	137
St. Luke	41,076	—	7	21	—	2	—	—	6	—	36	9·1	—	4	1	1	4	—	—	—	—	10	2·5	113	28·7	141
City of London	29,088	—	3	4	—	1	—	—	1	—	9	3·2	—	—	—	—	1	—	—	—	—	1	0·4	83	29·8	121
East Districts.																										
Shoreditch	121,485	—	50	23	—	4	—	—	13	—	90	7·7	—	13	2	9	21	—	—	—	2	47	4·0	281	24·1	147
Bethnal Green	129,027	—	47	31	—	3	—	—	39	—	120	9·7	—	20	—	8	26	—	—	—	4	68	5·5	340	27·5	192
Whitechapel	80,559	—	22	14	—	3	—	—	10	—	49	6·3	—	5	2	5	6	—	—	—	1	19	2·5	190	24·6	126
St. George-in-the-East	48,241	—	12	14	—	5	—	—	6	—	37	8·0	—	7	3	—	6	—	—	—	1	17	3·7	146	31·6	247
Limehouse	58,661	—	32	11	—	3	—	—	6	—	52	9·2	—	7	1	—	15	—	—	—	—	23	4·1	162	28·8	284
Mile End Old Town	112,528	—	31	25	—	—	—	—	14	—	70	6·5	—	11	1	5	13	—	2	—	1	33	3·1	214	19·8	135
Poplar	170,220	—	57	37	—	10	—	1	24	—	129	7·9	—	22	4	9	19	—	—	—	2	56	3·4	379	23·2	132
South Districts.																										
St Saviour Southwark	24,562	—	7	14	—	—	—	—	2	—	23	9·8	—	—	—	5	—	—	—	—	—	5	2·1	48	20·4	129
St. George Southwark	60,461	—	25	28	—	1	—	—	6	—	60	10·2	—	7	—	4	1	—	—	—	—	12	2·1	140	24·1	89
Newington	123,183	—	52	36	—	9	—	2	14	—	113	9·6	—	4	1	5	4	—	2	—	3	19	1·6	256	21·7	129
St. Olave Southwark	11,288	—	5	2	—	1	—	—	1	—	9	8·3	—	—	—	—	1	—	—	—	—	1	0·9	30	27·7	149
Bermondsey	85,738	—	22	6	—	1	—	1	7	—	37	4·5	—	4	1	1	5	—	1	—	—	12	1·5	174	21·2	87
Rotherhithe	40,849	—	19	5	—	—	—	1	5	—	30	7·7	—	3	4	1	4	—	—	—	—	12	3·1	87	22·2	180
Lambeth	304,073	—	104	58	1	13	3	2	25	—	206	7·1	—	36	3	8	12	—	3	—	2	64	2·2	583	20·0	122
Battersea	171,921	1	109	54	—	5	—	3	20	—	192	11·6	—	35	7	14	7	—	1	—	—	64	3·9	324	19·7	134
Wandsworth	202,526	—	66	51	—	4	—	4	32	—	157	8·1	—	18	1	15	2	—	—	—	1	37	1·9	325	17·3	131
Camberwell	261,189	1	80	60	—	8	—	—	21	—	140	5·6	—	8	2	7	9	—	2	—	2	30	1·2	447	17·9	117
Greenwich	180,441	—	52	48	—	11	1	—	17	—	129	7·5	—	28	1	8	12	—	2	—	3	54	3·1	344	19·9	143
Lewisham (excluding Penge)	88,562	—	39	13	—	4	—	1	3	—	60	7·1	—	6	2	1	7	—	1	—	5	22	2·6	131	15·4	124
Woolwich	41,478	—	16	6	—	—	—	—	2	—	24	6·0	—	23	—	—	—	—	1	—	1	25	6·3	80	22·6	100
Lee	39,717	—	10	14	—	1	—	—	3	—	28	7·4	—	—	2	1	—	—	—	—	—	3	0·8	62	16·3	182
Plumstead	62,531	—	22	20	—	1	—	1	5	—	49	8·2	—	8	4	8	9	—	—	—	—	29	4·8	130	21·7	188
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 52 cases of membranous croup.

† Including deaths from membranous croup.

deaths registered in Dublin during the week under notice showed an increase of 19 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 20 and 9 in the two preceding weeks; of these, 3 resulted from "fever," 3 from whooping-cough, 2 from scarlet fever, 2 from diphtheria, and not one either from small-pox, measles, or diarrhœa. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 2·8 in London and 1·8 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 7 to 3 in the four preceding weeks, were again 3 last week. The 3 fatal cases of whooping-cough exceeded by one the number recorded in the preceding week. The deaths from scarlet fever, which had been 4 and 2 in the two preceding weeks, were again 2 last week. The 182 deaths in Dublin last week included 21 of infants under one year of age, and 56 of persons aged upwards of sixty years; the deaths of infants corresponded with the number recorded in the preceding week, while those of elderly persons showed an increase. Seven inquest cases and 4 deaths from violence were registered; and 85, or nearly one half, of the deaths occurred in public institutions. The causes of 5, or nearly 3 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1898.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during March in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·4 per 1000 of the population, estimated at 4,504,766 persons in the middle of this year. In the three preceding months the rates had been 9·8, 8·2, and 7·8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, St. James Westminster, Stoke Newington, St. Giles, St. Martin-in-the-Fields, City of London, and Bermondsey; while they showed the largest excess in Fulham, Hackney, Holborn, Clerkenwell, Bethnal Green, St. Saviour Southwark, St. George Southwark, and Battersea. Three cases of small-pox were notified in London during March, corresponding with the number in each of the two preceding months; of these, 1 belonged to Holborn, 1 to Battersea, and 1 to Camberwell sanitary areas. One small-pox case was admitted to the Metropolitan Asylum Hospitals during March, but no patient remained under treatment at the end of the month. The prevalence of scarlet fever in London showed a further decline from that recorded in the five preceding months; this disease was proportionally most prevalent in Fulham, Hackney, Clerkenwell, Limehouse, Newington, Rotherhithe, Battersea, and Lewisham sanitary areas. The Metropolitan Asylum Hospitals contained 2358 scarlet fever patients at the end of March, against 3507, 3021, and 2640 at the end of the three preceding months; the weekly admissions averaged 208, against 272, 232, and 214 in the three preceding months. The prevalence of diphtheria in London during March showed a decline from that recorded in the previous month; among the various sanitary areas this disease showed the highest proportional prevalence in Hackney, Holborn, Clerkenwell, St. Luke, St. Saviour Southwark, St. George Southwark, and Lee. There were 1009 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of March, against 1066, 1055, and 1042 at the end of the three preceding months; the weekly admissions averaged 129, against 151, 132, and 140 in the three preceding months. The prevalence of enteric fever in London slightly exceeded that recorded during February; this disease was proportionally most prevalent in St. Pancras, Hackney, Newington, and Greenwich sanitary areas. The Metropolitan Asylum Hospitals contained 64 enteric fever patients at the end of March, against 116, 106, and 84 at the end of the three preceding months; the weekly admissions averaged 12, against 17 and 11 in each of the two preceding weeks. Erysipelas showed the highest proportional prevalence in St. Giles, Bethnal Green, St. George-in-the-East, Poplar, and Wandsworth sanitary areas. The 25 cases of puerperal fever notified in London during March included 4 in Wandsworth, 3 in Battersea, 3 in St. Pancras, 2 in Kensington, 2 in Newington, and 2 in Lambeth sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, April 2nd, the deaths of 8970 persons belonging to London were registered, equal to an annual rate of 20·8 per 1000, against 21·3, 22·0, and 21·4 in the three preceding months. The lowest death-rates in the various sanitary areas were 14·4 in Stoke Newington, 14·7 in Hampstead, 15·4 in Lewisham (excluding Penge), 16·3 in Lee and in St. George Hanover-square, 17·3 in Wandsworth, and 17·6 in Hackney; the highest rates were 27·7 in St. Olave Southwark, 28·6 in Westminster, 28·7 in Strand and in St. Luke, 28·8 in Limehouse, 29·8 in City of London, and 31·6 in St. George-in-the-East. During the five weeks of March 1287 deaths were referred to the principal zymotic diseases in London; of these, 647 resulted from measles, 286 from whooping-cough, 205 from diphtheria, 63 from scarlet fever, 49 from diarrhœa, 35 from enteric fever, and 2 from typhus. These 1287 deaths were equal to an annual rate of 3·0 per 1000; the lowest zymotic death-rates were recorded in St. James Westminster, City of London, Newington, St. Olave Southwark, Camberwell, and Lee; and the highest rates in Hammersmith, Westminster, Islington, Bethnal Green, Woolwich, and Plumstead sanitary areas. The 647 fatal cases of measles were considerably more than double the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Hammersmith, Westminster, Islington, St. Giles, Bethnal-green, and Woolwich sanitary areas. The 63 deaths referred to scarlet fever were 18 below the corrected average number; the mortality from this disease was highest in Whitechapel, St. George-in-the-East, Rotherhithe, Battersea, and Plumstead sanitary areas. The 205 fatal cases of diphtheria were 24 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Holborn, Clerkenwell, St. Saviour Southwark, Battersea, Wandsworth, and Plumstead. The 286 deaths from whooping-cough were 60 below the corrected average number; the mortality from this disease was highest in Islington, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, and Plumstead sanitary areas. The 35 fatal cases of enteric fever were within 6 of the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 2 deaths referred to typhus were of persons belonging to Kensington sanitary area. The 49 fatal cases of diarrhœa were 19 below the corrected average number. In conclusion, it may be stated that the mortality in London last month from these principal zymotic diseases was more than 30 per cent. above the average, owing principally to the excessive fatality of measles.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was last month equal to 141 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover Square, St. James Westminster, Stoke Newington, St. Martin-in-the-Fields, St. George Southwark, and Bermondsey; and the highest rates in Westminster, Holborn, Bethnal Green, St. George-in-the-East, Limehouse, and Lee.

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEONS: R. W. Anderson to the *Anson*; Alfred J. Picthorn to the *Galatea*, for temporary service; J. M. Rogers to the *Terror*, additional for service in Bermuda Dockyard; and J. Jenkins to the *Indefatigable*. Surgeons: Reginald T. A. Levinge to the *Humber* and H. N. Stevens to the *Excellent*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel Macdonald, Senior Medical Officer, Port Blair, is appointed to officiate as Medical Storekeeper, Bengal, during the absence of Surgeon-Lieutenant-Colonel Warden on plague duty at Bombay.

Surgeon-Captain E. Wilkinson is appointed to plague duty in the Jullundur District to assist Surgeon-Captain James.

VOLUNTEER CORPS.

Artillery: 1st Banff: Surgeon-Captain W. L. Stewart, M.D. Aberd., to be Surgeon-Major. *Royal Engineers* (Volunteers): — 1st Flintshire (Buckley): Surgeon-Lieutenant G. O. M. Lunt, M.B. Edin., to be Surgeon-Captain. *Rifle:* 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment: Captain Harry Munyard Brownfield resigns his commission, and is appointed Surgeon-Lieutenant. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Frank Alexander Wagstaff to be Surgeon-Lieutenant. 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry: Surgeon-Major D. Cowie, M.B. Glasg., to be Surgeon-Lieutenant-Colonel. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Surgeon-Lieutenant J. Dewar, M.B. Glasg., resigns his commission. 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment): Richard Ardra Fegan to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADE.

Mersey Brigade: Surgeon-Lieutenant-Colonel W. J. Fleetwood, M.D. St. And., 4th Volunteer Battalion the King's (Liverpool Regiment), to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

ROYAL PRESENTS TO THE ROYAL VICTORIA HOSPITAL, NETLEY.

The gifts which have been forwarded as a memento of the visit which Her Majesty and Princess Henry of Battenberg recently paid to the Royal Victoria Hospital have given great pleasure both to the officers of the medical staff and to the patients under treatment. On the occasion of her late visit the Queen inspected nineteen wards and for each of them she has sent her latest photograph bearing her autograph: "Victoria, R.I., 1837 — 1897. June 22nd, 1897." The photographs are handsomely framed in oak and gold and on a plate at the base of each is the inscription: "Presented by Her Majesty the Queen, 1898." With the photographs Her Majesty has also sent a fine portrait of the late Prince Consort, which has been framed in dark walnut with gold beading. Her Majesty's other gifts include engravings of herself in her pony carriage, the Jubilee procession passing Trafalgar-square, the Jubilee procession leaving Buckingham Palace, a group of the Royal Family, and some coloured prints. All of them have been framed in oak and gold, with the exception of the three coloured prints, the latter being in massive gilt frames, and each bears a brass plate with an inscription announcing the donor. When the Queen visited the wounded from the North-West frontier of India she requested the principal medical officer to order at her expense the best artificial limbs which modern invention has produced for those who have lost limbs in her service. In addition Her Majesty also ordered four invalid lounge chairs, which have duly arrived. They are of the latest pattern and most comfortable. The gift from Princess Beatrice is of a very pathetic nature, a gift of a soldier's widow to men who have fought for their country. It consists of a very fine steel portrait of the late Prince Henry of Battenberg and is framed in oak and gold. It bears the inscription: "Prince Henry of Battenberg, K.G., presented by Her Royal Highness Princess Henry of Battenberg." The pictures are to be hung on the walls of the wards of the hospital at an early date.

THE LATE CAMPAIGN ON THE INDIAN FRONTIER.

There seems every reason to believe that military operations against the Afridis have now really terminated and that the frontier tribes have submitted. Those of the British sick and wounded of the late campaign who are still remaining in India are doing well. It is highly probable that the conduct of this frontier war will form the subject of some Parliamentary inquiry and debate during the present session. It is a curious fact that the political officers appear to have been quite ignorant of the state of feeling among the tribes immediately before and up to the very time of their revolt. It is now apparently believed that if prompt measures had been taken at the beginning and troops had been sent to Ali Musjid, Lundi Khotal, and other posts along the Khyber Pass and on the western and southern borders of the Peshawar district when rumours of an intended movement on the part of the tribes first reached the authorities there would have been a highly probable chance of stamping out the rebellion in its initial stage.

THE TREATMENT OF ENTERIC FEVER IN INDIA.

According to the Anglo-Indian papers Surgeon-Major S. J. Rennie, in medical charge at Meerut, has been very successful in his treatment of cases of enteric fever with repeated doses of olive oil. A correspondent of the *Pioneer Mail* of March 25th last points out with reference to the foregoing that THE LANCET of Nov. 27th, 1897, p. 1383, contains an article by Dr. Owen F. Paget of Fremantle, Western Australia, on the value of olive oil in the treatment of this fever and the highly favourable results following its use in over 100 cases attended by him.

THE SOUDAN.

Further operations in the Soudan are suspended for three months. When the Nile rises and the railway has been carried further and the final arrangements for an advance on Khartoum have been made the campaign will be renewed. The moral effect of Sir Herbert Kitchener's brilliant victory must inevitably be great, but there will in all probability be some severe fighting before Khartoum falls into our hands, and the medical services of the Anglo-Egyptian force have not only plenty of work in the present but a good deal of prospective work before them.

ROYAL SCHOOL FOR ARMY OFFICERS' DAUGHTERS.

The annual meeting of this school was held on April 16th at the Royal United Service Institution, when the Duke of Cambridge presided. The report stated that the number of pupils on the rolls on Jan. 1st was 113. Among the donations which have been received was one of £1150 from Mr. J. A. Mullens, £750 of which have been devoted to the foundation of a Jubilee scholarship of £50.

SERVICE ON THE WEST COAST OF AFRICA.

Surgeon-Major C. J. Josling, Surgeon-Major R. G. Thompson, Surgeon-Captain W. T. Mould, Surgeon-Captain F. Smith,, Surgeon-Major A. A. Sutton, Surgeon-Captain J. W. Cockerill, and Surgeon-Captain G. Raymond have embarked for Sierra Leone for service in connexion with the operations on the west coast of Africa.

INOCULATION FOR PLAGUE.

Professor Haffkine is proceeding, in company with Surgeon-Lieutenant-Colonel Lawrie, to the plague-infected villages in the Nizam's territory in order to introduce his method of prophylactic inoculations on a large scale.

Brigade-Surgeon-Lieutenant-Colonel Sir A. S. Lethbridge, K.C.S.I., and Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E., have been granted the two extra pensions of £100 each available for the Bengal establishment for the year 1898-99, and Brigade-Surgeon-Lieutenant-Colonel F. H. Blenkinsopp and Brigade-Surgeon-Lieutenant-Colonel J. Arnott have been granted the pensions due to the Madras and Bombay establishments respectively.

The *Times* says: "The Admiralty have granted seven days' extra leave to all men in the Indian Defence Flotilla in consequence of the exceptional character of their services at Bombay during the plague epidemic. The hired transport *Jelunga*, which is due at Southampton on April 27th, has on board 276 ratings from Indian defence ships. She arrived at Suez on Saturday."

Major-General H. Trotter, commanding Home District, has consented to become a Vice-President of the Volunteer Medical Association and will dine with the Volunteer Medical Staff at Limmer's Hotel on May 4th; Colonel Mackinnon, A.A.G., and Surgeon-Colonel T. O'Farrell, P.M.O., have also accepted invitations.

Surgeon-Major-General Harvey, who is officiating as Director-General of the Indian Medical Service, recently visited Bombay to confer with the authorities regarding plague measures and subsequently proceeded on tour through Hyderabad, Baroda, Rajputana, and the Punjab.

In future when from the exigencies of service a surgeon-lieutenant-colonel is appointed principal medical officer of a general hospital in India of 500 beds he will be granted the temporary rank of brigade-surgeon-lieutenant-colonel.

Correspondence.

"Audi alteram partem."

"TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION."

To the Editors of THE LANCET.

SIRS,—May I in the first place point out, in reply to Dr. G. Ogilvie's letter in THE LANCET of March 5th, that Fergusson's "personal observations" in Portugal regarding the curability of syphilis in all its stages without mercury were testified to by Rose and "numerous British surgeons" from personal observations in the Peninsular War and corroborated five years later by Rose in London when surgeon to the Coldstream Guards and to the St. James's Infirmary?[1]

2. The argument Dr. Ogilvie advances in discrediting "Ferguson and Lee" in the *British Dermatological Journal* of November, 1897, and again advances in THE LANCET of March 5th with respect to Fergusson—viz, that these observations "were made at a time when no distinction was drawn between syphilitic and other sores"—was anticipated by Rose and referred to by Mr. Lee himself. "It is reasonable," says Rose, "to think that a considerable part of the cases of which Mr. Fergusson speaks could not be regarded by cautious practitioners as venereal," but while admitting some of the cases he himself brought forward were not venereal in the Guards he concludes that "amongst a number of cases of such a description taken indiscriminately the probability of some being venereal is materially increased and must at last approach nearly to a certainty"; while "It is true," says Mr. Lee, "that at the time Mr. Rose conducted his experiments no clear distinction was drawn between those syphilitic affections which if left to themselves would infect the constitutions of the patients and those which would not, and therefore a great many sores were no doubt said to be cured without mercury which under no circumstances would have been followed by secondary symptoms. It is exceedingly probable, however, that a certain proportion of the cases treated by Mr. Rose really depended upon the infecting variety of the disease, and as Mr. Rose found that he could deal with these cases without administering mercury we can only conclude that the disease he was treating had appeared in some modified form such as Dr. Ferguson had noticed in Portugal and such as he states to have existed also in Germany and in Russia." Moreover, the differentiation between local and infecting disease had already been noted by Bell (1797), who observed "that a chancre might frequently be cured with external applications alone and as we know from experience that the virus is not always absorbed the cure would in a few instances prove permanent," while the controversy between syphilis and "syphiloid" disease existed in the days of Abernethy (1804) and must have been well known to Fergusson (1812). And in truth it is evident that Fergusson not only noted a distinction between the sores in the Portuguese and British but in the British themselves, and Dr. Ogilvie's quotation "that the disease in its primary state is curable in Portugal without mercury" when taken alone is misleading. By disease Fergusson referred to the ulcerations in the Portuguese, which he compared with the "trifling cases of chancre as we have seen at home which can often be dried up with a piece of lint" and the venereal ulcerations in the British which were "more intractable to the operation of mercury than under similar circumstances at home." The Portuguese ulcerations were either local, which "made me shudder to look at," cured by topical remedies, or followed by insignificant throat ulcers cured also by topical remedies. The British ulcerations were characterised by "extraordinary action," "the most melancholy of all mutilations," and "the constitution while strongly under the influence of the remedy (mercury) has become affected with the secondary symptoms in a proportion that could not have been expected."

That the primary disease was phagedæna in the Portuguese as well as the British Dr. Ogilvie admits. That it was syphilitic he does not admit, for he considers that Fergusson debarred himself from observing the natural cure of such cases without mercury by indiscriminately prescribing the drug. In proof of this Dr. Ogilvie adduces the case of the British officer as an example of the class of case in the British to which Fergusson's "observations chiefly refer." The diagnosis of this case, says Dr. Ogilvie, is "soft multiple phagedænic sores. He had not syphilis as far as the history of the case goes, and the administration of mercury, which was dictated by the patient's fears and Fergusson's responsibility, was unnecessary." This opinion is negatived by the following case recorded in Mr. Alfred Cooper's work on Syphilis: "The case was one of soft chancres of the penis rapidly running into phagedæna." It was cured by local treatment and hot bath immersion but "two months after the phagedæna an eruption of rupia appeared all over the body, not having been preceded by roseola or any other secondary manifestation; this again was followed after an interval of three years by symptoms of spinal disorder." Fergusson, as a matter of fact, narrated the case of the officer as an example of syphilis "in a local form of phagedænic ulceration, and ..... no doubt, so thoroughly had the specific contagion been superseded by the violence of the inflammation, would have healed safely without mercury." Carmichael, according to Rose, anticipated Dr. Ogilvie in regarding the disease which prevailed in Portugal "as a phagedænic or sloughing ulcer differing from syphilitic chancre and in which he has found mercury to be neither necessary nor serviceable." However, "in what manner that kingdom, overrun by every description of foreigner, has escaped introduction of syphilis itself is left entirely to conjecture."

3. With Dr. Ogilvie's conclusion, "there are many venereal sores which require no treatment by mercury and are not followed by general symptoms," I agree, but I do not agree that this is proof of the non-syphilitic origin in every case. While admitting that some soft sores do not owe their origin to syphilis I maintain that Fergusson and Rose demonstrated the fact that some do and that syphilis under certain circumstances does assume primarily the suppurating form of disease which may be local and non-infecting or may be followed by constitutional symptoms of a modified nature. In this respect I have only to refer at the present time to cases of urethritis in the male (not concealed chancre) and vaginitis in the female diagnosed and treated as gonorrhœa, which not infrequently at a later period and not truly secondarily are followed by modified symptoms; while Mr. Lee's description of local non-infective syphilitic ulcerations consequent on re-infection suggests the same consequent on hereditary partial immunity.

4. Dr. Ogilvie denies attenuation on the ground that "secondary symptoms frequently disappear without treatment"; but here again Fergusson's conclusion "that the anti-syphilitic woods combined with sudorifics are an adequate remedy for constitutional symptoms, the quantity of mercury being always insignificant and often altogether omitted," cannot be taken alone. By constitutional symptoms Fergusson not only referred to secondary throat symptoms treated and cured by local remedies but also to later lesions. "Amongst the Portuguese," says Fergusson, "dreadful examples of exfoliation and loss of parts no doubt sometimes occur, but these ..... by no means constitute a large proportion of the affected; on the contrary, the affection of the bones is often so slight that were it not that it could be traced through the preceding stages and that the nocturnal paroxysm of pain is distinctly marked it might be classed, treated, and cured as rheumatism with sudorifics alone." There seems nothing "vague" in that statement of tertiaries, as Dr. Ogilvie thinks. If Fergusson's account of the disease in Portugal is read[2] and the very different results in two classes of people exposed to the same sources of infection noted, the conclusion is irresistible that Fergusson was justified in regarding the disease the same in both—i.e., mitigated syphilis in the Portuguese as compared with that in the British, and mitigated in comparison with the description of the disease which scourged Europe "at the close of the fifteenth century." In explanation Fergusson advanced the theory of transmitted partial hereditary immunity. He supported it by the analogous mitigation of variola and other specific fevers through generations and their reactivity when transplanted into virgin soils. He compared this to "the same species

[1] Transactions of the Royal Medical and Chirurgical Society, vol. viii.

[2] Ibid., vol. iv.

of seed ..... sown upon the same ground until it shall so degenerate in point of vigour as to become almost incapable of reproducing itself, but let it be changed to any other of any kind, though even of far inferior quality, it will immediately display new powers of life and fructify and vegetate with its native strength." He advanced the alternative view of climate (malaria) and intemperance to account for increased virulence; either of which theories may apply at the present day. Rose, on the other hand, attributed mitigation to non-mercurial treatment, thus anticipating Neisser and Dr. Ogilvie in the theory of improved treatment.

5. If further we compare Dr. Ogilvie's statement that "altogether the utterances of this meritorious military surgeon are more remarkable for military determination than for medical discrimination" with Aitken's testimony in his "Science and Practice of Medicine," quoted by Mr. Hutchinson in his work on Syphilis, the difference is striking: "The surgeons of the British Army perceived the ravages of the combined poisons of mercury and syphilis and had the boldness to declare themselves against the system of treatment. The credit of this improvement is mainly due to (1) Mr. Ferguson .....; (2) to Mr. Rose .....; (3) to Dr. John Thompson, the first professor of military surgery." I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE.

Grosvenor-street, W., April 13th, 1898.

"THE LATE MR. R. R. CHEYNE AND THE PRESERVATION OF VACCINE LYMPH."

To the Editors of THE LANCET.

SIRS,—As one who knew and very much esteemed the late Mr. R. R Cheyne, F.R.C.S., it is particularly gratifying to know that not only can the credit of having introduced glycerinated lymph be claimed by an Englishman, but that that Englishman was Mr. Cheyne. Had his method of treating vaccine lymph been generally adopted fifty years ago vaccination would probably not have fallen into disrepute with a section of the public, and many of the lives of victims to small-pox would in consequence have been saved. The knowledge of the antiseptic properties of glycerine is half a century old, but Mr. Cheyne not only proved the wonderful keeping powers of glycerinated lymph but also the excellent results that followed upon its use. We are much indebted to Dr. Copeman for increasing our knowledge as to why such lymph is more serviceable and safe for employment than that which has not been glycerinated, but the whole credit of pointing out that it was so lies with Mr. Cheyne, who, I have no doubt, if bacteriological methods had been as advanced in his day as they are now, would have furnished the scientific explanation.

Dr. Copeman says in his letter that "glycerine fifty years ago was by no means the pure chemical product which it is to-day, and, indeed, it has been suggested that its use as an addition to vaccine lymph has in former days been occasionally productive of mischief. This may possibly account for the late Mr. Cheyne's suggestion not having been generally accepted at the time." As a matter of fact Mr. Cheyne used glycerinated lymph invariably for many years in a very extensive practice and he always claimed uniformly satisfactory results. The real reason, I fancy, why the method was not more generally adopted was not the one suggested by Dr. Copeman, but because it was new and entailed some extra trouble and the capillary tubes and arm-to-arm vaccination was simpler and deemed sufficiently satisfactory in those days.

I am, Sirs, yours faithfully,

HENRY KENWOOD,
Medical Officer of Health to the Parish of Stoke Newington.

April 6th, 1898.

"THE EYESIGHT OF SCHOOL-CHILDREN."

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of Feb. 19th last you remark on the attention of the medical profession and of the public to the defects of eyesight prevalent among school-children and you kindly refer to my own efforts in this direction. It may not be without interest to briefly mention what has been done in this city as a result of the lectures given by me from time to time to the elementary and other teachers. The last lecture was about twelve months ago and was then delivered at the request of the assistant teachers who it is pleasing to mention had become alive to the importance of the subject, and it is greatly due to the activity of Mr. M. Davenport, one of their number, that action has now been taken. After the delivery of this lecture the Chairman of the School Board was approached by the teachers and they found him and the other members of the board in full sympathy with their desire to benefit the children and the result was that the board schools were supplied with test charts with instructions and circulars. The test chart adopted is after Snellen's types and the instructions accompanying each chart are to the effect that if vision only equals $\frac{14}{18}$ the parents are to be informed that the child's sight is defective and if it does not reach to $\frac{14}{36}$ they are to be told that vision is seriously defective. It may be remarked that the standard of vision regarded as defective and needing medical aid is placed at a higher point than has often been deemed absolutely necessary. Mr. Priestley Smith held, for instance, that all cases who failed to read type equal to $\frac{6}{12}$ might be condemned and that this would practically reach such cases among school-children as needed attention. Mention is also made in the instructions issued to teachers with the test charts of the importance of: (*a*) the posture of the child at the desk; (*b*) the position in the class with regard to lighting and nearness to the blackboard; (*c*) the type in the reading books. Should examination with the types discover defective vision in one or both eyes the head teacher of the school is directed to forward a circular to the parent stating the fact and recommending that the child should have medical advice. A second circular is provided to be issued later if the first has not produced the desired effect. I am, however, informed that the response on the part of parents to the recommendations of the teachers has thus far been very general and satisfactory. One teacher tells me that out of 120 who were found defective in a large school at the first examination he was quickly able to find out that 57 had received medical aid. The head teachers were desired to test the eyesight of all children above the first standard and of all new children on admission. A further test is to be given at the end of six months in those instances where no steps have been taken to remedy the defect. The question of the eyesight of school-children has properly created a good deal of interest which is now bearing fruit. In other places some sort of system has doubtless by this time been adopted, and the plan now in use in Sheffield is merely mentioned as one that is likely to be of service in combating the deleterious influences of school life on eyesight.

I am, Sirs, yours faithfully,

SIMEON SNELL,
Ophthalmic Surgeon, Royal Infirmary, Sheffield.

"COLLAPSE FOLLOWING LAPAROTOMY."

To the Editors of THE LANCET.

SIRS,—In reference to your note I have injected brandy and strychnine with saline solution into a vein and know of several cases in which this was done. Two drachms of brandy with 3 minims of liquor strychninæ in a pint of saline solution do not injure the endothelium of a vein and are not sufficient to produce toxic symptoms. In a collapsed patient a hypodermic injection is absorbed either very slowly or not at all, until the circulation improves, when, if several hypodermics of strychnine have been given, the patient sometimes becomes convulsed. Next best to intravenous injection is the intramuscular followed by massage. It is illogical to give a hypodermic injection in the forearm of a pulseless patient.—I am, Sirs, yours faithfully,

C. HAMILTON WHITEFORD.

Sussex-terrace, Plymouth, April 10th, 1898.

To the Editors of THE LANCET.

SIRS,—I have read Mr. C. Hamilton Whiteford's letter on Collapse following Laparotomy and your footnote with regard to the intravenous injection of brandy and strychnine in THE LANCET of April 9th, 1898, and think that the following case may prove of interest to some of your readers

as showing that the intravenous injection of brandy in this case at least was followed by no injurious effects.

A child, aged seventeen months, was admitted into this hospital in February last suffering from tuberculous arthritis of the left knee-joint. The child was small and very badly nourished. Mr. Eve opened the joint and performed arthrectomy. After the operation the child was collapsed, the pulse being quite imperceptible and the surface cold and clammy. Brandy was injected into the rectum, but it partially returned and subsequently brandy, ether, and strychnine were given by hypodermic injection. I was called to see the child in about half an hour and found it still in the same condition, the pulse being quite imperceptible. I opened the right basilic vein and injected ½ pint of saline solution to which 3 oz. brandy were added. During the transfusion the pulse became perceptible and when it was completed was full and of good force and tension. The collapse never returned and the child recovered perfectly.

I am, Sirs, yours faithfully,

CHARLES BOLTON, B.Sc., M.D., B.S. Lond.,
Senior Resident Medical Officer.

Evelina Hospital for Sick Children, Southwark Bridge-road, S.E., April 11th, 1898.

THE RECENT INQUIRY AT THE BRISTOL CHILDREN'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I have read your notice about the friction at the Bristol Children's Hospital and in reply would beg you, in the interests of justice, to insert my few words of explanation. When I went to this hospital I found, as the Medical Directory shows and as all now acknowledge, that the qualifications of the staff were lower than that of any similar hospital of the size. I was pledged to stay a year at my post and having had much greater advantages and more previous practice than some of the staff I placed what I knew in the most brotherly way before some of them. This was received well for some time, but gradually a feeling arose that I was in a false position. I got some reforms and gradually, in self-defence, I was forced to look to myself. Leaving reform to the committee, some of whom had supported me, I tried to get credentials in order to get away with honour. Failing this, I sought to be justified by the committee with some minor post and at last, after a year's private agitation for some justification, finding the Medical Society did not care to touch the matter and finding the reforms still hung fire, I determined to carry out my idea of getting reform by the severe pressure of printer's ink.

Now although I have got the hospital practically remodelled, with a new out-patient staff, a new in-patient surgical staff, new matron, some new nurses, and new rules for future guidance, I am, in the interests of this and, I presume, all hospitals and of the discipline for house surgeons in general, temporarily sat upon. It is to be noted, however, that mine is an exceptional case. I do not wish to encourage criticism by house surgeons; but stress of misfortune put me into a post of house surgeon with a staff exceptionally below the usual English standard. Reform was necessary and reform is gained by my self-sacrifice. It is a matter of honour with me now to prevent my name being trampled in the mire, sorry as I am that I have seemed to attack others. It must be known, however, that I am on my defence against a charge of causing "friction," and the cases related were not at first given as "charges," but merely instances of "friction." The opposite side called them "maltreatment," &c., and some lawyers have said they must be so considered. If so, no proper chance of proof has yet been given, for the judges have invariably been chosen under the auspices of the hospital or its friends and I have not yet put all the evidence before any inquiry. The matter must therefore be held as still *sub judice*.

I am, Sirs, yours faithfully,

W. L. CHRISTIE.

Church House Children's Hospital, East-street, Bedminster, April 4th, 1898.

A MIDDLE-CLASS HOSPITAL FOR LONDON.

To the Editors of THE LANCET.

SIRS,—Permit me on behalf of the promoters of the proposed middle-class hospital for London, referred to in your condemnatory article in THE LANCET of April 2nd, to respectfully challenge the grounds of your opposition, which I gather from the article to be:—1. That the establishment of such an institution would add to the financial embarrassment of existing hospitals. 2. That we have enough hospitals already or as many as can be properly maintained. 3. That we have the Metropolitan Asylums Board hospitals free to all. 4. That the hospital, if founded, would not be self-supporting. 5. That the cases of middle-class patients who cannot be accommodated at home are comparatively rare and are met by the existing private nursing homes, where they can be received on "reasonable terms."

1. Regarding the first objection, we submit that the initial funds needed for starting a middle-class hospital (assuming it to be subsequently self-supporting) could not, in such a city as London, materially affect hospital charities in general; and, further, that as far as the middle classes are concerned, at all events, they would be quite justified in helping to provide a hospital suited to themselves if the need for such exists; and I may add that the building of a new hospital is not at present contemplated, it being believed that suitable premises can be secured at a moderate rental. 2 and 3. In reference to there being as many hospitals already as can be properly maintained and to the existence of the Metropolitan Asylums Board hospitals, we would point out that the present project is based on a carefully made calculation that the middle-class hospital would be self-supporting after its foundation and not any further burden on public charity, that although we have many hospitals we have none of this kind, and that the Asylums Board hospitals do not meet the peculiar requirements which the middle-class hospital would provide. 4. The question of a middle-class hospital being self-supporting, established for patients willing to pay a moderate residential fee and having, if desired, their own medical men, turns largely on the next point (5) the demand for such an institution. Here we beg most emphatically to deny the accuracy of your view that the cases are "comparatively rare" where the sick among the middle classes require the accommodation, nursing skill, medical supervision, and appliances of a "hospital," but without the dishonour of the pauper ward. This point we confidently leave to the experience of your readers in the practice of their profession. Your statement that the existing private nursing homes meet these cases on "reasonable terms" we must also take exception to. Whether an average charge of from four or five guineas per week upwards be reasonable terms to middle-class patients of limited and often much burdened incomes, is a question which the majority of such patients answer by submitting themselves to the perils and their families to the worry and discomfort of the sick room at home, through inability to meet the quite prohibitive charges of the ordinary private nursing homes, with their limited and often defective accommodation. So far as our investigations have gone, we have had ample confirmation of how sorely the need for the proposed hospital is felt by the middle classes. Hoping that a reconsideration of the subject may enable you to modify your views, and trusting you will find space for the insertion of this letter,

I am, Sirs, yours faithfully,

S. STRATFORD MALONE,
Secretary to Committee.

"A SYMPTOM FOLLOWING ANGINA PECTORIS."

To the Editors of THE LANCET.

SIRS,—With reference to the clinical note in your last issue by Dr. Worton of Redditch under the above heading, the vaso-motor symptoms noted as affecting the left middle finger are of interest as illustrating the surface phenomena connected with visceral disease. It also illustrates a point which clinicians have to bear in mind—namely, the avoidance of too unquestioning an acceptance of the views of experimental physiologists. The value of Dr. Worton's note consists in its showing that peripheral phenomena may avoid what are regarded as the most direct routes for radiation and select in the first instance territories only reached as a rule by secondary reflex. The vaso-motor fibres in the case in question run, of course, in the median nerve, which is the offspring of the first dorsal and eighth cervical segments so far as the heart is concerned. Physiologists, however, note with a mark of interrogation the cardiac outflow from the first and fourth dorsal segments

and derive it chiefly from the second and third. The frequency with which painful peripheral signs in angina reach the elbow by way of the cutaneous branches of the intercosto-humeral nerve, which arises from the second dorsal segment, lends some force to the above physiological conclusion, but the mode in which anginal reflexes cover an extensive nerve area when pain is severe renders it probable that physiological preconceptions may be too narrow for the explanation of some clinical facts.

Dr. Worton accounts for the occurrence of the phenomenon in his case upon the left side by the "much more extensive nervous connexions on this side through the brachial plexus with the cardiac nerve apparatus." I think he will agree with me on reflection that it was more probably due to the situation of the cardiac disease in the left heart. I presume this was so, although Dr. Worton does not expressly state so much. The nervous connexions of the right side of the heart are anatomically quite as extensive as on the left side, and in a rare case of disease of the pulmonary and tricuspid valves associated with angina pectoris which I published in the Transactions of the Pathological Society of London in 1876 the peripheral phenomena extended down the right arm to the tip of the right little finger, just as one so frequently observes them to take that course in the left arm when the causal disease is situated in the left side of the heart.

I am, Sirs, yours faithfully,

ALEXANDER MORISON, M.D. Edin.

Upper Berkeley-street, W., April 18th, 1898.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—There is a statement in your leading article of March 12th that "their high rate of mortality has been guessed at and possibly exaggerated," thereby referring to untrained midwives, and I should like to do so more especially as Mr. Humphreys expresses regret that I still disbelieve in this high mortality. I beg therefore to submit that so far as any evidence can be produced on the score of high mortality there is strong all-round presumptive evidence that the mortality is little—taking all in all—if any at all affected. Certainly there are no statistics which will show the ratio of mortality between untrained midwives and registered practitioners and, moreover, as has been pointed out before, the mortality on the continent exceeds ours and the system of legislative control has shown marked signs of collapse and the continental public a strong tendency to revert to doctors. No doubt numerous witnesses with, I fear, preconceived ideas, but of whom I speak with marked respect, came before the Select Committee of the House of Commons and stated their general ideas on the question, but without chapter and verse, and the majority of these witnesses, if I recollect, had been accustomed to town practice, which affords no field whatever for observation in this matter. Some stated one thing and others something totally different and, as a consequence, the whole evidence resolved itself into one chaotic mass. The majority, however, were against midwives and as a consequence when a majority think one way and a minority think another the committee, having to arrive at some verdict, had no alternative but to report in favour of legislation. With regard to registration generally, if the principle is once acceded to the opponents of registration may take my cue for it that, barring one exception, it matters scarcely one brass farthing what is inside the Bill or another brass farthing what is outside of it, and the exception is this. Now Mr. Humphreys has distinctly stated on behalf of his party that the object of registration is to enable the public to distinguish between a trained midwife and one who is not trained. At the same time it is proposed to confer Parliamentary honours on thousands of Gamps, thus jumbling up the registry with the trained and the untrained. Surely this kind of coalescence cannot be tolerated. Now, Sirs, I ask if Mr. Humphreys and his party can conscientiously say that they are helping the public to distinguish the trained and the untrained by methods of this kind. Surely some distinguishing feature should be noted in the registry, say, for instance, "passed by examination" to those who have passed, which might enable the public to differentiate between the Gamps and the newly fledged.

I am, Sirs, yours faithfully,

Peckham, March 29th, 1898. CLEMENT H. SIBS.

"THE WALSALL MEDICAL SOCIETY."

To the Editors of THE LANCET.

SIRS,—In your issue of April 9th you stated that you had received from a correspondent a copy of a letter which a member of the above society is said to have addressed to the secretaries of sundry friendly societies; you commented that the letter in question was not one which should have been written. At a meeting of the society held on April 15th it was resolved, "That the members of the Walsall Medical Society entirely deprecate such action on the part of any member." The society has good grounds for believing that on being appealed to by the Medical Defence Union, to whom a copy of the letter was also sent, the member in question has expressed his regret at having offended in the manner indicated.

I am, Sirs, yours faithfully,

J. P. NIXON,

April 18th, 1898. Honorary Secretary, Walsall Medical Society.

"UNQUALIFIED ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—Dr. G. P. Hadley's suggestion for the institution of a special examination for men over forty years, unqualified yet with a "full curriculum," seems to me to be as totally unnecessary as it would be a retrogressive step. In the first place, what is a man with a "full curriculum"? I take this to mean "signed up" for all lectures, all hospital work, all examinations but the final passed; then why a special examination? There are many open to him, from—in point of expense—the Apothecaries' Hall, London, upwards. If it is a question of funds—and poverty is the general excuse of the unqualified—the special examination suggested hardly meets the case, as the fee would hardly be lowered; indeed, in case of special examinations it is usually considerably increased. Dr. Hadley urges that unless some such sort of examination is instituted these men will be driven into the ranks of the "unqualified and unregistered practitioners"! Indeed! Where are they, may I ask? What position do they occupy now? It *is* a grave scandal that so many practitioners should have been found, in face of the repeated warnings of the Council, to "cover" these unqualified men and so assist in perpetrating a fraud on the public, and on that portion of the public, too, which is least able to discriminate between the legitimate and illegitimate practitioner.

Sooner or later the unqualified and unregistered man will be dealt with, and though there may be delay, the law must be eventually altered to deal with these impostors as any other fraudulent class. To help the genuinely poverty-stricken man who is prevented from entering for his "final"—for which he *must be eligible*—for want of funds, let Dr. Hadley and the other *disinterested* practitioners neither seek to lower standards of examination nor to open a back door into a profession already filled to the overflowing with men who have spent their time, energy, and money in obtaining their qualifications, but let them put their hands in their pockets and subscribe and help to start a fund to enable the man "*sine* diploma but with full curriculum" to qualify. It need not be a large amount: there are very, very few unqualified men with a genuine "full curriculum" and there are very few unqualified assistants the admission of whom into the profession by such questionable means as suggested by Dr. Hadley would be any benefit to it, except perhaps to those large-minded practitioners, their employers, who would continue to "sweat" them.

I am, Sirs, yours faithfully,

April 19th, 1897. M.A. CAMB., M.A., M.B. DUBLIN.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Special Sanitary Service.—Bacteriological Laboratories.—Plague Inoculation.

THE present seems to be a particularly suitable time for establishing a special sanitary service for India. The subject has been talked about for many years, but has been postponed from financial considerations. There is hardly

any question that a radical change in the sanitary administrations of Indian towns, both large and small, is one of the most urgent needs for reform. The native forms of municipal government are so entirely influenced by the personal interest of the members that anything like sanitary progress under the present *régime* is hardly to be expected. The few sanitary commissioners are practically officers without men and their powers are limited. In Madras there are district medical and sanitary officers but they are not specially qualified in sanitary science. It has been suggested that the medical men holding the public health diploma who have been recently sent out by the Secretary of State should be offered appointments of this character and should form the nucleus of such an organisation. There would be no difficulty in obtaining other officers from England to satisfy the requirements for the further development of such a service. In addition, it should be compulsory on all municipalities to appoint as health officers only those who hold a sanitary qualification. This certainly should be made to apply to all towns of 50,000 people. It might be objected that such an establishment would be interfering with the province of the Indian Medical Service, but if there were shown any real disposition to create such an administration this difficulty might easily be overcome. Either the public health officers might be placed in a special service or they might be incorporated *for special work* in the Indian Medical Service. What is of vital importance, should such an organisation be created, is that the officers should possess a sanitary qualification. At the present time the Indian Medical Service could provide but a few men adequately prepared to fill such offices, so that either time must be allowed for a new generation of men qualified in public health work to be developed or assistance of men from England who are not in the service must be requisitioned for the special purpose. As a matter of general administration it would probably be better to create a special service or, if under the control of the heads of the Indian Medical Department, with an entirely distinct organisation. It is high time also that native medical men should have inducements offered to them to take up sanitary qualifications. The smattering of instruction in hygiene which the universities and colleges at present give is totally inadequate. Regular examinations and degrees in public health might readily be established. Another most urgent want is the provision of a thoroughly well-equipped bacteriological laboratory properly officered for each presidency. India offers so many diseases in man and animals which require further scientific investigation that the opportunities at present lost are much to be deplored.

The Government of Bombay have at last conceded that the Plague Committee should be instructed to exempt from segregation or detention persons who can produce satisfactory evidence of having been inoculated within the previous four months. They stipulate, however, that the inoculation shall have been performed by specially selected officers and that the premises, clothing, and effects of the inoculated persons shall be properly disinfected. These conditions are necessary to safeguard the possibilities of conveying contagion, but of course involve considerable trouble and hamper business movements very greatly. It is, however, a concession of considerable magnitude. It remains to be seen whether the Plague Committee will give facilities for inoculation beyond those offered by the municipality. If these inducements had been offered earlier it would have led thousands to willingly offer themselves for inoculation. The delay has been disastrous, if not to the lives of the people, to the trade of the city. If inoculation with Haffkine's prophylactic fluid can be permitted now to replace the necessity for detention and quarantine it might equally well have been allowed four months ago.

The past week has shown a marked decline in the mortality from plague; while there has been some improvement in the city for some two or three weeks past; the suburbs continue to be seriously affected. Now, however, there are signs of abatement everywhere. Judging from past experience the decline will regularly continue and we shall probably see an almost complete subsidence in the course of six or eight weeks. The type of the disease is also not so severe. The system of segregation has been still further relaxed and the granting of passes to traders is more freely given. House-to-house visitation has been practically abolished and very few "contacts" are now removed. In short, all the measures of the Plague Committee hitherto adopted with such stringency have been practically suspended and yet there is not the slightest evidence of further spread of the disease. This clearly shows either that severe sanitary measures are not required for plague or that when once an epidemic shows signs of declining the various rules of inspection, segregation, detention, and disinfection can be done away with. The disease seems to take its own particular course whatever may be done, although doubtless sanitary measures have an influence on the extent or the severity of the outbreak. Relapsing fever seems also to be dying out.

April 2nd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

"*The Dangers of Medical Life.*"

WHAT was aptly described as above by the presiding magistrate at Aston Police-court on April 15th is an illustration of the difficulties which sometimes beset the medical practitioner in the discharge of his duties. Mr. Parry, a surgeon, was brought to the court on a warrant charged with committing a criminal assault on a Mrs. Mathews. The solicitor who had been instructed to prosecute said that since the case was put into his hands he had examined the witnesses for the prosecution and in his judgment the evidence did not support the charge. The statement of prosecutrix was not corroborated in important points. Mr. Vincent Jones, to whom Mr. Parry acted as assistant, was called and he stated that he found the prosecutrix suffering from hysteria and that Mr. Parry had only done what was quite right in enforcing the administration of a soothing draught. The Bench decided that Mr. Parry was entirely and completely exonerated, stating that such cases frequently occurred and expressing their sympathy with any gentleman subjected to such a charge as this. A favourable ending to an unfounded charge of so serious a nature hardly compensates for the perils the medical man is exposed to in dealing with a certain class of patients, but it affords an example of the annoyance and risks which constitute one of "the dangers of medical life."

Death under Chloroform.

A death under chloroform happened at the Guest Hospital, Dudley, on April 14th. The patient was a young woman, aged twenty-four years, suffering from a deep-rooted abscess of the right breast. About five drachms of chloroform were administered by Mr. Tuxford, the house surgeon, in the presence of Dr. A. S. Underhill. The deceased struggled violently until she became insensible. Directly the operation was concluded the breathing ceased. Dr. Higgs, who made the post-mortem examination, stated that the brain was slightly congested, but that all the organs were healthy; in his opinion death was due to paralysis of the muscles of respiration. A verdict of "Death from misadventure" was returned by the jury at the inquest held on April 18th.

April 19th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Changes at the Liverpool Hospitals.

THE number of vacancies on the senior staffs of the Liverpool hospitals has been exceptionally large during the last three months. To begin with there occurred the vacancies at the Royal Infirmary, at the Royal Southern Hospital, and at the Ladies' Charity and Lying-in Hospital — all owing to resignations through lapse of time. These posts have been filled up as recorded in THE LANCET. The vacancy on the surgical staff of the Stanley Hospital caused by the appointment of Mr. G. P. Newbolt to the Royal Southern Hospital was filled up on the 12th inst. by the appointment of Mr. Douglas Crawford, who had been for three years assistant surgeon to the hospital. At the present time there are vacancies on the staffs of the Women's Hospital and the Ladies' Charity and Lying-in Hospital due to the appointment of Dr. T. B. Grimsdale to the Royal Infirmary, the regulations of the Royal Infirmary not allowing of the retention of similar posts at other Liverpool hospitals by members of its staff.

The Proposed Small-pox Hospital at Fazakerley.

Mr. W. W. E. Fletcher, inspector of the Local Government Board, held an inquiry at the Municipal Offices, Liverpool, on the 19th inst. in reference to the application by the Liverpool Corporation for powers to borrow £38,000 for the purchase of a site for a small-pox hospital and convalescent home at Fazakerley. The application was opposed by owners of estates in the vicinity. The town clerk of Liverpool in supporting the application detailed at length the steps which the corporation had taken during the last fourteen years to provide accommodation for infectious diseases, which had proved most beneficial in restricting infection and in improving the general health of the city. Although the Registrar-General's return stated that the death-rate of Liverpool was very high, yet the population upon which those returns were based was much under-estimated, as the actual population of the city was 50,000 in excess of the official figures. The official return put down the population at 643,000, whereas in point of fact it ought to have been 690,000. The corporation found themselves bound to provide for the actual number. Under existing circumstances the corporation had to ask poor-law authorities to receive infectious cases in workhouse hospitals, where there was no doubt they were a source of danger. At present there were at the disposal of the corporation 540 beds for the treatment of infectious diseases, but 260 of these beds were in wooden buildings of a temporary character. Another point emphasised by the town clerk was that there was no hospital for the treatment of small-pox at the north end of the city, which was most densely populated. The corporation did not admit that there was danger to the general public from institutions of this character provided the regulations of the Local Government Board were observed. The proposed site was large enough to enable the hospitals committee to have the required 400 yards of space between the small-pox and convalescent hospitals which they proposed to build and also to allow of ample space between these buildings and whatever houses might be erected on land adjoining. There was some argument between the opposing parties in reference to the estate having a clay subsoil which, it was stated, would render it unfit for hospital purposes, and also with regard to the fact that owing to the overflow of the Fazakerley brook the property was liable to periodical flooding. Dr. Hope supported the application of the corporation and adversely commented upon the adoption of floating hospitals on the Mersey. He also said that he had never known a case of infection traced to an ambulance carriage in progress through the streets. The great recommendation of the proposed site consisted in the fact of its nearness to the densely populated parts of the city.

The West Derby Guardians on the Treatment of Pauper Imbeciles and Epileptics and the Midwives Bill.

The West Derby Board of Guardians are about to enter into an agreement with the select vestry of the parish of Liverpool and the Ormskirk Union for the classification and accommodation of epileptic, imbecile, and weak-minded children. The West Derby board are to provide accommodation for 110 juvenile epileptics, the select vestry are to find accommodation for 170 imbeciles, and the Ormskirk guardians are to provide for 60 weak-minded children. The new movement is in the direction of classification of these diseases, which require special treatment. The West Derby board of guardians have also resolved by a majority of 18 votes to 9 to petition Parliament in favour of the Bill for the Compulsory Registration of Midwives. Two prominent medical members of the board opposed the resolution on the ground that it was full of dangers which, in the interests of the poor, it was desirable should be avoided.

The Dangers of False Teeth.

An inquest was recently held by the city coroner touching the death of a grocer's assistant aged thirty years. The deceased wore false teeth attached to a vulcanite suction-plate and fastened to his natural teeth by wires. He was in the habit of sleeping with the false teeth in his mouth. On the morning of March 19th the deceased unfortunately swallowed the false teeth during sleep. He was taken to the Royal Southern Hospital when the teeth were felt to be impacted at the junction of the pharynx with the œsophagus on the left side of the larynx. As it was found impossible to remove the teeth by manipulation they were eventually withdrawn through an artificial aperture made in the neck. However, the unfortunate man succumbed a week later, septicæmia having supervened.

April 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Glasgow Fever and Small-pox Hospitals.

THE report of the City of Glasgow Fever and Small-pox Hospitals for the year ending May 31st, 1897, has just been issued. The greater part of it is by Dr. Alexander Johnston, physician-superintendent of the fever hospitals, the few pages devoted to the small-pox hospital being by Dr. R. St Thomson. The general statistical summary of the patients is as follows: remaining in hospitals June 1st, 1896, 607; admitted during 1896–97, 4861; cured, relieved, and died, 4997; remaining in hospitals May 31st, 1897, 471. The total number of deaths was 497, of which 91 occurred within forty-eight hours of admission, and the general mortality calculated on completed cases was 10·2 per cent. The daily average number of patients was 627, of nurses and servants 319, and of officers 14. The average residence of each patient was between forty-one and forty-two days; the total ordinary expenditure was £34,224; the average daily cost per patient was 2*s.* 11·9*d.*; and the average cost of treatment per patient was £6 5*s.* 2½*d.* The 4861 cases admitted were classified as follows: scarlet fever, 1956 (with 89 deaths); diphtheria, 180 (with 38 deaths); enteric fever, 545 (with 106 deaths); typhus fever, 13 (with 5 deaths); small-pox, 2 (with 1 death); chicken-pox, 29 (with 1 death); measles, 1442 (with 164 deaths); whooping-cough, 348 (with 56 deaths); erysipelas, 53 (with 4 deaths); puerperal fever, 26 (with 9 deaths); epidemic roseola, 13 (with no death); the admissions also included 108 nursing mothers and 143 cases of non-infectious disease, among which there were 41 patients suffering from pneumonia. The average periods of residence for the various classes of disease were as follows: scarlet fever, fifty-eight days; enteric fever, fifty-five days; whooping-cough, fifty-three days; typhus fever, twenty-eight days; measles, twenty-nine days; and small-pox, thirty-one days. The classification of the admissions according to age was: under ten years, 3382 or 69·5 per cent.; between ten and twenty-five years, 1132, or 23·2 per cent.; and over twenty-five years, 347, or 7·1 per cent. The scarlet fever mortality was 4·5 per cent., being the lowest in the history of these hospitals. Anti-streptococcic serum was tried in scarlet fever, but nothing to show that it was of great value was observed. Laparotomy was performed in two cases of intestinal perforation occurring in enteric fever, but without averting a fatal result. The clinical classes were attended by 110 male and 15 female students. A paper on "The Administrative Treatment of Undefined Cases certified as Scarlet Fever," by Dr. Frederick Dittmar and Dr. John Brownlee, assistant medical officers at one of the fever hospitals, was published in THE LANCET of April 3rd, 1897.

April 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Meath Hospital, Dublin.

THE annual meeting of the Governors of the Meath Hospital and County Dublin Infirmary was held on April 18th, under the presidency of Sir Philip Smyly. The secretary, Mr. Francis Primrose, read the annual report, which showed that the hospital had been maintained as regards all its departments in a most efficient condition during the past year and that the convalescent home at Bray in connexion with the hospital had continued to confer much benefit on the patients sent there during the last twelve months. Dr. J. W. Moore moved a vote of thanks to the County Grand Jury and remarked that this would be the last occasion on which they would have an opportunity of thanking the Grand Jury, to whom they were greatly indebted for their interest in the institution and for their substantial grants to its funds. He stated that he

had every expectation that the members of the new county council would recognise their interest in also supporting an institution which had been for the last 150 years, the county infirmary of Dublin. Sir William Stokes moved: "That owing to the necessary provision for a new operating theatre, an additional accident ward, and a new laundry the Governors appealed strongly to the public for aid." He mentioned that these essential improvements, which were almost completed, had strongly taxed the resources of the hospital. It was satisfactory for them to know, however, that few operating theatres in the country or on the continent would be superior to their new operation theatre when completed.

The Local Government Bill and the Asylums.

A convention of governors representing all the asylums in Ireland is to be held in Dublin at the end of the present month to consider certain proposals arising out of the Local Government Bill. Many people think it would be much better for the country if the Government took into their own hands the management of the Irish asylums and the Derry Asylum Board have already passed a resolution to this effect.

Death of the Countess of Shaftesbury.

The public of Belfast heard with feelings of the utmost sorrow of the death of the Countess of Shaftesbury, which took place at Rome on April 14th, in her sixty-first year, from pneumonia secondary to influenza. One of her ancestors, Sir Arthur Chichester, Lord Deputy of Ireland in his day, has been called the founder of the city of Belfast. The Countess of Shaftesbury was the daughter of the third Marquis of Donegall and on his death in 1883 the late countess came into possession of the greater part of the extensive estates of the Donegall family in Antrim and Down, including valuable property in Belfast. She married Lord Ashley (son of the great Lord Shaftesbury), who succeeded his father, but died soon afterwards. The Countess of Shaftesbury possessed a beautiful residence in the vicinity of Belfast and she took the deepest interest in all charitable and philanthropic objects of the city. She was a special friend of the Society for Providing Nurses for the Sick Poor and she had a great deal to do with the Nurses' Home, often presiding at the annual meetings of that institution. She was also a true friend to the Royal Hospital and made a grant of the site on which it is built to the board of management, with right to sell it when the hospital was ready to be removed to its new site. This gift was estimated as being worth £10,000. The ground on which the hospital stands was held on a terminable lease, which was reaching the time of expiration when the Countess, with the consent of her son who had just come of age, gave it to the hospital authorities.

Birth of Quadruplets.

A woman named M'Grath, residing at Tallow, co. Waterford, gave birth to four daughters on the 28th of last month. Application was made for the Queen's bounty and Sir Arthur Bigge, keeper of Her Majesty's privy purse, forwarded a cheque for £4 with a request to be informed as to the health of Mrs. M'Grath's infant daughters.

Influenza in the Limerick Lunatic Asylum.

At the last meeting of the board of governors Dr. O'Neill, resident medical superintendent of the Limerick Asylum, reported that during the month there had been a considerable amount of sickness on both sides of the house and that nearly every bed in the hospital had been occupied, the patients suffering principally from influenza and pneumonia.

Cork South Infirmary and County Hospital.

At the last meeting of the board of trustees of the above institution Lieutenant-Colonel Donegan informed the trustees that the Countess Murphy had authorised him to state that she would be prepared to give £2000 for the building of a chapel on the grounds of the infirmary for the use of the Roman Catholic patients. Colonel Donegan, in moving that a committee be appointed to select a site, mentioned that allowing patients to go into the city to attend at their respective places of worship sometimes interfered with the discipline of the hospital and pointed out that it would be much more desirable that facilities should be afforded to them for attending to their religious duties within the precincts of the hospital. The trustees expressed their appreciation of Countess Murphy's generous proposal and a committee was appointed in accordance with Colonel Donegan's proposition.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Maternal Thyroid Treatment of Goitre in the Newly Born.

AT the meeting of the Academy of Medicine, held on April 12th, M. Mosse read an account of a woman, aged twenty-nine years, who was the subject of a goitre accompanied with feeble-mindedness, but without symptoms of myxœdema. Her general health was good. Her child, who was three months old and breast fed, had a large bilobed goitre, was very puny and sickly, but had no signs of myxœdema. The mother was put upon thyroid treatment and took daily a quantity of thyroid extract corresponding to 1½ grammes of thyroid gland. At the expiration of one and a half months the mother's goitre had diminished in size, but a still more marked result was obvious in the child, whose general health was excellent. After the lapse of a slightly shorter period of treatment the goitre in the infant had completely disappeared and it was making good progress, while the goitre in the mother continued to decrease. This is the first recorded case of the influence of thyroid treatment being transmitted from mother to child in the milk.

The Degree of Doctor in the University of Paris.

M. Greard, the President of the University Council, is just about to publish the regulations relative to the degree of Doctor in the University of Paris. These rules will come into force at the commencement of the scholastic year. The following are the principal features, applying more particularly to students in medicine, pharmacy and science. Those who wish to proceed to the doctorate must inscribe their names in a special register at the secretarial offices of the Faculty or school of the university in which they wish to pursue their studies. For the purposes of this enrolling of their names they must give in their diplomas, certificates of study or of having obtained scientific distinctions, and will be bound to fulfil the course laid down by the present regulations and to undergo a public test. They will also be bound by the disciplinary regulations of the university. At the Faculty of Sciences claimants for the degree must produce two certificates in the superior class of studies, which include differential and integral calculus, mechanics, astronomy, the higher analysis, the higher geometry, celestialmechanics, mathematical physics, mechanical and experimental physics, general physics, general chemistry, mineralogy, biological chemistry, zoology, botany, geology, general physiology, and physical geography. The Faculty reserves to itself the right of accepting equivalent certificates for the above mentioned in the case of foreigners. The term of necessary study is one year and the test consists in the sustaining of a thesis containing the candidate's personal researches and in answering questions put by the Faculty. At the higher school of pharmacy candidates must if they be Frenchmen produce the diploma of a pharmacist of the first class or if they are foreigners submit two certificates—firstly, of having studied pharmaceutical chemistry and toxicology, and secondly, of having studied galenical pharmacy and materia medica. The school reserves to itself the right of deciding what shall be received as equivalent for these studies. The term of necessary study is one year at least. The test consists in the sustaining of a thesis containing personal researches. The diploma of Doctor of the University of Paris is granted to foreign students who have obtained leave to study and undergo examinations at the Faculty of Medicine of Paris and have been allowed to dispense with the degree of Bachelor. It is as well to recall the fact that by the 15th article of the decree of July 21st, 1897, the new title confers none of the rights and privileges belonging to degrees by law and can in no case be considered as equivalent to a degree. Henceforward, therefore, there can be no manner of doubt as to the position of foreign students in the medical school.

Legislation on the Practice of Pharmacy.

The Senate has just discussed the Bill already accepted by

the Chamber with reference to the practice of medicine and pharmacy. For the future the School of Pharmacy will not be allowed to accept as new students those known as pharmacists of the second class, a grade which will soon die out. In France pharmacists of the second class differ from others in this particular in that they need not have obtained the university degree of Bachelor of Arts and Sciences before commencing their studies in the School of Pharmacy. A certificate of merely elementary study is enough. In addition, having once passed, after a course of examination almost identical with that enjoined upon other pharmacists, they were prohibited from exercising their art in all the departments of France except one and could not change their residence without undergoing a new examination. They held the same relation to a pharmacist of the first class as a sanitary officer does to a doctor of medicine.

April 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Disinfection of Dwellings.

AT a recent meeting of the Berlin Medical Society a paper on a new method of disinfecting dwellings was read by Dr. Schlossmann, who said that the vapour of formaldehyde used for this purpose according to the directions of M. Trélat of Paris and Dr. Aronsohn of Berlin is very liable to polymerisation, whereby it is converted into a substance of very little antiseptic value. When this occurs only the superficial bacteria are destroyed, whilst those between the planks of the floor or in the interior of feather-beds, clothing, &c., are not in the least affected. Dr. Schlossmann has, however, succeeded in avoiding polymerisation by evaporating the formaldehyde along with a mixture of water and glycerine, the latter of which combines with the formaldehyde. Clothes impregnated with purulent matter were thoroughly disinfected by this method in three hours at most without any injury to either the material or the colour. The disagreeable smell may be destroyed by ammonia.

The Philanthropist's Requital.

Dr. Leichtentritt, a medical practitioner of Berlin, has had a very strange and disagreeable personal experience, the details of which he has published in the *Aerztliche Sachverständigen-Zeitung* for the benefit of his professional brethren who may at any time be placed in similar circumstances. Dr. Leichtentritt one evening when on his way home and near his residence was asked by a policeman to see a woman who was giving birth to a child in a water-closet. He did so and found that the woman had just been delivered of a girl, the placenta being still in the uterus. A crowd of women was, of course, present to watch the proceedings and to give advice to the patient. The surroundings not being the most suitable for obstetrical manipulations Dr. Leichtentritt only tied the umbilical cord and ordered that the woman, whose name and address he did not ask for, should be conveyed by the policeman to the nearest hospital for the removal of the placenta. He then went away, feeling inwardly content with the charitable act which he had performed under such strange conditions. Some weeks afterwards the woman called on him to ask whether he had notified the birth of the child to the registrar. She told him that she wished the child to be baptized and according to law it was necessary for the clergyman to see the certificate of the registration of birth. Dr. Leichtentritt said that he had not notified the birth and explained to the woman that it was the duty of the hospital officials to do so. Not long afterwards he was officially summoned before the registrar, who drew up a long report of the case, and his troubles were supposed to be at an end, but to his great disappointment he received an order from a magistrate to pay a fine of 1 mark (1*s.*) and 1 mark 40 pfennigs (1*s.* 5*d*) costs for infringement of the registration laws. Dr. Leichtentritt refused to pay, not feeling that he had committed any offence, and rightly believing that he did not deserve to be fined for help freely given to a poor woman. Legal proceedings were taken against him, but judgment was given in his favour on the singular ground that he had not been "present" at the delivery as the child was already born when he arrived on the scene. The law is to the effect that medical men or midwives or other people "present" at the birth of a child are bound to notify the birth to the registrar, but it was not applicable to the present case. In future Dr. Leichtentritt and some other medical men will probably be less ready to respond to appeals for their assistance.

April 18th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The De Renzi and Pane "Siero Anti-pneumonico."

THE series of clinical trials of this serum, elaborated by Professor De Renzi and Professor Pane, both of them distinguished members of the Neapolitan Medical School, is still in progress and the results hitherto reported are certainly gratifying. From Dr. Ughetti, ordinary professor of pathology in the University of Catania, and from Dr. Cantieri, director of the "clinica medica" at Siena, highly favourable opinions as to its efficacy have come, while Professor Massolongo, head of the Civil Hospital at Verona, concludes a careful and minutely detailed report as follows: "My impression as to the 'siero anti-pneumonico' is this, that it is more efficacious than any other agent. These first experiments of mine convince me that from the 'De Renzi and Pane serum' we can obtain a clearly defined action on the pneumonia process which it influences directly." Nine other clinicians whose names are before me have put a similar experience on record and confirm the results that have been communicated during the last four months to the Istituto Siero-terapico at Naples, where the serum is in constant preparation to meet a corresponding demand. In this department of therapeutics Italian medicine has assuredly struck out a track prolific of good.

"In this So-called Nineteenth Century!"

At Castelvenere, near Beneventum, in the Samnite country, a peasant woman has seen a vision of the Madonna who told her that near a neighbouring cemetery there would be found, by digging deep enough, an image of Our Lady of the Seven Sorrows ("Vergine dei Sette Dolori") which claimed the worship of the faithful. The impression produced by this declaration was profound; digging commenced and 60 ft. below the spot indicated was discovered an arched vault, in the recess of which was found the expected image (a picture) of the Madonna. The countryside has sent its thousands to pay their votive offerings to the revealed Virgin and already miraculous "cures" are announced—a blind man has recovered his sight, another man has been "cured" of cancer in the right hand—only from drinking the water that gushed out after the excavations and still flows abundantly. Of the pilgrims some have travelled a journey of fourteen hours. Indeed, we have all the makings of a "Neapolitan Lourdes" within measurable distance of one of Italy's greatest clinical schools. The "image," however, turns out to be "di data freschissima" (of most recent date) and the "cures" of lame, deformed, and blind votaries to be the old wives' fables of "promoters" interested in "running" a miraculous health-giving water. The prefect has forbidden further excavations and the bishop of the diocese has ordered the parish priests to withhold their countenance from the improvised shrine. That the incidents already described should have attracted thousands of the faithful to the spot remains the one significant feature of the whole affair—a sad commentary on the superstition and debasement of the Neapolitan peasantry.

Dangerous Adulterations.

Italy has seldom been so full of the travelling public as at present—hotels and *pensions* "regurgitanti" (to use her own graphic expression) with visitors, mostly of the English-speaking race. Laudably concerned for the sanitary interests of these "paying guests" she is redoubling her vigilance over the food-supply and the beverages, natural and artificial, tracking out the adulterator wherever she finds him, impounding his deleterious wares and inflicting heavy punishment ranging from fines to incarceration more or less "exemplary." For instance, in the Alta

Italia a well-known Brescian firm received a visit the other day from the Ufficio Sanitario of Milan and was found to have on its premises, for supply to the baking fraternity, large quantities of flour adulterated with "caolina"—that is, the double silicate of alum and potash, a substance employed in porcelain manufactories and very pernicious to health. Following up its search the Ufficio Sanitario discovered in several baking-houses of Brescia another quality of "flour" furnished by the same firm and containing from 0·85 to 4·0 per cent. of sulphate of barium, a powder not actually poisonous like the "caolina" but very heavy and hurtful to the consumer's stomach. Convicted of this serious contravention of the sanitary law the head of the firm in question was put under arrest, though afterwards let out by finding security for 3000 lire (£120). Again, in Southern Italy the Neapolitan "assessore d'igiene," Professor Vincenzo Gauthier, has quite recently come upon a new adulteration of olive oil whereby that commodity, so universally employed in Italian cooking, is charged with an impure ingredient called "oëlina"—very injurious to the digestive apparatus. He made a vigorous search of the various oil depôts in the city and neighbourhood and has, I see, brought several dealers to justice, impounding within the last day or two as many as 200 "quintali" (hundredweights) of adulterated oil. The prevalence of this nefarious "industry" which under the pressure of heavy fiscal impositions is taking new and extensive developments, is, as I have shown, counteracted by increased vigilance on the part of the Sanitary Office and the fact is *pro tanto* reassuring. But I may mention for the comfort of English-speaking compatriots that the larger and better-frequented hotels in the chief cities are almost invariably supplied with food and beverages alike sound and above suspicion and that it is only in houses described in the guide-books as "thoroughly Italian"—that is, third or fourth-rate or lying outside the beaten tract of the tourist world—that there is danger from adulterated articles. In these the visitor must be on his guard, otherwise he may find the "Chianti" so charged with alum (to simulate the pleasant "prickly" after taste of that typical wine) and the bread so impregnated with the same astringent as seriously to derange his digestion and to make his "pleasure trip" somewhat of a "chastened joy."

The General Practitioner in Italy.

The general practitioner's life, especially in the remoter communes, is not a bed of roses. He is, for one thing, the victim of taxation more oppressive than in any other country—taxation which credits him with gains he never earns and assesses him accordingly. Even the "medico-condotto" (practitioner pensioned by the commune) is apt to pay imposts in excess of his fixed salary and to feel the heavy hand of the fiscal agent at unexpected turns. Hear this case of genuine hardship that has just been communicated to me: "There are two of us in my commune inscribed as possessors of bicycles and compelled to pay the tax on the same. The office of the controller of weights and measures at which we must present ourselves and our bicycles for verification is at Grosseto, 60 kilometres (some forty miles) distant. There is no railway to it, but a provincial road the reverse of smooth. Well, we are summoned to appear at Grosseto at the said office by the 23rd inst. to have our machines stamped and to pay the tax. Besides the fatigue of it the journey will cost us 20 fr. apiece (some 15*s.*) for bed and board during our two days' coming and going; so my companion, rather than incur this loss in time and money, is ready to forego his bicycle. I, too, would gladly do the same were it not that I cannot overtake my professional rounds without that means of 'vicarious progression.' And so I am obliged to throw 20 fr. away, to cover eighty miles coming and going on a badly metalled road, to hire a substitute to take over my practice for two days, and all because I must in person pay a tax of 10 fr. at Grosseto!" The "medico-condotto" proposed other means of satisfying the law—getting the syndic to pay the tax for him and the controller of weights and measures to "verify" his machine on his next visit to the owner's commune; but all in vain. Next year the same hardship must be undergone and the year after that—*ad infinitum!* "Certainly," he concludes, "His Excellency the Finance Minister when he made the law must have thought that bicycles were only vehicles of pleasure for 'peacocking about' in the parks of Rome."

April 18th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Severe Headache relieved by Trephining.

THE following interesting case was brought before the Imperial Society of Medicine. A man, aged thirty years, applied to Dr. Djemil Pacha five months ago for the relief of severe excruciating pain on the right side of his head, most severe about the parietal region. The patient had recourse to all sorts of scientific and non-scientific methods to allay the pain, but all in vain. Drugs of every description were tried, yet the cephalalgia was so severe that the poor fellow had become quite melancholic and desperate and life seemed to him not worth living under those circumstances. Dr. Djemil Pacha proposed to open the cranium at the point where the pain was most acute. The patient was put under an anæsthetic and the skull was trephined, a portion of about the size of a shilling piece being removed. There was absolutely nothing abnormal to be seen on the meninges or the brain. Some punctures were also made with a fine needle in the hope of discovering a cause for the complaint. The operator thought he had done his part of the work, though with no apparent result. As the man came round from his unconscious state the first thing he said was, "How comfortable I am now." The operation was evidently a success, as it had quite relieved the man of his headache. The man has not had any headache, not the trace of it, ever since the operation. The members of the society saw the patient for themselves and were quite satisfied about the facts of the case. No explanation could be given for the cessation or disappearance of the headache. Dr. Djemil Pacha himself confessed his surprise at the result, but he thought the case might be ascribed to the effect of the air or the light which no doubt had access to the exposed portion of the brain.

Cattle Disease.

Disease amongst cattle has lately appeared in the farms and villages near Constantinople. Dr. Nicolle, the French director of the bacteriological laboratories, is reported to have discovered a special remedy for the disease. A medical commission has now been appointed to make experiments with the new remedy. The commission is composed of Dr. Vitalis, assistant inspector of the Superior Council of Health, and Dr. Zoéros Pacha, director of the Pasteur Institute in this town. The Minister of Finance is to give all the necessary help and facility for the carrying out of the experiments and also for assisting Dr. Nicolle in his study of the bovine disease.

April 15th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Prince Alfred Hospital, Sydney.

THE annual meeting of the governors and subscribers to the Prince Alfred Hospital was held on Feb. 24th. His Excellency the Governor presided. The statement of accounts showed that the receipts for the financial year, including a credit balance of £911 12*s.* 10*d.*, had been £17,280 16*s.* 2*d.* and the expenditure £17,597 12*s.* 8*d.* The year had been remarkable for the number of additional expenses. There was one item in the expenditure of £1531 8*s.* 6*d.*, almost the whole of which was attributable to the rebuilding of the operating theatre. The cost of chemicals and of provisions had also been exceptionally high. The annual report stated that the number of patients admitted during the year was 3254, which, added to a total of 199 remaining in hospital at the commencement of the year, brought the number of patients treated during 1897 up to 3453. Out of 3254 patients admitted during the year 976 had contributed more or less to their support while in hospital. The total amount contributed by patients had been £2401 0*s.* 8*d.* Early in the year the operating theatre had been reopened after an entire renovation rendered necessary to bring its arrangements and equipment up to date. In all respects the directors were glad to learn that the new theatre had been a great success. In the carrying out of this

undertaking, as of so many others, the hospital owed everything to the constant personal and detailed supervision of the late honorary secretary, Sir Alfred Roberts. In October of last year a letter had been received from Sir Alfred Roberts resigning his position as honorary secretary of the institution on the ground of impairment of health. The directors had by resolution expressed their deep sense of the signal services rendered to the hospital by Sir Alfred Roberts during the thirty years that he had been connected with it. The report expressed great appreciation of the work of the medical superintendent (Dr. Sawkins), of the honorary medical and surgical staff, of the matron, and of the nurses of the institution.

Resident Medical Officers and Fees for Inquests.

The Crown Law Department of Victoria has recently refused to pay fees for making post-mortem examinations for the coroner to the resident medical officers at the Alfred and Children's Hospitals, Melbourne, on the ground that the Act states that paid officers of public institutions are not entitled to such payments. The medical officers dispute that the hospitals in question are public institutions within the meaning of the Act as they are supported partly by public contributions, and they have recently drawn public attention to the dispute by failing to attend at inquests when required on two occasions, stating that they had not been regularly subpœnaed. The coroner states that their proper course is to sue the Crown Law Department for the fees.

March 7th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Auckland Skin-grafting Case.

THE case of Baker *v.* Purchas, recently tried at the Supreme Court, Auckland, before Mr. Justice Connolly and a special jury, is probably unique and presents some very interesting features from a medico-legal point of view. The plaintiff, Miss Baker, a music and art teacher, sought to recover damages from Dr. A. C. Purchas, a well-known Auckland surgeon, for personal injuries resulting from the operation of skin-grafting. In the month of May, 1897, a Miss Eva Holdsworth was an inmate of the Auckland Hospital suffering from extensive burns. It was decided to perform the operation of skin-grafting by the Thiersch method and Miss Baker was one of three persons who consented to supply the skin needed for the purpose. Miss Baker in her statement of claim alleges that she only consented to have a small portion of skin removed, that 52 square inches were removed, that the operation of removing such skin was not to cause her detention in the Hospital but that she was detained there eleven days, that she was placed under chloroform, that she suffered for a long time "grievous pain and agony," and that her body had been permanently and largely disfigured. She also states that the nature and extent of the operation was not explained to her, that there was wanton excess of any licence or authority given by her, and she claimed £500 damages. It will be seen that the statement of claim practically contained three grounds: (1) neglect of duty in not informing the plaintiff of the nature of the operation; (2) deception as to the amount of skin to be removed; and (3) bad surgery. The trial lasted four days and a large number of professional and other witnesses were examined. As the trial proceeded the second and third grounds of complaint were abandoned by counsel for the plaintiff, it being clearly proved that no deception had been practised and also that the operation had been skilfully performed. The question for the jury to decide therefore was, did Dr. Purchas neglect his duty by not informing the plaintiff of the nature, extent, &c., of the operation? Dr. Lindsay, Dr. McKellar, Dr. King, and Dr. Haines, who were called for the plaintiff, were all of opinion that the nature and extent of the operation should have been explained to the plaintiff. Dr. Scott, who was also called for the plaintiff, stated that he had never performed a similar operation and could not say whether he would have first taken steps to ascertain whether the patient was aware of the nature of the operation or not. Dr. Purchas admitted in cross-examination that he had not explained fully to the plaintiff the extent of skin which he might find necessary to remove, but that she was aware of the nature of the operation. He most certainly considered that he had *carte blanche* to take as much skin as he required to complete the operation; he continued taking skin from her until he had completed the operation. Mr. Marsack, who was called by the defendant, "most certainly thought that an explanation was due to a person before an operation was performed." Mr. Justice Connolly in his summing up commented very severely on the evidence given by the plaintiff on her own behalf and stated that the jury must discount her evidence to a considerable extent. He read the medical evidence without comment, pointing out that the charge of want of medical skill was disproved and had been abandoned. He left it to the jury to decide whether there had been an omission of duty in not explaining the nature of the operation and whether the skin taken was in excess of the licence given by the plaintiff to the defendant. His honour's summing up was strongly in favour of the defence. The jury, after considering their verdict for about three-quarters of an hour, returned a verdict for the defendant unanimously. Dr. Purchas is to be congratulated on the result of the trial as far as not having been mulcted in damages is concerned; but he has unquestionably had a narrow escape, for juries in New Zealand, as elsewhere, are erratic, and more often than not their sympathies are enlisted against a medical defendant. The medical witnesses who thought that the plaintiff should have had the nature of the operation very fully explained to her were right; a prudent operating surgeon would even go a step further and obtain a written consent or a verbal one in the presence of witnesses before undertaking such an extensive proceeding.

The Annual Meeting of the New Zealand Branch of the British Medical Association.

This, the second, meeting of the above association commenced its sittings in the lecture room of the Wellington Museum on Monday, March 14th and the conference will terminate on March 19th. Considering the fact that there is a widespread epidemic of influenza prevailing all over the colony at this moment the assemblage of the profession in the "Empire City" is numerically strong. The members of the Wellington branch acting as our hosts on this occasion have taken upon their shoulders the chief task of reading the papers, thus paving the way for discussions on various topics of interest. One that is more to be fully dealt with is Dr. Cleghorn's remarks on "Private Patients in Public Hospitals." That some at least of the hospitals in New Zealand are grossly abused is an undoubted fact. Successful tradesmen and persons in sound financial positions seek and obtain admission into our hospitals for treatment as paupers when they are well able to pay for professional advice and attention outside. These persons—and they are not a few—claim as ratepayers their right to be thus treated and legally there is no redress. There is a very decided tinge of illiberality about these persons which can only be put a stop to by legislation on this important subject, for this evil is universal in this colony. Dr. Fell is the president for this year. He has been exerting himself for some considerable time past towards making this conference the success it has already attained. He has been ably backed up by other members of the Wellington branch in organising social functions of a most enjoyable character whereby the visiting medical men and their wives will be kept busy until the week is over. I hope to send you fuller particulars concerning this meeting, which is now sitting, by the next mail.

March 15th.

Obituary.

SURGEON-LIEUTENANT-COLONEL WILLIAM GEORGE SHEPHERD, M.D. ABERD., F.R.C.S. ENG.

IN Surgeon-Lieutenant-Colonel Shepherd, who died on March 30th last at the age of eighty-three years, an interesting character has passed away. Educated so long ago as when the Aldersgate-street School of Medicine flourished, where for a time he was a demonstrator of anatomy, he became a successful general practitioner in Claremont-square and afterwards in Myddelton-square, Clerkenwell, and had an aptitude for operative

surgery. Being the son of an officer in the army he had inherited a taste for military service and joined the Victoria Rifles, with which regiment he was connected for thirty-one years, first as a private and afterwards as surgeon. His genial manners and remarkable spirit of comradeship made him one of the most popular members of that ancient corps. His surgical aptitudes brought him to the front in the very beginning of the movement for improving the means of aid to the wounded. His lectures and the drill of his bearer companies were typical of a happy combination of military and surgical ability. The example which he practically set to the volunteers has been followed all over the kingdom, and the system which he was one of the first to illustrate has taken shape in the education of lay people in first aid to the wounded in multiple directions. Dr. Shepherd was a fine type of the general practitioner of the last generation—somewhat rugged but honest and thorough and a sterling friend. He kept his friends and his patients loved him.

LOUIS JOSEPH KING, M.R.C.S. ENG.

BY the death on April 15th of Mr. L. J. King, at his residence, Rivers House, Bath, the medical profession of that city has lost another prominent member. Mr. King received his medical education at the Bristol Medical School, where he gained the Suple gold medals in medicine and surgery and qualified M.R.C.S. Eng. in 1871. He was a member of a well-known Bath family and had a large and extensive practice, being consulting surgeon to the Eastern Dispensary and the Eye and Ear Infirmary. Mr. King, who was in his fiftieth year at the time of his death, had been in failing health for some months past. He was extremely popular with all who knew him and will be greatly missed in Bath. He leaves a widow and two daughters for whom much sympathy is felt. The interment took place in the Roman Catholic Cemetery at Perrymead, Bath.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Carl Nicholas, Professor of Hygiene in the University of Lausanne.—Dr. Rudolf Leuckart, Professor of Zoology and Zootomy in the University of Leipsic and well known in all civilised countries on account of his valuable researches on parasites. He was born in 1823 in Helmstedt and studied medicine at Göttingen, where he was a pupil of Rudolf Wagner in zoology. He became professor of this subject in Giessen in 1855 and migrated to the Leipsic chair in 1870.

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

(FROM OUR SPECIAL CORRESPONDENT.)

BACTERIOLOGY.

Pneumococci.—Intra-cerebral Inoculation.—Experiments in the Treatment of Snake bites.

WITH ten sections of hygiene and three of demography all sitting at one and the same time it is absolutely impossible to follow or to obtain anything like a consecutive idea of what has occurred in each of these thirteen different meetings; besides, such an account would fill a bulky volume, outstepping altogether the limits of a periodical publication. All I can venture to attempt is a summary of some of the more important papers and an account of some of the debates at which I was able personally to assist. As at Budapest, so also at Madrid, it is the bacteriological section which has attracted the most attention. This is not surprising, as it is in the domain of bacteriology that new discoveries were most likely to be recorded. In this respect the Congress has not been disappointed. For instance, Dr. Nocard, of the Veterinary School of Alfort (the great French centre for the production of serum) and delegate of the French Academy of Medicine, read a very important paper on the microbe of pneumonia. He had succeeded in cultivating this microbe in envelopes of collodion. These little sacks were then introduced into the peritoneum of animals, where they grew and multiplied, protected by the collodion from all surrounding hostile influences. At first limpid these sacks become opalescent when a numerous colony has grown within them and constitute a virus which will produce the malady after its tenth generation or colonisation. When examined even with the most powerful microsccpes nothing can be seen but an extremely small speck. So small is this speck that it is not possible to affirm that it is a microbe and the proof of its character is only obtained by means of inoculations. Under special conditions Dr. Nocard was able to cultivate the microbe otherwise than within the bodies of living animals and then the same opalescence appears which as yet constitutes the best practical proof we have that a colony has been developed. Having thus secured the microbe which up to now was unrecognised and invisible there is reason to hope that means will soon be found of producing a "vaccine" against this terrible cattle scourge.

Dr. Roux, of the Pasteur Institute, is unfortunately not present at this Congress and those who remember the sensation he produced at Budapest by his paper on the Anti-diphtheritic Toxin have not failed to express their regret at his absence. But he is worthily represented by his colleague, Dr. BORREL. The latter read a paper describing the experiments made by Dr. Roux and himself at the Pasteur Institute with regard to the tetanic disease obtained by the direct inoculation of tetanic toxin in the brain substance of susceptible animals. Under the name of cerebral tetanus a special malady is obtained which is clearly defined by a set of symptoms including excitement, epileptiform convulsions, strange or manifold desires, and other symptoms which vary according to the portion of the brain in which the toxin has been introduced. This tetanic malady is absolutely different to the ordinary tetanus but is none the less specific. Dr. Borrel and Dr. Roux then studied cerebral tetanus among immunised animals. They discovered that an animal rendered immune against injections under the skin was not immune against injections into the substance of the brain. From this they conclude that subcutaneous injections of antitoxin do not affect the nerve cells and do not protect them. The same occurs when for therapeutic purposes serum is injected into an animal which has commenced to manifest the symptoms of tetanus, the nerve substance being already attacked by the toxin. The serum does not reach the nerve cells and therefore the toxin can continue its deadly effects undisturbed. This explains the many failures to treat tetanus by antitoxin. Dr. Roux and Dr. Borrel then tried to treat the disease by conveying the antitoxin direct to the brain substance. They were thus able to cure rabbits, guinea-pigs, &c., even when the disease had prevailed for some hours, and this at a time when very large subcutaneous injections had proved of no use whatsoever. On the other hand, when injected into the brain matter very small quantities of serum sufficed. These researches on cerebral tetanus demonstrate that with animals immunised passively or actively the nerve cells are not immunised. An immunised animal which resists a subcutaneous inoculation of the toxin will die if the smallest quantity of this toxin is introduced into the brain matter. Immunity is not therefore due to some new property acquired by the nerve cells as they remain unaffected unless directly attacked. The same may be noticed in cases of natural immunity. Thus, for instance, Dr. Roux and Dr. Borrel have shown that the rat is naturally immune from diphtheria and that subcutaneous injections of diphtheritic poison will not produce this disease. On the other hand, if the smallest quantity of this toxin is introduced into the brain of this animal it will die from diphtheritic paralysis. All these facts open out a new field of research in respect to the question of immunity.

Dr. A. CALMETTE, who is now professor of the Pasteur Institute of Lille, but whose investigations in China and elsewhere are well known, made some interesting and conclusive experiments with regard to the venom of reptiles. He brought some rabbits in cages and the most active snake poisons known. These consisted of a mixture of the venom of the bothrops, the naja and the cobra capello. Taking one of the rabbits he injected five times the fatal dose into a vein of the ear. In twenty minutes this rabbit was dead. In the meanwhile he injected two cubic centimetres of serum into two of the other rabbits; and then after a little while injected the same dose of venom into these two rabbits which was fatal to the first rabbit. The serum, however, proved a perfect protective; the two

rabbits were not even ill. He then took two other rabbits and injected five cubic centimetres of serum into one of the rabbits. He then gave to both the rabbits ten times the fatal dose of venom. The rabbit which had not been rendered immune by the serum died in three minutes, the other rabbit, though it had received ten times the fatal dose of venom, was not affected. Professor Calmette explained that with regard to the poison of reptiles it was possible to calculate with great precision the results. According to the weight of the animal or person it could be reckoned how much poison would destroy and how much serum would save life. The production of this serum was easy and large quantities had been sent to India. It was stable in quality and could be kept any length of time. Nor did the horses employed for its production appear to be any the worse for the process, though they were bled once a fortnight—a fact which perhaps explained why our forefathers were able to withstand the frequent bleeding to which they were subjected by the medical practitioners of their day.

Mr. HERBERT E. DURHAM, of the Pathological Laboratory of the University of Cambridge, read a paper on the Micrococcus of Mediterranean Fever, in which he showed that there were special characteristics which distinguished the micrococcus Melitensis. By means of intra-cerebral inoculations the coccus becomes pathogenic for rabbits and guinea-pigs and may produce fatal results in a few days, but intra-peritoneal injections are not uniformly fatal; it often produces chronic illness. What, however, is of the greatest general and practical interest in Mr. Durham's paper is his testimony that the cocci are found in the urine of these animals a long time after the inoculation. This suggests that observations should be made on the urine of human beings who have suffered from Malta fever and similar ailments. One animal killed four months after inoculation still had the cocci in its kidney and urine, but not elsewhere. If the cocci persist in a similar manner in the urine of human beings a serious and practical question arises as to how such urine is to be disinfected, and if not disinfected what dangers may it occasion? Further, it was urged that more careful observations were needed as to the length of time the typhoid bacilli were present in the urine after convalescence and what occurs with regard to other infectious fevers. Mr. Durham also explained that the blood of rabbits and guinea-pigs which have been inoculated acquire agglutinating properties towards the pathogenic coccus. Experiments show that the presence of agglutinins is associated with a condition of the blood which is inimical to the existence of the cocci, and he described the varying agglutinating powers of the blood after the administration of different doses of the cocci.

SCHOOL HOLIDAY COLONIES.

Another section of the Congress which was very largely attended, especially by the lady members, was that dealing with the hygiene of schools. Here some very warm debates occurred; indeed, to the phlegmatic Englishman, unaccustomed to the exuberance of the South European, it seemed as if some of the Spanish delegates were violently quarrelling with each other. But the noise was only due to the enthusiasm of earnest convictions. Señor AGUSTIN SARDA, Councillor to the Public Instruction Board of Spain, caused a tremendous ferment because he pleaded that children should not have any books given them till they were eleven or twelve years old. This, he said, was necessary for sanitary reasons, as a child under that age should not work more than six hours, therefore should have no home-work. On the other hand, while the child was at school the time should be employed listening to his instructor rather than reading books. From the pædagogic point of view he urged that if young children were made to learn lessons from books they got into the habit of referring to books instead of seeking to develop their own ideas. On this comparatively inoffensive beginning the whole system of education came under criticism till at last one speaker went so far as to say that the present methods of teaching bred criminals. Of course this was violently denied and the excitement went on increasing till, from the sanitary point of view, the more appropriate subject of school colonies was introduced. On this latter subject the section voted in favour of the following resolution or "conclusions," as the declaration is called:—

Considering that holiday colonies have been established in many countries for more than twenty years by which children from the elementary schools are taken from large towns into country districts during the holidays and thus removed from the contaminating influence of the streets; that among pupils of from ten to twelve years the benefits resulting are recognised by the most eminent authorities; that these benefits comprise a greater increase in size, chest measurement, and weight gained during three weeks of country life than during six months of town life; that such a marked improvement constitutes a very valuable means of conferring vigorous health to the children; that the advantage gained from the physical and intellectual point of view continues to subsist for many months after the child has returned to town; that the habits of discipline, cleanliness, and self-control acquired in these colonies by the example given or the desire of the pupils to prove their gratitude towards those who have procured for them so agreeable a holiday are brought home by the pupils, and do not fail to influence their parents and families for good and that altogether a better tone and sentiments of fraternity are engendered; that the simple character of the life in these school colonies dispels all ideas of luxury which might corrupt the pupils; that the cost of such colonies has never exceeded 2s. 6d. per day per pupil and that for a little over £3 a pupil may be sent to a school colony for three weeks (disposable school funds could scarcely be employed more advantageously and economically);—for these and many other reasons the Sixth Section of the Congress of Hygiene expresses its desire that municipalities' school funds, cantonal delegations, &c., should take in hand the establishment of school colonies. The Sixth Section recommends this sort of institution as one of the means that is best calculated to ameliorate both the moral and physical condition of the pupils and, in some instances, of their parents.

The same section passed a resolution to the effect that children suffering from ophthalmia should not be absolutely excluded from school, but should be grouped together in a separate class-room. In hospitals, however, such cases should be relegated to a separate special wing or pavilion.

FURNISHED LODGING HOUSES.

In the tenth section, dealing with Architecture and Sanitary Engineering, M. F. Besançon, chief of a division at the Paris Prefecture of Police and member of the Council of Hygiene, read a paper on the Sanitary Condition of Furnished Lodging-houses. He expressed the hope that in all important cities special rules would be drawn up and applied to this class of dwelling. Overcrowding, a faulty disposition of the rooms, and dirt, all tended to convert such places into centres of infection. He then went on to describe the results achieved in Paris by the application of the police ordinance of Oct. 25th, 1883. This law was now all the more readily applied as the Municipal Council of Paris and the Council-General of the Department of the Seine had organised a service of medical men and of architects whose business it is to inspect and report upon the sanitary condition of furnished lodgings. The section, which was then sitting under the Presidency of the Chief Engineer of Vienna, Herr Attilia Rolla, adopted a resolution in favour of the systematic inspection of lodging-houses by a combined service of medical men and architects, considering that after the explanations given by M. Besançon the advantages of such measures could not be questioned.

WALL DISEASES TREATED BY INOCULATION.

Dr. E. VALLIN, of the French Academy of Medicine, read a very interesting and original paper on the Presence of Saltpetre in the Walls of Inhabited Houses. This he described as a disease of the walls due to the presence of micro-organisms. As the walls could not suffer without causing serious inconvenience to the persons whom they were destined to shelter it was the duty of sanitary reformers to seek to cure the walls and thus save the inhabitants of the houses. The disease was caused by the penetration into the body of the walls of the bacilli of nitrification, and consequently the houses became cold, damp, and unwholesome. This state was likely to occur in damp localities and in the presence of nitrogenous organic matter. From the sanitary point of view this disease of the walls could and should be prevented or cured as we prevent or cure virulent diseases among men and animals. Consequently, Dr. Vallin proceeded to speak of the walls of a house just as if they were human beings and went systematically through the various symptoms of their diseases. Dealing first with the prophylaxis of wall diseases he pointed out that the primary step to be taken was to thoroughly drain the ground round the walls and isolate them from the surrounding earth, if possible by a trench and by the use of cement, asphalt, or coal tar. Thus the access of water bearing nitrifying bacteria that are aerobic would be prevented. It was also very necessary to mix the mortar used with antiseptic solutions such as dissolved sulphate of copper, &c. Where these precautions had not been taken and the disease had broken out then the treatment indicated was as follows: first to scrape off and wash away all superficial traces of saltpetre, &c.; then the walls should be inoculated with active cultures of

the anti-nitrifying bacilli which impoverish farm manure by decomposing the nitrates and by throwing off in the atmosphere a great part of the nitrogen which they contain; these walls should then be covered over with impermeable paint so as to retard the process of nitrification of the aerobic germs and, on the other hand, to stimulate the growth of the anaerobic and anti-nitrifying germs which remove the oxygen from the nitrates and from ammonia when they cannot supply themselves with oxygen from the atmosphere. This ingenious theory was highly appreciated and formed the subject of many conversations among members of the Congress. The idea of applying the principles of inoculation to the preservation of material used in building opens out a vast field of possible progress in the domains of sanitary engineering and architecture.

In respect to buildings, Señor Fort, a Spanish architect, was very anxious to prevent accidents in theatres. He proposed that all the scenery should be treated with sulphate of ammonia, and that all the paint should be made with asbestos so as not to be inflammable. The structure itself should be made as much as possible of iron, and no candle or oil lamp should be allowed. The lighting, he insisted, must be carried out exclusively with electricity, and there must be two systems or separate sets of wire—one for the auditorium and the other to give light behind the curtain. Thus if an accident occurred in one part of the house it would be possible to extinguish all the lights without affecting the other part. This would be very useful in the prevention of panics.

THE RECEPTION AND ENTERTAINMENT OF THE MEMBERS.

The Congress, it will be remembered, should have been held last year, but was postponed because Spain was engaged in two colonial wars. Now these two wars are not only continuing but it is almost certain that Spain must also undertake a gigantic struggle against all the might and power of the United States of America. Under such circumstances had the Congress been postponed even at the eleventh hour no one could have complained or been surprised. The Congress, however, was not only held in spite of these terrible difficulties, but everything has been done in a most lavish manner, just as if the country was in the full enjoyment of a period of peace and prosperity. It is, indeed, true that while arming to the teeth and preparing for war not one item has been abandoned of the splendid programme prepared to honour and to celebrate the great work of peace and progress on which the Congress is engaged. To hold in so brilliant a manner such a Congress at such a moment constitutes a practical demonstration of the self-confidence and of the vitality which animates the Spanish people. Many other nations would have shrunk from such a task or would at least have cut down some portion of the programme. But even if there had been no question of war very few delegates could have expected the lavish hospitality which they have received. Spain, it is but too obvious, is a poor country and therefore the members of the Congress only anticipated, and would have been quite content with, a very modest and inexpensive reception. The study of hygiene, and not the enjoyment of banquets and receptions, is the object of the Congress. Therefore when coming to a poor country, at a moment of terrible crisis, little more was needed or expected than the possibility of meeting and of discussing. Instead of this minimum the members of the Congress have enjoyed remarkable hospitality and a princely reception. On Saturday evening, April 9th, they met in the Conservatory of Music, where a well-supplied buffet awaited them. On Sunday there was the gala performance at the Spanish theatre which I have already described. On Monday an excellent concert was given in their honour at the Athenæum Club. On Tuesday evening the Minister of the Interior gave one of the finest banquets I have ever seen in any country or at any congress. For this purpose the whole of the floor of the Grand Opera House was boarded over from the back of the stage right down to the first tier of boxes. This immense space was covered with a rich carpet. Across the back of the stage the Minister of the Interior and the official delegates of the various Governments sat facing the long rows of tables that stretched the whole length of the building. The scene on the stage was that of a banqueting hall disposed so that there were no side wings. As the floor sloped slightly it was easy to look up or down. The magnificent opera house was brilliantly illuminated throughout and, further, there were coloured limelights playing on the stage and upper table. In one of the galleries the orchestra of the opera performed various selections and, rendering the scene still more animated, a great number of ladies in evening dress and sparkling with jewellery occupied the boxes, having come to look on this wonderful scene, to hear the speeches, and to see the delegates. Of the speeches, however, nothing much can be said. It required no ordinary voice and power to be heard in such an enormous theatre and amid the inevitable noise due to such a concourse of people. Of course the Minister of the Interior spoke words of warm welcome and Dr. Brouardel, in the name of the Permanent International Committee, replied. Dr. Navarre, President of the Paris Municipal Council, responded on behalf of the French delegation, declaring that this magnificent *fête* gave the members the illusion of peace and that in any case it was a great achievement to have united at such a moment the representatives of science of all countries, for the future was with the country that knew best how to profit by the discoveries of science. The Hon. E. Lyulph Stanley, delegate of the London School Board, responded on behalf of the British delegation and was followed by Surgeon-General Macpherson of the War Office, who pointed out that a few centuries ago England sent its students to the Spanish universities and that now Englishmen had once more come, and not in vain, to seek knowledge. After speeches from the German and one or two other delegates the speech-making came to a close rather earlier than usual, as it was really impossible to command the attention of so vast an audience.

On the following day (Wednesday) all the members of the Congress were received by the King and the Queen Regent at the royal palace. When the magnificent rooms of the palace were well filled Her Majesty came out and walking through the centre of the various rooms paused to talk with various members of the Congress. Nor was Her Majesty satisfied with the mere exchange of a few complimentary words, but talked lengthily on various subjects. For instance, of Dr. MacAlister she inquired whether the gown worn by the Princess of Wales as doctor of music was like the Cambridge gown which he was wearing. Her Majesty also asked many questions as to lady medical practitioners, and then addressed Miss Beverley who is a medical student. When speaking to the Belgium delegates she was keen in her inquiries concerning the health of the Queen of the Belgians; and so on, from group to group, always finding something appropriate to say, and more often than not saying it in the language of the delegate. Quite apart from her royal attributes the Queen Regent showed herself to be a gifted with exceptional knowledge, tact and amiability. After spending more than an hour in friendly conversation with the delegates of all nationalities, the Queen Regent went to her private apartments, reappearing again shortly afterwards with the young king walking in front of her. His Majesty Alfonso XIII. bowed to the delegates on either side of him as he passed slowly through the lengthy suit of apartments. The members of the Congress were now left to refresh themselves with all manner of delicacies—ices, tea, and good wines—which were displayed on a large buffet. But what was especially appreciated was the pleasure of being able to stroll through the gorgeous suite of rooms, meeting there old friends and acquaintances. The royal reception proved to be one of the best conversaziones enjoyed during the week.

On Thursday, Friday, and Sunday nights free admittances to various Madrid theatres were distributed to the members of the Congress and on Saturday night there was the grand reception at the town hall. But apart from these official entertainments the Governor of the province, his Excellency Señor D. Aguilera y Velasco—who, by the way, was Minister of the Interior when the Congress at Budapest was invited to hold its next session at Madrid—and the Mayor of Madrid, his Excellency Señor D. Conde de Romanones, have on several occasions entertained members of the Congress, and there have been many private receptions and other marks of hospitality.

The French Ambassador gave a dinner to some of the leading French delegates and all the French delegation enjoyed a very lively evening after a dinner given to them by the French Club at Madrid. As for the British Embassy or the British residents in Madrid, if taken in their collective capacity, they have as yet made no sign of existence. Perhaps in the course of time it will dawn upon them that there has been a congress in Madrid and that they might have done something to welcome the distinguished fellow countrymen who have been in their midst.

CLOSURE OF THE CONGRESS.

The final and plenary meeting of the Congress was held in the Great Hall of the Central University. This is a magnificent oblong hall, with a lofty domed roof. The whole Congress might easily have met here and have discussed the more urgent and practical questions, instead of being split up in thirteen little sections. An expression of opinion might thus have been obtained which must have influenced considerably all concerned. Unfortunately, at Madrid the error committed in London and Budapest was repeated and there were no discussions at the two plenary meetings of the Congress. The first, held last Sunday, I have fully described and it served only for the purpose of exchanging courteous expressions and good wishes and for formally declaring that the Congress was open. The second full meeting of the Congress has again served for the purpose of exchanging compliments and to declare that the Congress was closed. What else was done can hardly be treated as serious. In the early morning the Permanent International Committee met and looked over the resolutions which had been passed in the Sections, exercising their right to expunge those resolutions which were not appropriate. As an example of such resolutions I was told that there was one condemning the boiling of milk, and it was suggested that this had been passed when the section was almost empty and the two or three persons present did not understand the subject under discussion. On Friday and on Saturday many of the members of the Congress went to the Escurial or to Toledo, so that the sections were not so well attended. Some of the sections did not meet at all, either because they had exhausted their programme or for want of a sufficient audience. Others, on the contrary, notably the section on the Hygiene of Childhood, met in the afternoon as well as in the morning, and were always well attended, in spite of the excursions and other diversions. The resolutions adopted by these different sections, after having been examined by the Permanent Committee, were read out by the general secretary to the whole Congress at the final meeting. The majority were in French, some were in Spanish. It is quite certain that the members who sat at the farther end of the hall could not hear what was said. Dr. Julian Calleja, the acting President of the Congress, was in the chair. When a resolution had been read out he inquired in Spanish whether the Congress approved and though more than a thousand persons were present barely a dozen hands were held up. This, however, was supposed to suffice, for the contrary opinion was not ever asked. The vote was therefore a mere matter of form, few persons present realising what was done. There was no discussion and no adverse vote was solicited or recorded. This is most regrettable, for a great force of scientific opinion had been gathered together and then allowed to run to waste, no emphatic expression of that opinion having been obtained.

The resolutions having been thus hastily disposed of, Dr. KÖHLER, as one of the official representatives of Germany, rose to express the satisfaction which his fellow countrymen had experienced during their visit to Spain. The speech, delivered in German, was, however, concluded by a few appropriate and complimentary sentences in Spanish, which were much appreciated.

Professor BROUARDEL followed. He said that the hopes they had entertained that the Congress would bear good fruit had been more than realised. The King, the Queen-Regent, all the authorities had helped to give the delegates a reception which had not been surpassed in any country. They had come to work for the happiness of mankind and for peace. Those who sought to improve the health of the populations could not but view with horror the preparations for war. He hoped that peace would be maintained, as nothing could be more distressing than to see those eminent medical men with whom they had worked harmoniously at many Congresses at war with each other. The results of the Congress would be all the more beneficial as the sense of continuity which at first did not exist had now been strongly emphasised. The Permanent Committee had voted that the next Congress should be held in Paris in the year 1900. In the name and with the authority of the French Government he assured all present that every effort would be made to render the Paris Congress worthy of the Congress of Madrid.

Dr. DONALD MACALISTER of Cambridge spoke on behalf of the British members. It was sometimes said, he remarked, that people from the north were cold, close, and unexpansive, but their visit to Madrid must have opened the closest heart and made warm the coldest blood. They could never forget how they had been received, especially by the Queen Regent, who had shown herself to be a noble, able, queenly woman. The reception given by others, though not so striking, was yet a cause of surprise and admiration. The strain put on the general secretary, Dr. Amalio Gimeno, was immense and yet throughout he preserved his kindly and courteous disposition. His example must never be forgotten in the organisation of future congresses. To all who with the general secretary had by their work contributed to the success of the Congress he tendered the thanks of the British members. The British members had done good scientific work but, better still, they had made valuable friends. They would leave Spain with a keen appreciation of its heart, its love of science, and its dignity as a nation.

Professor PAGLIANI, speaking eloquently on behalf of the Italians, alluded to the soft and amiable voice of the Queen Regent, and to the friendships formed. The Spanish types painted by Murillo, Velasquez, or Goyas had now been seen in life as well as on canvas, and he united with his colleagues in thanking the nation which had produced such great artists and had rendered so many services. As for war, Spain had waged its war of independence, boasted of its Maid of Saragossa, and was in no need of further military glory. But the death-rate of the country was still high and what was needed was further progress in practical hygiene; they must march, march forward.

Dr. VON JURASCHEK expressed thanks in the name of Austria, and Dr. CORNÉL CHYSER on behalf of Hungary.

Dr. ATTAMINANO, a Mexican delegate, elicited loud applause by calling Spain his mother country, and the Portuguese delegate, Dr. Amado Silva, was equally appreciated when he concluded his speech, delivered in French, with the cry of *Vive la paix honourable*.

After a few words from a Dutch delegate another ovation greeted Dr. HÉGUY, delegate of Uruguay, South America, for he also expressed the warmest sympathy with the Spanish people in their present difficulties, concluding by wishing "prosperity to the mother country and the Spanish people."

The Governor of the province of Madrid, his Excellency Señor D. AGUILERA Y VELASCO, now came forward to express his gratitude to the distinguished men of science who had come from all parts of the world to constitute in Madrid the grand assembly which had honoured the capital by its presence.

The Secretary-General, Dr. AMALIO GIMENO, followed by saying a few words in acknowledgment of the thanks he had received. There were some 2000 members of the Congress, so that it was not inferior to that held at Budapest. As for the work he had done, he was only the figurehead. Others less in evidence had worked as hard.

These modest remarks were much applauded, for everyone knows how greatly the Congress is indebted to the organising capacity and the active leadership of the Secretary-General.

The Acting President, Dr. JULIAN CALLEJA, was the last speaker. He apologised for the absence of the Minister of the Interior, detained by urgent affairs of State. This, in the present crisis, would be easily understood and forgiven. The Minister had, however, sent his profound thanks to the distinguished foreign visitors who had helped to constitute this magnificent Congress. He hoped that they would recognise that Spain was devoted to the cause of science and progress—that Spain listened to all that is said on behalf of suffering humanity. Science, progress, peace, friendship, such, said Dr. Calleja, were, in a few words, their programme. Finally, he declared that the next Congress would meet in Paris in 1900 and that the present Congress had terminated its labours and was now closed.

THE PRESS BAZAAR IN AID OF THE LONDON HOSPITAL.—A committee meeting was held in the Oak Room of the Hotel Cecil on Wednesday afternoon, at which Mrs. Spender presided, to consider the organisation of a Press Bazaar in Aid of the London Hospital. It was suggested that June 28th or 29th should be fixed as the date for holding the bazaar. Some sixteen or eighteen newspapers have already signified their willingness to hold stalls and to help in making the exhibition of objects connected with the press an attractive one.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having previously passed the necessary examinations and having now attained the legal age of twenty-five years have been admitted Fellows of the College, viz.:

Edward Owen Thurston, M.B., B.S. Lond., L.R.C.P. Lond., St. Thomas's Hospital; diploma of Member dated Nov. 8th, 1894; Charles Herbert Fagge, L.R.C.P. Lond., Guy's Hospital; diploma of Member dated Aug. 4th, 1886.

UNIVERSITY OF DURHAM.—At the second examination for the degree of Bachelor in Medicine, held at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners:—

Anatomy, Physiology, and Materia Medica.—Second-class Honours: Leslie Herbert Walsh, M.R.C.S., L.R.C.P., King's College Hospital; and Edward Turner Born, College of Medicine, Newcastle-upon Tyne. *Pass-list:* Robert Story Brown, George Burrows Brown, and Joseph James French, College of Medicine, Newcastle-upon-Tyne; Richard Denington Fisher, M.R.C.S., L.R.C.P., London Hospital; Howard Payne Fox, Cooke's School of Anatomy; Charles Henry Gibson, Hubert Wolstenholme Horan, and James Willie Heslop, College of Medicine, Newcastle-upon-Tyne; David Henry Jeavons Kirton, Mason College, Birmingham; and John Robert Mitchell, Ralph Thomas Vaux, and Frederick Percy Wigfield, College of Medicine, Newcastle-upon-Tyne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. E. Lexer, Dr. G. Joachimsthal, and Dr. Wolpert have been recognised as *privat-docenten* of Surgery, Orthopædic Surgery, and Hygiene respectively.—*Catania:* Dr. Giuseppe D'Abundo, Extraordinary Professor of Psychiatry, has been promoted to be Ordinary Professor.—*Göttingen:* Dr. Karl Jacobj has been appointed to the chair of Pharmacology in place of the late Dr. Marmé.—*Heidelberg:* Dr. E. von Hippel, *privat-docent* of Ophthalmology, has been promoted to be Extraordinary Professor.—*Lemberg:* Dr. W. von Lukasiewicz, Extraordinary Professor in Innsbrück, has been appointed to the chair of Dermatology and Syphilis.—*Leipsic:* Dr. Perthes, Assistant in the Surgical Clinic, has been recognised as *privat-docent*.—*Munich:* Dr. Wilhelm Herzog, *privat-docent* of Surgery, has been promoted to be Extraordinary Professor.—*Padua:* Dr. Angelo Ceconi has been recognised as *privat-docent* of Medical Pathology.—*Pisa:* Dr Alberto Cavazzini has been recognised as *privat-docent* of Medical Pathology.—*St. Petersburg (Military Medical Academy):* Dr. Gundobin, *privat-docent* of Children's Diseases, has been promoted to be Extraordinary Professor. Dr. Bellarminoff, Extraordinary Professor of Ophthalmology, has been promoted to be Ordinary Professor.—*Zürich:* Dr. Eugen Bleuler has been appointed Professor of Clinical Psychiatry in place of Dr. Forel, who has resigned. Dr. Cloetta has been recognised as *privat-docent* of Pharmacology.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on the 12th inst., Mr. W. H. Lloyd, M.D. St. And., Inspector-General, in the chair, the sum of £61 was distributed among the several applicants.

LITERARY INTELLIGENCE.—Mr. H. Wippell Gadd, of Messrs. Evans, Gadd and Co. of Bristol, is preparing for the press a small book entitled, "A Pocket Synopsis of the British Pharmacopœia, 1898," containing concise notes on the changes that have been introduced in the new issue, with particulars of the added preparations and tables of doses and strengths.—Sajous' "Annual of the Universal Medical Sciences" will be published within a few days by Mr. F. J. Rebman, 11, Adam-street, Strand, W.C.—Messrs. Charles Griffin and Company, Limited, will issue immediately a new edition, revised and enlarged, of Professor Dixon Mann's "Forensic Medicine and Toxicology" and a translation of "Technical Mycology for Bacteriologists and Analysts," by Professor Franz Lafar of Vienna, from the pen of Mr. Charles T. C. Salter. They have in the press a new edition, revised and enlarged, of Mr. Bevan Lewis's "Mental Diseases, with Special Reference to the Pathological Aspects of Insanity," and an English edition of the new "Atlas of Urinary Sediments," by Dr. Hermann Rieder of Munich, with a translation of the accompanying letterpress by Dr. Craven Moore, edited and annotated by Professor Sheridan Delépine.

THE London Hospital has received in response to the special appeal now being made in aid of the Maintenance Fund donations of £500 from "Anonymous," £500 from "J. A. F.," £100 from Mr. C. E. N. Charrington, £100 from Lord Grimthorpe, £105 from Mrs. Graham Robertson, £200 from "E. M. G.," Brighton, and several others of £100 and £50.

A COMPLIMENTARY DINNER.—At the Inns of Court Hotel, Lincoln's Inn-fields, on April 18th, there was given by the Infirmary Medical Superintendents' Society a dinner in honour of Mr. D. M. Forbes, who has retired from the service and is leaving Shoreditch Infirmary after more than thirty years' tenure of office. Mr. Burney, the chairman, proposed the health of the guest in suitable terms, and he and Mr. Hopkins, Mr. Lunn, Mr. Gordon and Dr. Toogood paid a high tribute to the good work achieved by Mr. Forbes in the interests of the sick poor, and pointed out that not only was he the pioneer in the establishment of the separated infirmaries under medical control, but also, as Mr. Hopkins explained, one of the first to draw attention to the fearful mortality amongst London lead-workers and to recommend preventive measures, the advocacy of which very materially led to the passing of the Lead Workers Acts which have been the means of saving many hundreds of lives. Mr. Forbes returned thanks in an appropriate speech.

NORTHUMBERLAND COUNTY NURSING ASSOCIATION.—This useful association has recently issued its first annual report. Its most important item is the announcement that affiliation to the Queen Victoria Jubilee Institute for nurses has been made. There are two classes of nurses, first-class or Queen's nurses, of whom four are at present employed, and second-class or village nurses, of whom eight are employed. The donations and subscriptions do not as yet amount to a very large sum, but there can be no doubt that as the association becomes better known and the services of the nurses thoroughly appreciated money will be forthcoming. The County Council contributes to the funds of the association and gives scholarships to certain nurses between twenty-five and forty years of age having satisfactory medical and other references and being resident in the county of Northumberland. The Countess Percy is president and on the General Committee are the names of many well-known medical men practising in the county.

THE NEWCASTLE DISPENSARY.—At the annual meeting of governors held on March 17th the 120th report was read and it showed that 27,916 cases had been treated during the year, being an increase of 2955. The financial statement showed a balance of £47 in hand. A special vote of thanks was returned in the report made by the resident medical officer, Dr. W. Hardcastle, to the Cathedral Nurse and Loan Society, to the Brunswick and to St. James's Congregational Nurse Deaconess Societies. The amount of gratuitous medical aid given in Newcastle during 1897 was very large. 27,916 cases were attended to by the Dispensary and 40,558 by the Royal Infirmary, being an increase over the previous year of 6134—that is to say, 68 474 cases were dealt with by these two charities—and there are several others, the Children's, the Skin, the Eye, the Chest, the Woman's, the Lying-in, the Throat and Ear, and the Dental Hospitals in the city. The medical may well be a poor profession.

THE HOSPITAL SATURDAY FUND.—The twenty-fourth annual report of this fund, which has just been issued, shows the receipts for the year to be as follows: Workshop and business house collection, £16,615 5*s.* 8*d.*; street collection. £3330 11*s.* 10*d.*; donations, £65 16*s.*; interest, £33 9*s.* 3*d.*; ambulance (donations, sales, and fees), £86 12*s.* 9*d.*; miscellaneous, £6 19*s.* 4*d.* The workshop and business house collection shows an increase of £278 and the street collection a decrease of £1554. As we have previously announced, the Council of the Fund have very wisely decided to do away with the annual street collection and in lieu thereof a private collection will be made extending over some weeks. The results of this collection will be gathered up on one particular day (this year Sept. 3rd), to be called Hospital Saturday as heretofore. The total income for the year 1897 was £20 138. as against £21,614 in 1896. The total sum awarded was £17,627 2*s.* 1*d*, as compared with £18,109 18*s.* 8*d.* last year. The number of participating institutions was 169, being a decrease of 9 compared with the numbers of the year 1896.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At a meeting of the College held on Friday, April 15th, the following gentlemen were admitted:—As Fellows: John Campbell, J. H. R. Glenn, W. L. Symes, and T. H. Wilson. As Member: W. R. Dawson.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The last monthly meeting of this society was held at 235, Lavender-hill on April 13th, under the presidency of Mr. T. A. I. Howell. The President read notes of cases of Pneumonia, Pleurisy, and Rheumatic Fever. There were shown for Mr. Charles Ryall specimens of Uteri removed for fibro-myoma, carcinoma, and epithelioma; Dr. Barkwell showed a Penis removed for malignant disease; Mr. T. J. Bokenham gave an interesting demonstration of Widal's Test for Enteric Fever which was followed by a discussion, in which Dr. B. L. Abrahams, Mr. Gay, and others took part; and Dr. Mackintosh showed a series of lantern slides of the Commoner Micro-organisms. The usual votes of thanks brought the meeting to a close.

A LINK WITH THE PAST.—Dr. James Paul, who died not long ago at his residence, Lonsdale-villas, Barnes, had in the course of his long life witnessed many surprising innovations and advances in medicine and surgery. He took the diplomas of M.R.C.S. Eng. and L.S.A. in 1824 and almost immediately entered the naval service of the East India Company. In 1830 he settled in practice in London, where he acquired considerable reputation in connexion with the diagnosis and treatment of cholera, having been among the first to identify the disease on its appearance in 1832, and his services were consequently in request during the successive epidemics of cholera up to the memorable one of 1854. In 1833 Dr. Paul graduated as M.D. at Glasgow University. He retired from practice in 1856 and had the misfortune to lose his sight in 1881.

PRESENTATIONS TO MEDICAL MEN.—Mr. James Broomhead, M.B. Aberd., of Haslingden, the lecturer to the local ambulance classes, has been presented with thirteen volumes of the Waverley Novels in the Centenary Edition, and, having recently received twelve volumes from a ladies' ambulance class, this gift completes the set.—Mr. J. O'Neill, L.R.C.P., L.R.C.S. Edin., of Leeds, has been the recipient from the St. John Ambulance class in connexion with the North-Eastern Railway Goods' Department, Marsh-lane, of a gold-mounted umbrella as an acknowledgment of his services as instructor.—On Monday, April 4th, the members of the St. John Ambulance classes at Newtown, N. Wales, presented Mr. Anthony Lavery, L.R.C.S., L.R.C.P. Edin., with a timepiece and pair of vases in recognition of his gratuitous services to them as lecturer. On the following day a deputation waited upon Mr. Lavery to present him, on behalf of some of his patients and friends, with a consulting desk and chair on the occasion of his leaving Newtown.

DIPHTHERIA IN LONDON.—The deaths from diphtheria in London during the three weeks ended on March 26th were 33, 36, and 53 respectively. In the next succeeding week, ended on April 2nd, the total was 45, a figure nevertheless in excess by 11 of the corrected decennial average for the particular week. All 45 deaths were of young persons aged under twenty years, and 32 were of children aged from one to five years, only 3 being of infants. Both St. Pancras and Wandsworth sanitary areas had 5 deaths; Lambeth and Plumstead each had 4; and Hackney had 3 deaths. In the Outer Ring the registered deaths numbered 15, as many as 8 belonging to West Ham district. There were in London hospitals at the close of the week 1009 patients ill of diphtheria. In the week ended April 9th the deaths from the disease in London fell to 29, and were 4 below the corrected decennial average for the week. All were of young persons aged under twenty years, 3 being of infants and 15 of those in the first quinquenniad of life. There occurred 5 deaths in Hackney and 4 in Camberwell sanitary areas. In the Outer Ring 13 deaths were registered, West Ham district being credited with 5 of them. Last week there was a slight rise in the number of registered deaths from diphtheria in London, 34 being the total, as compared with 35 as the corrected decennial average for the corresponding week of the period 1888-97. Hackney again had 5 deaths placed against it and Islington was credited with 4 deaths. Only one of the 34 deaths was of a person aged over twenty years, 2 were of infants, and other 21 were of children under five years of age. In the Outer Ring the total rose to 21 deaths, of which 9 belonged to West Ham district, and 3 each to Croydon, Dartford, Hendon, and Edmonton registration areas.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of the society was held on April 13th, at 11, Chandos-street, Dr. Pollock being in the chair. Four new members were elected and the deaths of two were reported. Applications for grants were received from 50 widows, 12 orphans, and 6 recipients from the Copeland Fund, and it was resolved that £1241 should be distributed among them at the next court. The expenses of the quarter were £50 15*s.* 6*d.* The treasurer was empowered to purchase stock to the amount of £500. The secretary was instructed to forward to Miss Quain a letter of sympathy and condolence on the great loss she had sustained through the death of Sir Richard Quain. The following gentlemen were nominated for election at the annual general meeting to fill the vacancies in the list of officers: Mr. Warrington Haward as treasurer in the place of the late Sir R. Quain; and Mr. C. F. Keele, Dr. Bate, Sir A. Garrod, Mr. Hazel, Mr. Lynch, and Dr. Cullingworth as directors in the place of the six seniors who retire. The annual general meeting of the society will be held on May 20th, at 5 P.M., at 11, Chandos-street, W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Lead Poisoning in the Potteries.

THE Home Secretary has determined to appoint an inspector for the district in the potteries where lead poisoning is rife and representations are being made to him in favour of a female inspector being appointed on the ground that the people who suffer most are women and girls.

Pharmacy Acts Amendment Bill.

In connexion with the Committee Stage of the Pharmacy Acts Amendment Bill, Mr. Cross, one of the Members for Glasgow, has given notice that he will move to insert the following clause, viz.: "That nothing in this Act nor in the Act to regulate the sale of poisons, 31 and 32 Vict. c. 21, entitled The Pharmacy Act, 1868, shall apply to or interfere with the business of persons who are engaged in the sale, distribution, or manufacture of insecticides, destroyers of vermin, or disease germs in plants, of ant destroyers, of preparations for prevention of disease in potatoes, grain, or other field or garden crops, or for the preservation and protection of plants from disease in greenhouses or in the open air, or for other such or similar purposes, or of sheep dips or wool dressings or other articles used for such purposes."

Vaccination Bill Debate.

The debate on the second reading of the Vaccination Bill was carried on at some disadvantage in the matter of time. The House usually meets at 3 o'clock and on Government days the whole time from then until midnight is available for Government business, but on this particular occasion there was what is called at Westminster a morning sitting, which begins at 2 o'clock and ends at 7 or a few minutes before that hour. It was thought that such a sitting would suffice for the second reading of the Vaccination Bill, but as a matter of fact, owing to private bill business and questions to Ministers, the measure was not reached until shortly before 4 o'clock, and when it was reached so many Members gave evidence of their desire to speak, and those who caught the Speaker's eye occupied so much time, that it soon became apparent the stage could not be completed at that sitting. In the three hours available seven speeches were delivered, four for and three against the Bill, the longest speech being that of Sir William Priestley, which occupied considerably over an hour. When the debate will be resumed is difficult to say, for when a start is made with the committee stage of the Irish Local Government Bill next week it will be taken *de die in diem* until finished.

HOUSE OF COMMONS.

TUESDAY, APRIL 19TH.

The Report of the Tuberculosis Commission.

Mr. Chaplin, answering a question on this subject addressed to him by Mr. Field, said he had made inquiries of the Home Office and he was informed that the report would probably be presented that day.

The Vaccination Bill: Second Reading Debate.

The first order at this sitting of the House was the Vaccination Bill of the Government.

Mr. Chaplin, as the Minister in charge of the measure, formally moved its second reading.

Sir Walter Foster said that the Bill was an exceedingly small product

of the long and laborious inquiry of the Royal Commission on Vaccination. He did not, however, complain of the smallness of the Bill. On the contrary, he thought that probably the President of the Local Government Board had exercised a wise prudence in making the measure so small as it was, for in that way he had avoided possibly some difficulties and criticisms which might interfere with the easy passage of the Bill. He would deal first with the main provisions of the Bill and afterwards with certain serious omissions to which he wished to call attention. The Bill was really an attempt to introduce a new means of applying vaccine matter to children for their protection against a serious disease. It was a State experiment upon a large scale with a new form of lymph, which was known under the name of calf lymph, but which by the scientific investigations of a distinguished medical man had been altered to such a form that while it not only attained greater efficiency than the old form, it also was not likely to convey such foul disease, as had been so often described in this House, or erysipelas or tubercle. The discovery which had been made by Dr. Sydney Monckton Copeman was that by mixing the lymph taken from the calf with glycerine they were able to obtain from a single calf vaccine sufficient to vaccinate from 4000 to 6000 children. Abroad it had been found possible to obtain sufficient to vaccinate as many as 15,000 children. And this vaccine matter mixed with glycerine was not only efficacious for the purpose of vaccination, but it contained no possibility of contamination by syphilis. One advantage it had in addition to those he had described was that it could be preserved for a considerable time without losing any of its efficacy. The new lymph was to be used under different conditions from those under which vaccination had hitherto been performed. The Royal Commission recommended that the age up to which children should be vaccinated should be extended; their recommendation mainly was that the age should be extended to six months. The Commission found that in Scotland deaths from vaccination were much more rare than in England. Deaths from vaccination were very uncommon in England, but the figures showed that while in England and Wales one death occurred in 14,159 vaccinations, in Scotland there was only one death in 38,872 vaccinations. The probable cause, or at all events one of the causes, of that was that the age in Scotland was six months, whereas in England it was three months. The Commissioners thought that an extension of age to six months would be advisable in the interest of vaccination and of the children. They also found that the extension of age was no serious deterrent as regarded the number of children vaccinated. The general feeling in this country was that early vaccination was useful because so many children did not escape vaccination as would if a longer time were allowed. In Birmingham, where vaccination was very well attended to, it was found that about 10 per cent. of the children were lost by removals during the first three months and the opinion of some people was that if the age were extended, as proposed in the Bill, to twelve months they would probably lose nearly 50 per cent. by removals. From the point of view of the efficiency and universality of vaccination that was a strong objection to the extension of the age, but at the same time he thought the advantages of vaccinating children at a later age were so great that they ought not to be deterred from extending the age to six if not to twelve months. There was no doubt that if they could make vaccination less perilous to the children they would find less objection to the operation on the part of the parents. The institution of domiciliary vaccination by the Bill had also attracted a great deal of public attention. The present system of requiring children to attend at vaccination stations for vaccination by public vaccinaters was in many ways objectionable. It brought a crowd of children into one locality which often occasioned the spread of contagious diseases and kept the mothers waiting for a long time under unfavourable conditions. But, on the other hand, he did not think that the vaccinators would be quite pleased in having to visit the children at their homes. In some towns, like Leicester and Birmingham where a strong feeling against vaccination existed, the domiciliary visits of the vaccinators would not be altogether free from difficulty and discomfort. He therefore hoped that the vaccination stations would not be entirely dispensed with. Dealing next with the provision as to penalties, Sir Walter Foster said that anyone who studied carefully the report of the Royal Commission would come to the conclusion that it practically killed compulsion. The Commissioners were of opinion—and, he thought, rightly of opinion—that the repetition of penalties for non-compliance with the law was irritating, and was probably the cause of much of the agitation against vaccination. The administration of the law was in the hands of the boards of guardians—popularly elected authorities—and as one-fifth of the boards were opposed to the compulsory clause of the present Act and refused to carry it out the law probably did more harm than good. The sincere and honest objector was not likely to be compelled by fines and imprisonments to accede to the vaccination of his children; and the report of the Royal Commission suggested as an alternative to the system of repeated fines that a person who refused to comply with the law might make before a magistrate a declaration that he had a conscientious objection to vaccination. He was sorry the right hon. gentleman had not accepted that alternative. The agitation against vaccination had undoubtedly been fostered by injudicious compulsion. Twenty per cent. of the children in England and Wales were not vaccinated, and in a large proportion of the 80 per cent. of vaccination cases recorded the vaccination was inefficient and practically useless for the protection of the children, for there was a certain class of medical practitioners, he was ashamed to say, who were willing to carry out a sham and ineffective vaccination at the request of parents and to give a certificate. That was the reason why a large number of people who had been inefficiently vaccinated got small-pox and thereby brought the whole system of vaccination into discredit and disrepute. He therefore hoped that the Local Government Board would take powers under the Bill to secure that vaccination, whether carried out by public vaccinators or by private practitioners, should be done in such a way as to be an effective protection against the disease it was intended to prevent. He considered that the position of the Government in this matter of penalties was extremely illogical and absurd. It enabled a man who paid two penalties to escape the duty he owed to the law. He considered that if a man conscientiously objected he ought to be allowed to go to a court and before a magistrate make a declaration. He thought if this were done and compulsion abandoned the law would be much more effectively administered and there would be much less dissatisfaction throughout the country. He did not propose to vote against the second reading of the Bill, because he thought that even as it stood it was an improvement on the existing law, but he hoped that in Committee they would have an opportunity of moving the omission of the section, or a portion of it, which dealt with the penalties so as to bring about the alternative he had suggested. If they could repeal the penalties altogether he should be glad, because he believed that that would make vaccination more popular. He thought that those sections which enforced penalties, and went on to imprisonment, had done a great deal of harm to the cause of vaccination. He would now refer to the omissions in the Bill. He regretted in the first place that there was nothing said about revaccination. He did not want to make revaccination compulsory but he wanted to see some system under which revaccination would be offered to the whole community at suitable times. Sir Walter Foster referred to what has been done in Germany and Italy in this connexion and to its effect on the small-pox mortality and expressed the hope that the President of the Local Government Board would turn his attention to the point and allow some clauses to be introduced into the Bill by means of which revaccination might not be forced but might be offered in the case of children leaving or entering school at twelve or fourteen years so that we might have this great protective influence in this country. The Bill gave large powers to the Local Government Board of modifying the regulations of vaccination officers; he should like that power extended in respect to all persons who vaccinated, so that they might bring under the same rules all private practitioners, and he hoped that in committee the right hon. gentleman would be willing to give even larger powers to the Board than were proposed. In conclusion Sir Walter Foster said he hoped that the President of the Local Government Board would have the credit before the Bill was passed not only of having done something to improve vaccination by the introduction of this new glycerinated lymph but of having done something to make the law more popular and efficient and so contributed to the general well-being and health of the community.

Sir William Priestley said he had listened with great pleasure to the admirable speech of his friend, and he agreed with almost all that he had said. He wished to congratulate the President of the Local Government Board on having had the courage to grasp so thorny a subject as vaccination, and though this Bill only dealt with the fringe of the subject, he regarded it as a genuine attempt to do something by way of improving the system of vaccination. He would criticise the Bill not in a hostile spirit, but rather in the hope of being able to strengthen the hands of the Government and of the President of the Local Government Board. It was computed that at present about a third of all the children born in England and Wales were escaping vaccination—i.e., about 300,000 children—and in this connexion they could not but recollect the serious object-lesson recently presented by Gloucester. The discovery of glycerinated lymph was made in 1891, and yet it had never been adopted systematically in this country. It was most likely, if once adopted, to remove many of the objections and apprehensions of parents, which he had no doubt were very conscientious. It had been adopted in other countries, where they had Ministers of public health and where a great deal more attention was paid to the question of public health than was the case in this country. The system had been carried out at Berlin, Paris, Geneva, and other centres, and as yet there had been no misadventures. The diseases most feared by parents in the matter of vaccination were syphilis, erysipelas, and tubercle. He believed the fears as to diseases being communicated by vaccination had been greatly exaggerated. The Royal Commission in their report stated that in some instances syphilis had been communicated by vaccination, but it could not have been so communicated to any substantial extent, whilst it was extremely rare for erysipelas to be conveyed at the time of vaccination. The Commission also found that there were no facts to warrant the assertion that increase of tubercle was due to vaccination. Admitting that harm was done by the practice of vaccination it was not easy at any time to do a vast amount of good without some modicum of harm. All medical efforts were relative; if they were absolute no one would die. If they were to look into the history of many remedies they would find that misadventures came by their use. It was well known, for instance, that no one could avail himself of the administration of chloroform to relieve pain without fear of misadventure. In regard to those domestic remedies Epsom salts and castor oil the effects had gone in some cases much further than had been intended or expected. The great thing in the use of all remedies was to do the greatest amount of good with the last possible harm. It was entirely a question of proportion. Unfortunately there were always people possessed of what he might be permitted to call the "anti" mind, who, with a perverse ingenuity, fastened on the harm and refused to look on the other side of the question. A distinguished scientific friend of his once said he always tried to teach his pupils to think to scale as well as work to scale; but these people who were always dwelling on th harm did not think to scale. They concentrated all their attention upon the mischief and they came signally to grief in their reasoning. Sir William Priestley then went on to express approval of the proposed domiciliary vaccination, although at the same time he hoped that stations would not be abolished altogether. Medical officers under the proposed system would have better means of persuading parents to submit their children to vaccination and of showing that objections were really not valid. It had been said that vaccinators might be very unfavourably received, and in some instances be in danger of violence from anti-vaccinationists; but in Chicago, among a population made up of all sorts and conditions of men, a system of domiciliary visits had the best possible effect, few children remaining unvaccinated. Some years ago, he had been informed, it was the custom in France to pay a small sum to parents who brought their children for vaccination, and it was surprising to find how parental scruples about danger to children were removed by the few sous paid. It was desirable that some arrangement should be made whereby medical men who vaccinated their own poor patients should receive the fee otherwise paid to the public vaccinator. To the extension of the limit of age he saw no objection so far as danger to children was concerned, for experience had shown that infants under twelve months were unlikely to take small-pox. There were some objections, but they might be overcome. True there was more risk that the vesicles might be rubbed and contaminated when the child crawled about and in twelve months removals made the following-up of the cases difficult. On the whole, he was disposed to adopt the suggestion of six instead of twelve months and the prac-

tice in Scotland and England would then be uniform. We might also imitate the practice in Germany, which obtained also in Chicago, and impose some check on the admission of unvaccinated children to school. With regard to revaccination, for which there was no provision in the Bill, Sir William Priestley said that Dr. Jenner fell into the mistake of supposing that he had found a remedy for the whole life of the patient; but observation had abundantly proved that when ten or twelve years elapsed after vaccination, though the operation might modify the effect of the disease, it was not a preservative against small-pox. Anti-vaccinationists made capital out of the fact that in outbreaks of small-pox many victims had been vaccinated, but they omitted to say how large a proportion had never been revaccinated. It might seem hard to impose an obligation on parents to which they objected and of which they did not see the value. But the object of the State should be the welfare and happiness of the greatest number and the good of the children, above all things, should be the regard of the State as well as of the parents. The danger of allowing a large number of children to remain unvaccinated had been very clearly seen at Gloucester and he would venture to point out that in proportion to the stringency with which vaccination was carried out so was protection furnished to the community. Medical men thought that vaccination was just as essential to the welfare of the child as the provision of food and raiment. If it kept the child from disease—and they believed it would—there ought to be no remission of penalties. At any rate if there were remission of penalties there ought to be something which was almost equally efficacious. He should be disposed not to remit penalties, but if the parent had conscientious objections to vaccination he would not give it up altogether, but suspend it for a time—say until the school days. This would be a great deal more logical than remitting the penalties. He would make one other suggestion. All parents who insisted that their children should not be vaccinated and who persisted in this course even after being fined once or twice should be compelled to subscribe to isolation hospitals. Isolation hospitals had been again and again proposed as an alternative to vaccination and no doubt they were the next best things, though they would not take the place of vaccination. The administration of the law, he thought, should be entrusted to the sanitary authorities and not to the boards of guardians, who had constantly shirked their duty in this connexion.

Mr. Thomas Bayley, member for the Chesterfield division of Derbyshire, moved the rejection of the Bill. He said that the House was entitled to know what it was going to cost the local authorities to carry out this Bill and upon whom the burden of payment was to fall. They might be pretty certain that if people had a choice between taking their children to a public institution for vaccination and having them vaccinated in their dwelling houses they would choose the latter course, and he would like to know what was to be the cost of this domiciliary vaccination. He submitted that the recommendations of the Royal Commission were not carried out by this Bill. The Commision reported that there were other things besides vaccination to be depended on for extinguishing small-pox. They recommended a complete system of compulsory notification, immediate hospital isolation, and improved sanitation. Not a word about those things was to be found in the Bill. A year ago he was as strongly in favour of vaccination as any one, but the reading of the official reports had now made him very doubtful on the subject. He believed that we were beginning at the wrong end, and that sanitation, isolation, and cleanly habits among the people would do more to destroy small-pox than any amount of vaccination. As to Gloucester, which he had himself visited at the time of the epidemic, the drainage of the city discharged into the Severn and was carried up by the tide beyond the pumping station where the water was pumped into the main. The people of Gloucester had thus been using contaminated water for washing and drinking.

Mr. Monk, the representative of Gloucester, interrupting the hon. Member, said it was not the case that water was taken from the Severn for drinking purposes.

Mr. Bayley said he was told that the water pumped from the Severn was the ordinary drinking-water, and he would point out that when the new waterworks were opened the epidemic disappeared. Then there was the case of Middlesbrough, which had a larger percentage of vaccinated persons in its population than any other town in the kingdom. Nevertheless, Middlesbrough had suffered a very serious outbreak of small-pox. The Bill was one which would please nobody. The Commission wished to see a less severe law put into force uncompromisingly; but this Bill would not be put in force in Leicester, for example, at all. The penalties of fine and imprisonment still remained, though they could only be inflicted once; but it was still possible to punish a man indefinitely by the constant adjournments which would be possible in the hearing of the case. The poor man who had an honest objection to vaccination would thus be liable to the loss of many days' employment. The number of those who were honestly opposed to vaccination was already large, and would certainly grow unless the decision of the individual were left perfectly free. The real question of interest to the House and the country was whether they were to continue almost the last of the old worn-out systems of imprisonment and fine for conscientious opinion rightly or wrongly held and held firmly by many people.

Mr. Steadman, Member for the Tower Hamlets Division of Stepney, seconded the motion for the rejection of the Bill. He said he was a member of one of those boards of guardians in the East-end of London which absolutely refused to carry out the present Acts of Parliament dealing with vaccination. He denied that the decrease in small-pox was due to vaccination, whatever medical men might say. Taking the last five years during which the Mile End board of guardians had refused to carry out the Vaccination Acts he found that in 1893 there occurred in that district 116 cases of small-pox and 8 deaths; in 1894 42 cases and 4 deaths; in 1895 49 cases 1 death; in 1896 1 case and no death; and in 1897 no cases at all. In Mile End no candidate for the position of guardian, whether Conservative or Liberal, stood any earthly chance of being elected unless he was opposed to compulsory vaccination. Not only so, but the attitude of the Mile End guardians had converted their brethren in the adjoining districts of Bethnal Green, St. George's-in-the-East, Poplar, and Whitechapel. All those boards to-day were absolutely refusing to carry out the Acts. There were in Mile End 16,000 children unvaccinated, and out of the 13 deaths which had occurred in the last five years 4 were through children being vaccinated. If that statement were disputed he held in his hand the certificate of the death of one of those children in which the death was laid at the door of vaccination. Through the whole of the East-end of London there were 25,131 children who were born during 1896 in ten Parliamentary divisions and out of that number only 7980 were vaccinated. He claimed that the decrease in small-pox was due more to the Public Health Act which passed this House in 1891 than to compulsory vaccination. Previous to that time the vestries were largely monopolised by the housemongers whose sole object was to evade the sanitary laws, and the sanitary inspectors were practically under their thumb, and it was not till the Public Health Act came into operation that they were able to compel the local authorities to do their duty as regards sanitation. Isolation in conjunction with better sanitary arrangements had been the means of preventing epidemics of small-pox in recent times. Medical men themselves differed in opinion as to the efficacy of vaccination as much as lawyers differed about Acts of Parliaments. Nothing would satisfy the great majority of the population but the total abolition of compulsory vaccination.

Mr. Chaplin then addressed the House. With regard to the cost of the scheme he said it would be borne in precisely the same way as that of the present system of vaccination was borne. The notification would be given under the Notification of Diseases Act, which was compulsory in the metropolis at the present time. Though that Act was optional in other districts of the country, it was practically in force in respect of 28,000,000 of persons out of a population of 29,000,000. With regard to the compulsory provision of hospitals for isolation, he showed that under the Public Health Act the local authorities could provide hospitals if their representatives desired, and county councils at the present time had an absolute power to form districts and to require the provisions of the Isolation Hospitals Act to be put in force subject to certain restrictions. It was said that the cost of vaccination would be increased. The remuneration of vaccination officers and public vaccinators was subject at present, and would be in future, to the approval of the Local Government Board. Their duties would be increased to some extent no doubt, and he recognised that there must be some alteration in their remuneration. What the Government proposed was that both classes of officers should be remunerated in future by two methods. First, by a payment based on the number of births to cover all their general duties; and, second, by a payment in each case for successful vaccination. To encourage this the Government thought that the fee for the last-named duty should be higher than the fee for the former. The amount of the fees was a matter for arrangement between the local authorities and the officers who were employed, but it was subject in all cases to alteration and approval by the Local Government Board. In addition to this, under the system of awards which existed at present and which would be continued in the future, there would be the award which was certified at the present time by the Local Government Board and which was paid by county councils, and which was not to exceed under the existing law 1s. in the case of each successful vaccination. The amount raised by public rates in the country at the present time was practically about £35,000,000; the whole cost of vaccination expenses at present was £78,000 a year. If the cost of vaccination was doubled, which was extremely unlikely, it would mean an increase of less than half a farthing in the pound on the rateable value, and if trebled less than a farthing. The efficacy of vaccination for the prevention and mitigation of small-pox appeared to him to have been demonstrated by the experience of the world. Dealing with the procedure to be adopted under the new regulations, he indicated that the registrar of births and deaths at the time of the birth of a child gave information to the parents as to their duties in respect of vaccination. At the same time the registrar gave a list of births to the vaccination officer. It then became the duty of the parent under the Bill to have the child vaccinated within twelve months from that time. The parent might employ either a private or a public vaccinator, but whichever officer was employed it would be his duty, if he vaccinated successfully, to send a certificate to that effect to the vaccination officer who had already the list of births, and by comparing that list with the certificates which he received he would be able to ascertain at once who had and who had not been vaccinated. If a parent had employed neither officer by the end of nine months, then it became the duty of the public vaccinator to call at the residence and offer to vaccinate the child, giving due notice of the time at which he would do so. At the end of twelve months, the public vaccinator having made this offer, if the child remained unvaccinated the parent would become liable to prosecution, the vaccination officer giving notice before taking proceedings. Under the powers which the Board already possessed they proposed in future to make it the duty of the vaccination officer to institute the necessary proceedings. That would be a change in the present practice with regard to vaccination to which he, for one, attached very considerable importance. It would also be the duty of the vaccination officer to take proceedings for enforcement of the second penalty if it should be necessary for him to act. Something had been said about the difficulty in connexion with removals in consequence of the age being postponed to twelve months. It would be part of the vaccination officer's duty to make every inquiry as to those removals and to ascertain the district into which the removal had been made. While wishful to include provisions for revaccination in the Bill he was still more anxious to get the measure passed into law this Session. He had some fears that if at the outset he overloaded the Bill with an unnecessary number of new provisions he might fail in his primary object. To the importance of the proposal that children should be inspected when they entered school so that they might be vaccinated if they had escaped vaccination in their earlier years he was quite alive, and with the support of the hon. Member (Sir Walter Foster) it might be found possible to introduce into the Bill an amendment on this point. To the adoption of the hon. Member's suggestion with respect to vaccination by private practitioners there were practical obstacles. He did not understand why a burden which had hitherto been borne cheerfully by private individuals should be imposed upon the rates. Then the work of all public vaccinators was carried out under strict regulations and if they were disregarded the officer could be dismissed. Over private practitioners, who numbered 21,000, similar control could not be exercised. The hon. Member had urged him not to do away altogether with stational vaccination, pointing out that at times it would be of the greatest possible use. The subject was well worth considering; but he might explain that stational vaccination was only to be abandoned in a certain sense. It would cease to be

compulsory and children would no longer be required to attend in order that lymph might be transferred from their arms to those of others; but there was no intention to prevent guardians from having recourse to stational vaccination if they should think fit to do so. It was probable that in populous places where serious outbreaks of small-pox occurred stational vaccination would still be resorted to. He came now to the question of repeated penalties, which had caused such acute differences of opinion. Upon this subject there appeared to be much misapprehension in the minds of large sections of the public and even in the minds of people who ought to know better. It had been stated constantly that anybody by paying a trivial fine in one case could purchase exemption thereafter from the operation of the Bill. That was quite a mistake. It would be for the magistrates to determine whether the fines should be trumpery or not, but all defaulters would be liable under the Bill to two prosecutions. Under the 29th section of the Act of 1867 a parent who neglected to vaccinate a child before twelve months would be liable to a penalty, and under section 31 if a registrar or officer of a board of guardians informed a magistrate that he had reason to believe that any child in the union under fourteen years of age had not been successfully vaccinated the magistrate could summon the parent of the child and could make an order directing vaccination within a certain time. If the order was not obeyed the parent became liable to a penalty and at present an order of the kind could be repeated again and again *ad infinitum*. Under the present Bill defaulters would be liable to two prosecutions and two penalties, but the unlimited repetition of orders directing the vaccination of a child would be prohibited. He knew that this proposal to repeal the law permitting the imposition of repeated penalties had met with a great amount of disapproval and if the system which had hitherto prevailed had been effective in securing the vaccination of children whose parents objected to it there would no doubt be a great deal to be said for the retention of the present state of things. Too many records, however, showed that, far from succeeding in promoting vaccination, the system of imposing repeated penalties had rather an opposite effect. One result of the system had been to make martyrs of many misguided but no doubt well-meaning people, and so to create prejudice against the whole practice of vaccination. Whenever this question of repeated penalties had been made the subject of public inquiry a modification of the law had been unanimously recommended. Having given the question the best consideration in his power he had come to the conclusion that the balance of argument, and certainly the balance of authority, was in favour of the proposal he had made. Complaint had been made that the Bill did not accept the other recommendations of the Royal Commission. The hon. Member for Ilkeston (Sir Walter Foster) said the Royal Commission had killed compulsory vaccination, that one-fifth of the local authorities decline to carry it out, and that therefore it would be better to accept that position. He was, however, not without hope that with an improved and amended Bill such as this, with conditions entirely altered, with many of the gravest objections to vaccination removed, and with greater facilities for carrying it out being offered in the future, much of the opposition to vaccination might, and probably would, die out, and that it would be found that the local authorities would be prepared to enforce the law much more readily than in the past. In the great majority of cases in which people neglected vaccination they did so from indolence or carelessness rather than from any rooted objection to the practice. All such cases would be met and provided for by the Bill. But there was an active and powerful body of men in the country who desired the total repeal of the vaccination law and who were ceaselessly working to procure its abolition. With their powerful organisation, with their ceaseless and restless energy, nothing in the world would be simpler than to arrange for conscientious objections to be presented by the thousand, and he was afraid that if he accepted the proposal of the hon. Member for Ilkeston they would soon see the vaccination law become a dead letter in a number of districts. He was as strongly convinced as any Member in the House that vaccination was an absolute necessity in the interest of the community as a whole and so long as he was responsible in the matter nothing would induce him to sanction anything of the kind. The best mode of enforcing the law might, he admitted, remain to be proved in the future. He believed honestly that the course he had adopted was the right one, but if it failed—and he did not believe it would—he should not hesitate to come to Parliament again and again, if necessary, for any additional powers that might be needed to thoroughly enforce vaccination throughout the country. At the same time he thought he had some right to hope that no such steps would be required. In this Bill the Government had done their utmost to remove, on the one hand, every legitimate grievance and every plausible objection that could be raised to the practice of vaccination, while, on the other hand, they had sought to provide, especially for the poorer classes—though he altogether denied that this was a question affecting only the poorer classes—facilities for vaccination which had never been enjoyed before and he asked the House to approve what they had done.

Mr. Pickersgill, opposing the Bill, prophesied for glycerinated calf lymph absolute failure and took exception to Mr. Chaplin having made arrangements with the Institute of Preventive Medicine for its supply. Than this institute, he said, there was no body more unpopular and more distrusted by the people of London. He did not think that the medical profession would thank either Sir Walter Foster or Sir William Priestley for the references they made to members of the profession. The former charged members of his own profession with making sham operations with pretending to vaccinate, and after so pretending giving a certificate of vaccination. Did not that open up a rather alarming prospect to many of them? Then Sir William Priestley had told them that he stood aghast at the risks run in vaccination in the days of his youth. Yes; and in the days of Sir William Priestley's youth vaccination was supported in this House by just the same arguments as it was now supported These statements made by distinguished members of the medical profession would be taken to heart by the country and would make it all the more determined that the system of compulsory vaccination should no longer be continued.

Mr. Monk said he wished to repeat his denial of the statement that the drinking water of Gloucester was taken from the Severn. It was taken from the reservoirs and was a most admirable supply. Indeed, there was no city in England which was now better supplied with water. As to the drainage of Gloucester it would compare favourably with any city or town in the country. As to the epidemic the mortality was certainly great, but while it was less than 10 per cent. among vaccinated people it was 40·8 per cent. among unvaccinated.

On the motion of Mr. Logan the debate was adjourned.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BELBEN, F., M.B. Cantab., F.R.C.S., L.R.C.P. Lond., has been appointed Resident Surgical Officer to the Hull Royal Infirmary.

BOX, STANLEY, M.B. Lond., M.R.C.S., L.R.C.P., D.P.H., has been appointed Resident Assistant Surgeon to the Western General Dispensary, Marylebone-road, London.

CODD, J. ALFRED, M.D., B.Sc. Lond., has been appointed Honorary Assistant Physician to the Wolverhampton and Staffordshire General Hospital, Wolverhampton.

DAVIES, W. J. E., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Resident Medical Officer to the Chelsea Infirmary.

DIXSON, C. F. L., M.D. Durh., M.R.C.S., has been appoined Honorary Anæsthetist to the Brentford Cottage Hospital and Dispensary.

GILMOUR, R. W., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed fifth Medical Officer and Pathologist to the Waduley Asylum.

GOSTLING, T. P., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Worcester Infirmary.

HODGSON, G. G., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Sussex Eye Hospital, Brighton.

HITCHINS, F. C., M.R.C.S. Eng., L.R.C.P., has been appointed House Surgeon to the Stamford and Rutland Infirmary, Stamford.

IONIDES, T. H., M.B. Lond., B.S., F.R.C.S., has been appointed Honorary Assistant Surgeon to the Sussex Eye Hospital, Brighton.

JOHNSTON, J. SOMERVILLE, L.K.Q.C.P., L.R.C.S. Irel., has been appointed Visiting Surgeon to the St. Nicholas Industrial Schools, Manor Park, vice P. C. Boyd, resigned.

JOHNSTONE, THOMAS, M.D. Edin., M.R.C.P. Lond., has been re-appointed Medical Officer of Health to the Ilkley Urban District Council.

KINSELLA, J. J., M.B., B.Ch. Irel., has been appointed Medical Officer to the Workhouse of the Edenderry Poor-law Union.

MACGREGOR, ALEXANDER, M.D. Aberd., M.R.C.P. Lond., has been appointed Physician to the Westminster General Infirmary.

MACKAY, H., L.S.A. Lond., has been appointed Medical Officer for the South-East sanitary district the Sheffield Union, vice C. E. Strickland, resigned.

MACMUNN, C. A., M.D. Dubl., L.R.C.S. Irel., has been appointed Honorary Physician to the Wolverhampton and Staffordshire General Hospital, Wolverhampton.

MOLESWORTH, F. H., M.B., B.C. Cantab., has been appointed Assistant House Surgeon to the Stockport Infirmary.

PRICE, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Great Indian Peninsula Railway.

ROUTLEDGE, C. L., L.D.S., R.C.S. Edin., has been appointed to the Senior Staff of the Newcastle-on-Tyne Dental Hospital and School.

ROWLANDS, D. R., M.B., C.M. Edin., has been appointed House Physician to the Swansea Hospital.

SHELLY, C. E., M.D. Camb., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician by the Hertford and Ware Joint Hospital Board.

TASKER-EVANS, J. T., M.D. Aberd., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician by the Hertford and Ware Joint Hospital Board.

TAYLOR, H. H., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Sussex Eye Hospital, Brighton.

VERDON-ROE, S., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Radcliffe Infirmary, Oxford.

WARD, J. P. S., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Plymouth Public Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £50, with board, washing, and attendance.

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Board, lodging, and washing provided.

BOROUGH OF MIDDLESBROUGH.—Medical Officer of Health. Salary £350 per annum, payable monthly. Applications to the Town Clerk, Middlesbrough.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Senior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

GENERAL INFIRMARY, Gloucester, and GLOUCESTERSHIRE EYE INSTITUTION, Gloucester.—Assistant Surgeon.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital. Will be required to do the dispensing for the hospital and free and provident dispensaries, for which an additional salary of £40 is paid.

HOSPITAL OF ST. FRANCIS, 145, New Kent-road, London.—Honorary Assistant Surgeon, two Honorary Assistant Physicians, and Anæsthetist.

KILBURN, MAIDA-VALE, AND ST. JOHN'S-WOOD GENERAL DISPENSARY.—Two vacancies on the Board of the Hon. Medical Staff. Applications to the Secretary, 13, Kilburn-park-road, N.W.

LONDON THROAT HOSPITAL, Great Portland-street.—House Surgeon (non-resident), for six months, Salary £25.

MIDDLESBROUGH COUNTY BOROUGH ASYLUM, Cleveland, Yorkshire.—Assistant Medical Officer, single. Salary £100 per annum, with furnished apartments, board, washing, and attendance.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Honorary Physician.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, each for six months. Salary at the rate of £50 per annum, attached to the senior post.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer for two years, unmarried. Salary £100 per annum, with board and lodging.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging in the hospital. Applications to the Board of Management, London Office, 34, Craven-street, Charing-cross, W.C.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road, London.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance. Applications to the Honorary Secretary, Mr. H. P. Bodkin, 23, Gordon-street, Gordon-square, W.C.

ST. MARY'S HOSPITAL, Paddington, London.—Honorary Radiographer.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Surgeon for the Dreadnought Hospital, Greenwich. Salary £50 per annum, with board and residence. Also Junior House Surgeon for the Branch Hospital, Royal Albert Dock, E. Salary £50 per annum, with board and residence. Applications to the Secretary, Greenwich.

SUFFOLK COUNTY ASYLUM.—Second Assistant Medical Officer, for three years, unmarried. Salary £100 a year, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Melton, Suffolk.

THE GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon, for six months. Salary at the rate of £20 per annum, with board, lodging, and washing in the hospital.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Physician, for six months, unmarried. Salary £20, with board and residence in the hospital. Also House Surgeon to out-patients (non-resident), for six months. Salary 25 guineas.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—Lady House Surgeon. Salary £60, and board and lodgings. Applications to the Honorary Secretary, 3, the Pantiles, Tunbridge Wells.

WEST DERBY UNION.—Resident Assistant Medical Officer at the Mill-road Infirmary, for one year. Salary £100 per annum, subject to statutory deduction, with board, lodging, and washing. Applications to the Clerk to the Guardians, Brougham-terrace, Liverpool.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL INFIRMARY, Wolverhampton.—House Physician, who will be required to act as Medical Registrar, Pathologist, and Anæsthetist, for one year. Salary £100 a year, with board, lodgings, and washing.

YORK DISPENSARY.—Resident Medical Officer to visit and attend (including midwifery), the sick poor at their own homes, unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to W. Draper, Esq., De Grey House, York.

Births, Marriages, and Deaths.

BIRTHS.

BUTLER.—On Easter Monday, at Westfield House, Flaxton, Yorkshire, the wife of W. Barber Butler, M.R.C.S., of a daughter.

GODFREY.—On April 13th, at Lichfield-grove, Finchley, N., the wife of T. H. Godfrey, M.B., of a son.

HAGUE.—On April 13th, at Kingston House, Camberwell, the wife of S. Hague, M.D. St. And., of a daughter.

JACKSON.—On April 15th, at Alnwick, the wife of G. Scott Jackson, M.D., of a daughter.

MOLSON.—On April 13th, at Rainsford House, Chelmsford, the wife of J. Bladale Molson, M.B., B.C. Cantab., of a daughter.

NEWINGTON.—On April 11th, at The Grange, Edenbridge, Kent, the wife of C. W. H. Newington, M.R.C.S., L.R.C.P., of a son.

WALLIS.—On April 15th, at Roman-road, Bow, E., the wife of Sidney Seymour Wallis, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BLACKER—HARVEY.—On April 13th, at St. Paul's Church, Clifton, by the Rev. W. H. P. Harvey, M.A., Vicar of St. John's Church, Chipping Sodbury (brother of the bride), assisted by the Ven. A. C. Ainslie, LL.D., Archdeacon of Taunton, and the Rev. Canon Mather, M.A., Vicar of St. Paul's, Ernest Blacker, M.D., M.R.C.S., L.R.C.P., of Southampton, son of the late Dr. Blacker, of Midsomer Norton, to Edith Emilie, youngest daughter of the late Rev. George Ludford Harvey, M.A., Rector of Yate, Gloucestershire, and granddaughter of the late Sir Ludford Harvey, many years senior surgeon of St. Bartholomew's Hospital, London.

BOON—WOOD.—On April 19th, at Sherborne Abbey, John Goodisson Boon, L.R.C.P. and L.R.C.S. Irel., Broseley, Shropshire, to Olive Dunbar, only daughter of the Rev. Alexander Wood, Sherborne.

EVANS—HOWSE.—On April 13th, at the Church of All Hallows, London-wall, E.C., by the rector, the Rev. S. J. Stone, cousin of the bridegroom, Harold Ward Evans, M.R.C.S., L.R.C.P., of Littleport, Cambs., younger son of the late Francis Stone Evans, Esq., M.A., late Principal of the Presidency College of Madras, to Hilda Mabel, fourth daughter of the late Alfred Howse, Esq., M.R.C.S.

FRY—ROSS.—On April 13th, at St. Barnabas's Church, Middlesbrough, W. L. Fry, M.B. Oxon., third son of C. Rutter Fry, of Darlington, to Bertha Mary, third daughter of the late John Ross, formerly of Feethams, Darlington.

GRIFFITH—TALBOT.—On April 12th, at Mill Hill Chapel, Leeds, Thomas Wardrop Griffith, M.D., youngest son of the late Charles Fox Griffith, Aberdeen, to Louisa Talbot, younger daughter of Grosvenor Talbot, Burley, Leeds.

HAWKES—COGHILL.—On April 14th, at the Parish Church, Ventnor, by the Rev. A. L. B. Peile, M.A., Master of St. Catherine's and Chaplain to the Queen, assisted by Rev. H. D. Macnamara, Rector of St. James, Garlickhithe, E.C., Priest in Ordinary to the Queen, Rev. A. Alloway, Chaplain to the Ventnor Hospital, and Rev. G. P. Bassett Karry, Vicar of Ventnor, Lewis Arthur Hawkes, M.D., to Mary Stuart Coghill, L.R.C.P., L.R.C.S., eldest daughter of Dr. and Mrs. Coghill, of St. Catherine's House, Ventnor, I.W.

HILL—BACHLER.—On April 12th, at St. Jude's Church, Southsea, Reginald Augustus Lowder Hill, M.R.C.S. Eng. and L.R.C.P. Lond., of Wimbledon, to Maud Mary Ann, only daughter of Leonard Bachler, Esq., Inspector of Machinery, R.N.

LIGHTBODY—MEYLER.—On April 14th, at Shepperton Church, by the Rev. C. F. Chorley, Vicar of Mossley, assisted by the Rev. C. E. Littledale, Rector of Shepperton, John Henry Lightbody, M.D., of Wybunbury, Cheshire, eldest son of the late John Lightbody, of Liverpool, to Constance Helen, second daughter of the late T. H. Meyler, of Taunton, Somerset.

NEWTON—CARTER.—On April 14th, at St. Clement's, Bournemouth, Henry William Newton, M.R.C.S., L.R.C.P., D.P.H., of Chelmsford, to Edith Mabel Carter, elder daughter of the late Mr. E. Hunt Carter, of Chelmsford.

RANSOM—FOWLER.—On April 19th, at Christ Church, Cinder-hill, Nottingham, William Bramwell Ransom, M.D., eldest son of Dr. W. H. Ransom, F.R.S., to Edith Mary Isabel, eldest daughter of George Fowler, Esq., M. Inst. C.E., of Basford Hall, Nottingham.

DEATH.

HOWLETT.—On April 15th, at Lugano, Gerard Dalziel Howlett, M.R.C.S., L.R.C.P., second and much-loved son of Richard and Alice Howlett, aged 24 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 21st, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 15	29·72	W.	...	105	61	48	48	50	Overcast
" 16	30·01	N.W.	...	79	59	42	45	47	Hazy
" 17	30·06	S.W.	...	103	63	43	48	53	Cloudy
" 18	29·78	S.E.	...	93	57	41	44	47	Cloudy
" 19	29·90	S.E.	...	89	55	44	44	48	Cloudy
" 20	29·97	S.E.	0·02	91	60	44	45	47	Overcast
" 21	30·19	S.E.	...	100	58	41	46	48	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (30th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. T. R. Bradshaw (communicated by Dr. Lauder Brunton): A Case of Albumosuria in which the Albumose was Spontaneously Precipitated.—Dr. S. West: Intrapleural Tension.

WEDNESDAY (27th).—HUNTERIAN SOCIETY.—8.30 P.M. Dr. F. Fox: Observations on Crisis.—Mr. H. H. Tubby: Coxa Vara.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Communication:—Dr. Wm. Bain (Harrogate): The Action of certain Drugs and Mineral Waters on the Secretion and Composition of Human Bile—an experimental investigation. Paper:—Dr. E. Hobhouse (Brighton): Gout and Rheumatism in Relation to the Sea-shore and Salt-water Baths.

THURSDAY (28th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, W.).—8.30 P.M. Mr. P. J. Freyer: My Latest Series of 100 Operations for Stone in the Bladder with Practical Remarks thereon.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Cases will be shown.

FRIDAY (29th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Clinical Evening. The following cases will be shown:—Mr. F. Eve: Cases of Transplantation of Tendon for Infantile Paralysis.—Dr. W. Pasteur: Case of Graves's Disease in which Bradycardia has supervened.—Mr. A. E. Garrod: Cases illustrating the Association of Congenital Heart Disease with the Mongol type of Idiocy.—Mr. W. Spencer: Case of Acute Gangrenous Appendicitis in a Boy, Removal of Appendix twenty-six hours after onset (with specimen).—Dr. C. E. Beevor: Case of Amyotrophic Lateral Sclerosis with Jaw Clonus.—Dr. H. D. Rolleston: Hemiplegia after Typhoid Fever.—Dr. H. D. Rolleston: Osteitis Deformans in a Woman. And other cases. Patients will be in attendance at 8 P.M.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-st., Cavendish-sq., W.).—3 P.M. Laryngological Section. Cases will be shown by Dr. B. Baron, Dr. Tresilian, Mr. W. Wingrave, Dr. E. S. Young, and Mr. St. G. Reid. Papers will by read by Dr. B. Kelly and Dr. Tresilian. 5 P.M. Otological Section. Cases will be shown by Dr. D. Grant, Mr. W. Wingrave, and Dr. G. Stoker.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (25th).—THE SANITARY INSTITUTE (Parkes Museum Margaret-street, W.).—8 P.M. Mr. C. Jones: Scavenging, Disposal of House Refuse.

THURSDAY (28th).—THE SANITARY INSTITUTE (Parkes Museum Margaret-street, W.).—8 P.M. Prof. H. Robinson: Sewerage and Sewage Disposal.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Lantern Demonstration to Senior Students—Heart Disease.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

UNDESIRABLE PUBLICITY.

THE Royal Halifax Infirmary authorities have recently put an advertisement in the local papers giving notice of some arrangements made in connexion with the special department for diseases of the ear, eye, nose, and throat. In this advertisement the name of the medical man in charge of this department is mentioned, with an intimation that he confines his practice to diseases of the eye, ear, nose, and throat only. There is also a laudatory editorial paragraph about the same gentleman. We do not suppose for a moment that the medical man in question authorised either advertisement or paragraph in any way, but the infirmary authorities should know better.

LONDON DRAINS.

To the Editors of THE LANCET.

SIRS,—That it is exceptional for sewer gas to contain many micro-organisms is a discovery for which sanitarians may well be grateful. Reactionaries are apt to say to us, "If this gas is so highly injurious, why are we not all dead men?" We can now distinguish and define. There are probably tens of thousands of houses in London into which gas from the drains easily escapes, but until a casual pathogenic "germ-cloud" escapes with it there is no specific disease. Nevertheless, in the inmates of these houses some (often unrecognised) loss of energy, degrees of anæmia, variation of temper and of intellect will always be found. It is necessary to arrive if possible at complete clearness upon this matter. Quite recently an architect, an advocate of the strictest sanitary measures, told the writer with an evident tone of perplexity and puzzle that he had examined a house in which a man had lived for twenty years, that during all that time sewage had accumulated in the soil beneath the house running over from a cesspool, and that yet the man had never been ill. But I knew the man and that it might be equally true to say that he had never been well or at his best. It is the brain cells which are most readily injured by poisons and by anæmia and want of oxygen in the blood. In this case no specific microbes from a common sewer could find their way into the drains and cesspool of the house; the

ground was ready but the seed was not sown. Hence the immunity which had to some extent shaken the belief of my friend in the reality of the danger of sewer gas. He was expecting an impossible result, as though he had looked for wheat in a field merely because the soil had been enriched. The germs of every specific disease must enter and exist in the sewers. Their escape is an accident which may happen anywhere. No house into which there is a leak is safe; on the other hand any house however faulty may escape. This latter fact has caused a state of doubt or imperfect belief even in the minds of members of sanitary committees as to the degree of danger to be encountered, and has led to a corresponding want of firmness and resolution in their actions, and this simply because it appeared that much worse results ought uniformly to occur when house drains were defective than actually did occur. An explanation based on accurate observations which seems likely to remove this difficulty is therefore highly acceptable.

I am, Sirs, yours faithfully,

April 11th, 1898. T. C.

A HINT.

WE extract the following advertisement from the *Bazaar* of March 28th, 1898:—

MEDICAL.—Wanted, standard homœopathic books and drugs. Hints gratefully accepted. Vicar, B——, D——.

We are happy to give "Vicar" a hint and hope he may be as grateful for it as he promises to be in the advertisement. We might multiply hints, but one hint will cover all the ground. It is that he should not interfere with what he does not understand. Suppose he drugs a person and that person dies, "Vicar" cannot sign a death certificate—at least not a valid one. In that case the coroner at the ensuing inquest would certainly make strong remarks upon "Vicar's" unfortunate position, and "Vicar" might even find himself nearer a trial for manslaughter than would be seemly in one of his cloth.

INFECTION IN THE STREET.

To the Editors of THE LANCET.

SIRS,—Through the medium of your widely read columns I beg to call the attention of the medical world to what I believe to be a source of infection and I write in the hope that this letter may be the means of eliciting competent opinion on the subject. It appears to me that the laying down of straw in the public streets is a practice which, limited as it may be, is prejudicial to health for several reasons and should not be resorted to save in extreme cases. In the first place, it is dirty, as the portion of the road thus covered is left unattended to by the scavengers during periods of various length. The drains also probably suffer in consequence. Moreover, the straw mixing with the natural deposits and accumulations of the road and being in a state of constant disturbance and decay must originate and diffuse dangerous germs. These would, I suppose, vary in quantity with the condition of the straw, the nature of the pavement, and the weather, but the difference would be only in degree. The bruised straw absorbs rain and other moisture and when upon this warm weather prevails some poisonous germination no doubt takes place. When in a dry condition the straw in its constant disturbance and reduction gives off a cloud of unwholesome particles which affect the surrounding atmosphere. The pollution is spread abroad, and in the case of weak or sick people this air, charged with the miasma of decaying vegetable matter, must be highly injurious. It would seem therefore that what invalids gain in one way from the use of straw they may lose in another. Admitting the necessity for the use of straw in certain cases we must yet hope that in view of its creating and diffusing infection to the prejudice of the public health its use may be restricted as much as possible.

I am, Sirs, yours faithfully,

April 18th, 1898. P.

A NOVELTY IN SHOES.

ORDINARY boots and shoes made of leather impervious to air and moisture encourage perspiration of the feet and the formation of products of decomposition. To remedy this defect Dr. Spener of Berlin recommends in the *Deutsche Medicinische Wochenschrift* of April 7th that boots and shoes should be lined with canvas treated by a process which renders it waterproof without loss of porosity. This canvas is of the same colour as the upper leather, which latter is perforated with holes arranged in any kind of tasteful pattern, the margin where it joins the sole being left without perforations for a width of about half an inch. In this way the shoe is ventilated and the perspiration escapes as vapour, while at the same time the foot is completely protected from damp due to rain or other causes, as well as from dust or mud. To prevent the perforations becoming stopped up by blacking or varnish the leather should be well brushed with a dry brush. Shoes made in this way were worn by Dr. Spener during a seven weeks' journey in Russia in the summer of 1897 and gave him entire satisfaction.

THE EYESIGHT OF CIVIL SERVICE CANDIDATES.

To the Editors of THE LANCET.

SIRS,—Can any of your readers tell me where I can ascertain the amount of defect of refraction permissible to candidates for the Civil Service?

I am, Sirs, yours faithfully,

April 19th, 1898. ENQUIRER.

"AN OBSTINATE CASE OF HERPES."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Blake's query in THE LANCET of April 9th, p. 1035, "An Obstinate Case of Herpes," I beg to say that in my experience herpes genitalis, if not symptomatic of urethral discharge or stricture, is usually due to the decomposition of the smegma præputiale. Ointments mix with the latter and share in the decomposition to which the smegma is so liable, hence I think there is a contra-indication against the use of fatty substances. In my opinion scrupulous cleanliness is the most effective preventive against the recurrence of this troublesome complaint. I consider hot alcoholic lotions, as eau de Cologne or brandy in water, quite sufficient. But as the treatment is usually more steadily persevered in when a medicinal lotion is given I am in the habit of prescribing the following lotion: boric acid, 2 dr.; absolute alcohol, 1 oz.; and rose-water to 6 oz. This is to be diluted with equal parts of *boiling* water and is to be used as a lotion several times a day. A dusting powder containing dermatol and calomel assists the treatment. I usually prescribe the following dusting powder: calomel, 20 gr.; dermatol, 30 gr.; and bismuth subnitrate, 1 dr. This treatment has to be carried out regularly for from four to six weeks and then to be repeated about once or twice a week. If every other remedy fails the nitrate of silver pencil usually effects a cure.

I am, Sirs, yours faithfully,

H. OPPENHEIMER, M.D. Heidl., M.R.C.P. Lond.

Adamson-road, Swiss Cottage, N.W., April 11th, 1898.

F.R.C.S.—It is undoubtedly the duty of the medical man to warn the relatives in the matter of a patient who exhibits suicidal tendencies. Should they refuse to take action it might conceivably be his duty to take further action or intimate such a step to the relatives, but no general rule can be laid down, for the special circumstances of each case must be taken into consideration. There is no question of "privilege" at all.

L.S.A. has acted rightly, but we cannot agree with him that any purpose would be served by printing his letter and giving public approval to the course that he has taken. Surely the medical profession—the younger members every whit as much as their seniors—know that under such circumstances to procure an abortion is a crime. We think that to insist upon the point would be impertinent because unnecessary.

L.R.C.P., L.R.C.S., &c.—The matter is one for mutual arrangement. We understand our correspondent to be an employé and not a partner, in which case it seems to us the fees belong to the principal and he can make no legal claim. But if he actually earns most of the fees there can be no objection to his asking to participate in them.

W. H. B. (Bradford).—We never recommend individual practitioners, specialist or other. The medical man in attendance on the case can give advice as to the seeking a consultant's opinion and there is no need whatever to look beyond the two large cities named for adequate medical assistance.

Monkshood—Our correspondent will find the precise information he asks for in THE LANCET of July 15th, 1895, pp. 76, 77, and 78.

Observer's is an ingenious speculation, but no more.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Isle of Wight Observer, Lancaster Standard, Callander Advertiser, Bradford Daily Argus, Norfolk Daily Standard, Brisbane Courier, Kentish Express, North British Mail, Devon Gazette, Times of India, Pioneer Mail, South Wales Daily News, Dundee Advertiser, Glasgow Herald, Liverpool Daily Post, Melbourne Age, Dorking Advertiser, Sheffield Telegraph, Manchester Guardian, Birmingham Post, Builder, Sussex Daily News, Keighley News, Yorkshire Post, Huntingdonshire Post, Newbury Express, Kettering Leader and Observer, Worcester Echo, North Wilts Herald, Bristol Mercury, South Western Star, Barnsley Independent, Essex Telegraph, Accrington Observer, Dalton Advertiser, Leeds Mercury, Cheshire Observer, New Ross Reporter, Midland Free Press, Architect, Scotsman, Fairplay, Mining Journal, Reading Mercury, City Press, Hertfordshire Mercury, Local Government Chronicle, Surrey Advertiser, Local Government Journal, Weekly Free Press and Aberdeen Herald, St. Bartholomew's Hospital Journal, Lincoln Mercury, Auckland Chronicle, Forres Gazette, Hobart Mercury, Ceylon Observer, Banffshire Advertiser, Falkirk Herald, Clifton Chronicle, St. Andrew's Citizen, Boston Independent, Nairnshire Telegraph, Sunderland Daily Echo, Evening Chronicle (Newcastle-on-Tyne), High Peak News, Berkshire Chronicle, Suffolk Chronicle, Montgomeryshire Express, Hornc stle News, Pembroke City Guardian, Munster Express, Cromer Post, West Middlesex Herald, New Ross Reporter, Guernsey Mail, Citizen, &c., &c.**

Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; Messrs. Allen and Hanburys, Lond.; Mons. J. Astier, Paris; Dr. R. Y. Aitken, Blackburn.

B.—Mr. L. A. Bidwell, Lond.; Mrs. E. W. Bailie, Soochow, China; Messrs. A. and C. Black, Lond.; Dr. T. S. Brodie, Houston; Mr. T. Blackett, Lond.; Dr. A. B. Boyd, Richmond, N.Z.; Mr. S. Boyd, Lond.; Dr. M. M. Bowlan, Lond.; Mr. J. de C. Boscawen, Truro; Mr. J. P. Bush, Clifton; Mr. P. H. Boyden, Thorpe Hamlet; Messrs. Blondeau et Cie, Lond.; Mr. G. Booth, Woodbridge; Mr. H. N. Bushby, Lond.; Birmingham City Asylum, Medical Superintendent of; Birmingham and Midland Free Hospital, Secretary of.

C.—Mr. S. N. Corlett, Lond.; Mr. R. Cuffe, Woodhall Spa; Clayton Hospital, Wakefield, Hon. Secretary of; Mr. E. J. Carter, Tunbridge Wells; Dr. T. S. Carrington, Marsovan, Turkey; Dr. J. Clarke, Gurdaspur, Punjab, India; Dr. T. Churton, Leeds; Dr. H. H. Crook, Margate; Mr. J. D. Campbell, Lond.; Dr. W. Collingridge, Lond.; Messrs. Cassell and Co., Lond.; Chelsea Hospital for Women, Lond., Secretary of; Messrs. J. and A. Churchill, Lond.; Mr. J. B. Cameron, Lond.

D.—Dr. W. Dickson, Leicester; Messrs. Domeier and Co., Lond.; Messrs. A. De St. Dalmas and Co., Leicester; Mr. E. Drake, Lond.; Messrs. W. Dawson and Son, Lond.; Messrs. S. Deacon and Co., Lond.

E.—Surgeon-Captain H. M. Earle, Peshawur, India; Messrs. Evans, Gadd and Co., Exeter; Elberfeld Farbenfabriken Co., Lond.; East Suffolk Hospital, Secretary of.

F.—Mr. R. J. Farman, Lond.; Messrs. Ferris and Co., Bristol; Foreign Press Office, Paris; Messrs. Fairchild Bros. and Foster, Lond.; Fellows Manufacturing Co., Lond.; Dr. F. D. Fisher, Bury St. Edmunds; F. C., Lond.

G.—Dr. G. M. Gould, Philadelphia, U.S.A.; Glasgow University, Secretary of; Dr. L. G. Guthrie, Lond.; Dr. E. Goddard, Lond.; Mr. L. M. Griffiths, Bristol; Mr. A. E. Gilbert, Newcastle-on-Tyne; Grantham Town Council, Clerk of; Messrs. Griffin and Co., Lond.

H.—Mr. E. C. Hodgson, Dublin; Dr. F. W. H. Hutchison, Finchingfield; Mr. F. Hobday, Lond.; Harveian Society, Hon. Secretary of; Dr. T. Harris, Manchester; Rev. A. P. Hockin, St. Margaret's-at-Cliffe; Mr. C. H. Huish, Lond.; Mr. J. Heywood, Manchester.

J.—Mr. N. B. Jenkins, Knoxville, U.S.A.; Jeyes' Sanitary Compounds Co., Lond.

K.—Dr. H. Kenwood, Lond.; Dr. A. Kinsey-Morgan, Bournemouth; Dr. N. Kerr, Lond.; Mr. E. Knight, Lond.; Kilburn Dispensary, Lond., Secretary of.

L.—Mr. H. K. Lewis, Lond.; Leamington Corporation, Town Clerk of; Messrs. Lee and Martin, Birmingham; Liverpool Royal Infirmary, Secretary of; Mr. W. M. Laurin, Lond.; Mons. H. Le Soudier, Paris.

M.—Dr. C. MacDonnell, Dundalk; Mr. J. Milne, Lond.; Messrs. J. and C. Mort, Stafford; M.D., London; Messrs. Moseley and Co., Sheffield: Mr. Martin, Darlington; Mr. W. Marriott, Lond.

N.—Newark-on-Trent Hospital, Secretary of; Mr. A. W. Nuthall, Lond.; National Telephone Co., Lond., District Manager of; Norfolk and Norwich Hospital, Norwich, Secretary of; Numero, Lond.

O.—Ogden's, Ltd., Liverpool; O. A., Lond.; Mr. H. W. Ormerod, Warminster; Messrs. Orridge and Co., Lond.

P.—Mr. J. L. Prichard, Llanfair, Pwllgwyngyll; Messrs. Parke, Davis, and Co., Lond; Mr. Edgar Penman, Lond.; Mr. T. H. Powell, Lond.; Mr. J. E. Pickering, Lond.; Messrs. J. Parker and Co., Lond.; Mr. Y. J. Pentland, Edinburgh; Plumbers' Company, Lond.

R.—Mr. C. Randolph. Milverton; Mr. S. H. Rowley, Swadlincote; Mr. E. J. Reid, Lond.; *Rivista Quindicinale di Psicologia, &c.*, Rome, Editor of; Royal Society, Lond.; Messrs. Reynolds and Branson, Leeds; Royal Hospital for Children and Women, Lond., Secretary of; Dr. D. Ross, Lond.; Royal College of Physicians of Ireland, Registrar of; Messrs. G. M. Restall and Son, Birmingham; Royal York Baths, Lond., Manager of.

S.—Dr. W. J. Smyth, Bournemouth; Messrs. Spiers and Pond, Lond.; Sufferer, Lond.; Dr. H. Scurfield, Sunderland; Dr. R. J. Smith, Cardiff; Mr. E. S. Smith, Liverpool; Sanitary Wood Wool Co., Lond.; Dr. E. J. Smyth, Lond.; J. T. Segrue, Ltd., Lond.; Sanitas Co., Lond.; Messrs. Street and Co., Lond.; Mr. W. P. Stocks, Salford; Smith, Lond.; Dr. R. Sevestre, Leicester; St. Mungo's College, Glasgow, Secretary of; Dr. A. J. Sharp, Whitby; Seamen's Hospital Society, Greenwich, Secretary of; Sunderland Borough Lunatic Asylum, Clerk of; Messrs. Street Bros., Lond.

T.—Mr. J. Thompson, Boston; Dr. J. A. Turner, Hertford; The State Children's Aid Association, Lond., Secretary of; Mr. A. G. Tribe, Treorchy; Sir W. Turner, Torquay; Dr. S. J. Taylor, Norwich.

U.—University of Durham College of Medicine, Secretary of.

V.—Mr. J. W. Vickers, Lond.; Volunteer Medical Association, Hon. Secretary of; Messrs. C. Vaux and Sons, Sunderland.

W.—Mr. S. Wall, Oldham; Dr. P. W. Williams, Clifton; Wills, Ltd., Lond; Mr. H. P. Wilkinson, Powick; Mr. E. Willson, Oxford; Dr. Weber, Rome; Messrs. Wright, Layman, and Umney, Lond.; Messrs. Whitaker and Co., Lond; Mr. T. M. Watt, Lond.; Mr. J. Westmorland, Macclesfield; Worthing Corporation, Town Clerk of, Wolverhampton General Hospital, Secretary of; Mr. F. Wilson, Lond.

Z.—Messrs. A. and M. Zimmerman, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. W. Antony, Dublin; A. R., Lond.; Alpha, Ramsgate; Mr. G. B. Atkinson, Long Clawson; Ætas, Lond.; A. B., Lond.

B.—Mr. G. H. W. Bennett, Sandbach; British Medical Temperance Association, Treasurer of; W. H. Blackburn, Bradford; Messrs. Bowen and McKechnie, Lond; Mrs. Blacker, Southampton; B. W., Lond.; Mr. E. H. Beaman, Misterton; *Birmingham Daily Post*; Beta, Lond.; Mr. C. Birchall, Liverpool; Mr. J. H. Booth, Chesterfield; Mr. H. H. Beale, Reading; Dr. H. C. Bastian, Lond.; Bromide, Lond.

C.—Mr. W. R. Cumming, Mill Hill; Corporal, Lond.; Mr. W. Cox, Winchcombe; C. F., Lond.; Camera, Lond.; Dr. A. Court, Staveley; Mrs. A. M. Campbell, Lond.; Dr. S. Conner, H.M.S. *Albacore*, Queenstown; Messrs. Carless and Mackay, Devizes; Mr. T. Cooke, Lond.; Dr. G. W. Cordwent, Milverton; Mr. A. H. Cheatle, Lond.; City Medicus, Lond.; Colliery, Lond.

D.—Dr. C. V. Dingle, Middlesbrough.

E.—E. S. A., Lond.

F.—Miss M. J. Fergusson, Broughty Ferry; F. S., Lond.; Fromms Extract Co., Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.

G.—Dr. A. Gardner, Kirby Moorside; Guest Hospital, Dudley, Secretary of; G., Faversham; G. G., Leeds.

H.—Dr. D. Henderson, Llandeilo; Mr. J. Hamilton, Swadlincote; Messrs. R. Hogg and Son, Lond.; Miss L. Howse, Lond.; Home, Lond.; Hospital for Diseases of the Throat, Lond., Secretary of; H. F., Lond.; Dr. T. W. Hime, Bradford; Mrs. Hunt, St. Albans.

I.—I. J., Lond.

J.—Mr. F. F. Jones, Llanfyllin; Dr. G. S. Jackson, Alnwick; Mr. F. B. Jessett, Lond.; Dr. W. D. Johns, Winton; J. M., Lond.; Junius, Lond.

K.—Mr. W. Kent, Southsea; Mr. Knight, Lond.; K.D., Bournemouth; Messrs. Kilner Bros., Lond.; Messrs. Keith and Co., Edinburgh.

L.—Dr. H. J. Ley, Birmingham; Locum Tenens, Leicester; Mr. Lymburn, Glasgow; Mr. H. B. Long, Burwell; London Association of Nurses, Lond., Lady Superintendent of.

M.—Dr. F. K. March, Bradford; Medicus, Dover; Mutual Life Insurance Co. of New York, Lond., General Manager of; Mr. H. Marsh, Lond.; Moth, Lond.; Medicus, Bath; Medicus, Lond.; M. S., Lond.; Messrs. J. Murdoch and Co., Lond.; Mr. G. F. W. Meadows, Otley; Medicus, Winifrith; Messrs. Margrave Bros., Llanelly; Dr. H. Macnaughton-Jones, Lond.; M. M., Lond.

N.—Dr. H. P. Noble, Lond.; Nucleus, Lond.

O.—Mr. B. O'Connor, Burnley.

P.—Messrs. W. Porteous and Co., Glasgow; P. M., Lond; P. P., Lond.; Permanent, Lond.; Peptenzyme Co., Lond.

R.—Dr. T. W. Reid, Canterbury; Royal Isle of Wight Infirmary, Ryde, Secretary of; Richmond, Lond.; Dr. J. Ryan, Finea; Royal Halifax Infirmary, Treasurer of; Mr. H. M. Riley, Leicester.; Mr. A. Rainford, Port Dinorwic; Dr. H. D. Rolleston, Lond.; Radius, Lond.; Rumex, Lond.; Messrs. Richardson and Co., Lond.

S.—Mr. G. F. Sydenham, Dulverton; Dr. D. J. Sherrard, Hailsham; Spero, Blackburn; Sigma, Lond.; Syncope, Lond.; S., Lond.; Schoolmaster, Belper; Sheffield City Hospital, Medical Superintendent of; Mr. T. Smith, Lond.; Spes, Lond.; Mr. A. Stenhouse, Lond.; Mr. G. Saunders, Burghead; Mr. J. Sampson, York; Messrs. Squire and Sons, Lond.; Messrs. Scott, Newcastle-on-Tyne; Dr. C. S. de Segundo, Lond.

T.—Mr. F. W. Thornton, Huddersfield; Trecenti, Lond.; Trinitrina, Lond.; Mr. A. M. Taylor, Surbiton Hill; Dr. B. Taylor, Nottingham; Mr. J. Thin, Edinburgh.

U.—Urbanus, Lond.

V.—Verax, Lond.; Verax, Sheffield.

W.—Mr. S. Walker, Middlesbrough; W., Millom; Wildersdale, Illracombe; Messrs. G. G. and A. T. Whitwell, Shrewsbury; Messrs. R. R. Whitehead and Bros., Lond.; Dr. H. Williams, Richmond.

X.—X. Y. Z., Crediton.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8 Rue Traversière, Asnières, Paris.

New British Pharmacopoeia 1898.

ARRANGEMENTS ARE BEING MADE TO ADJUST THE B. W. & Co. PREPARATIONS TO THE STANDARDS OF THE NEW BRITISH PHARMACOPOEIA.

Burroughs Wellcome and Co.

London and Sydney.

H 52

SYR. HYPOPHOS. CO. FELLOWS.

IMPORTANT.

Experiments have been made by chemists to concentrate still further many of the old formulæ which are prescribed daily by the Profession. This has been found impracticable as applied to the SYRUP OF HYPOPHOSPHITES, as, after many trials, the results obtained by the administration of the condensed preparations in several other forms have fallen far short of those obtained by the Syrup.

"The compound is skilfully prepared. ..... May be given with confidence in cases of nervous debility."—THE LANCET.

"An excellent tonic in the debility of phthisis and strumous conditions generally."
BRITISH MEDICAL JOURNAL.

SYR. HYPOPHOS. FELLOWS. "This excellent compound, as prepared by Mr. Fellows, may be fairly described as the 'ne plus ultra' of tonics, combining as it does all the valuable constituents of Easton's and Parrish's preparations."
BIRMINGHAM MEDICAL REVIEW.

The FELLOWS MEDICAL MANUFACTURING COMPANY, Ltd.,
94, PAUL STREET, FINSBURY, LONDON, E.C.

Re PHENACETINE.

IMPORTANT WARNING to MEDICAL MEN.

As discoverers and original makers of this **safe and valuable antipyretic,** we consider it to be our duty to **warn** the Medical Profession that an adulterated substance is now on the market, and is being sold as genuine Phenacetine. (*Vide* current Chemical and Pharmaceutical periodicals.) Our name is so well known in connexion with this product, that, for our reputation's sake, we are compelled to issue this notice.

Medical Men can protect themselves and their patients, and can rely upon obtaining a thoroughly pure product by adding the name BAYER when prescribing Phenacetine.

PHENACETINE-BAYER

is the pure and original product: the name is a guarantee of purity. Phenacetine-Bayer is put up in 4, 5, 8, and 16 grain Tablets, as well as in the Powder and Crystal form.

Samples and Literature can be obtained on application to the Wholesale Depots for all Bayer's Pharmaceutical Specialities—

19, ST. DUNSTAN'S HILL, LONDON, E.C.
Also at MANCHESTER, GLASGOW, and BRADFORD.

TRADE MARK 'TABLOID' BRAND

BLAUD PILL

IT rarely happens that the clinical investigator is able to state the physiological results of the action of drugs with mathematical precision. When preparations of iron are administered an exception to the general rule is encountered. By estimating the increase of haemoglobin in the blood of patients the therapeutic action of iron can be ascertained and the relative values of various methods of administering it accurately compared.

A prolonged and comprehensive investigation was recently undertaken at the Hospital for Diseases of the Heart, Soho Square, and it was then definitely ascertained that 'Tabloid' Blaud Pill caused an increase of haemoglobin of 1.2 per cent. per diem, whereas in the case of all the other preparations it never exceeded 0.5 per cent.

Full particulars of these investigations will be forwarded to physicians who desire them.

'TABLOID' BLAUD PILL, 4 gr. (plain or sugar-coated).

'TABLOID' BLAUD PILL, 4 gr. with Arsenious Acid, 1/64 gr.

'TABLOID' BLAUD PILL, 4 gr. with Aloin, 1/20 gr.

'TABLOID' BLAUD PILL, 4 gr., with Extract Cascara Sagrada, 1/2 gr.

Bottles of 100, 10d. per bottle.

'TABLOID' BLAUD PILL, 5 gr. with Strychnine and Arsenious Acid, 1/100 gr. ea.

'TABLOID' BLAUD PILL COMPOUND.

℞ Pil. Ferrugin. (Blaud) gr. 10
Pulv. Capsici .. gr. 1/4
Aloin,
Strychninæ,
Acid. Arseniosi ..*aa* gr. 1/30

Bottles of 100, 1s. 3d. per bottle.

The above are supplied sugar-coated only, unless otherwise marked.

Specimens and Clinical Reports forwarded on request.

Burroughs Wellcome & Co.,

LONDON and SYDNEY.

H 40

H. K. LEWIS'S STANDARD PUBLICATIONS.

Just published, THIRTEENTH Edition, thoroughly revised, 8vo, 16s.

A HANDBOOK OF THERAPEUTICS.

By SYDNEY RINGER, M.D., F.R.S.,

Holme Professor of Clinical Medicine in University College; Physician to University College Hospital; and

HARRINGTON SAINSBURY, M.D., F.R.C.P.,

Physician to the Royal Free Hospital and the City of London Hospital for Diseases of the Chest, Victoria Park.

"We welcome a new edition of this familiar work, which still remains one of the most useful alike to student and practitioner. The article on Serum Therapeutics is excellent. The admirable introduction on symptoms as a guide to prognosis and treatment ought to be studied by every practitioner."—LIVERPOOL MED.-CHIR. JOURNAL.

"One of the most essentially practical and useful therapeutic works in existence."—NEW YORK MEDICAL JOURNAL.

Just published, with 13 Plates and other Illustrations, crown 8vo, 10s. 6d.

DISEASES OF THE NERVOUS SYSTEM.

A HANDBOOK FOR STUDENTS AND PRACTITIONERS.

By CHARLES E. BEEVOR, M.D. Lond., F.R.C.P.,

Physician to the National Hospital for the Paralysed and Epileptic, the Great Northern Central Hospital, and the National Orthopædic Hospital.

[*Lewis's Practical Series.*

"The author is to be congratulated on having produced a treatise on nervous diseases which is likely to be as interesting to the general reader of medicine as to the specialist. The remarks on treatment are excellent and practical throughout. We feel sure that Dr. Beevor's book will be of the greatest value both to the student and practitioner."—BRITISH MEDICAL JOURNAL.

Just published, FIFTH Edition, thoroughly revised, with 4 Plates and 174 Illustrations, crown 8vo, 10s. 6d.

A PRACTICAL TEXT-BOOK OF THE DISEASES OF WOMEN.

By ARTHUR H. N. LEWERS, M.D. Lond.,

Obstetric Physician to the London Hospital, and Joint Teacher of Practical Midwifery at the London Hospital Medical School; Examiner in Midwifery and Diseases of Women at the Conjoint Board of the Royal College of Physicians, London, and Royal College of Surgeons, England, &c.

[*Lewis's Practical Series.*

"This work can be recommended to practitioners and students as giving a concise view of the present state of gynæcological knowledge and practice."—THE LANCET.

"One of the safest guides upon diseases of women both for the practitioner and student."—BRITISH MEDICAL JOURNAL.

"The work has the advantage of being thoroughly practical. To the student we heartily recommend this little book as handy in size and sound in material."—BRITISH GYNÆCOLOGICAL JOURNAL.

"We congratulate Dr. Lewers upon having produced one of the most readable and valuable of a valuable series. No better book could be given a student or practitioner anxious to brush up his gynæcology."—LIVERPOOL MED.-CHIR. JOURNAL.

"In it the author has fully succeeded in showing what a practical text-book for students should be. From preface to finish the style and matter are eminently practical and clinical."—EDINBURGH MEDICAL JOURNAL.

FIFTH Edition, with numerous Illustrations, crown 8vo, 10s. 6d.

HYGIENE AND PUBLIC HEALTH.

By LOUIS C. PARKES, M.D., D.P.H. Lond. Univ.,

Fellow of the Sanitary Institute; Lecturer on Public Health at St. George's Hospital Medical School; Medical Officer of Health for Chelsea.

[*Lewis's Practical Series.*

"Fully maintains the standard of excellence to which its popularity is due."—BRITISH MEDICAL JOURNAL.

"The qualities which have made the manual so deservedly popular in the past are fully maintained."—PRACTITIONER.

"The book is an excellent one in all respects, and is worthy of the high reputation of its author. ..... May be thoroughly relied upon."—SANITARY RECORD.

"A very safe guide for those who desire to possess knowledge on the varied subjects of hygiene and public health."—GLASGOW MEDICAL JOURNAL.

NINTH Edition, in One Volume of over 1100 pages, with Illustrations, large 8vo, 21s.

THE THEORY AND PRACTICE OF MEDICINE.

By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P.,

Professor of the Principles and Practice of Medicine in University College; Physician to University College Hospital, &c.

"Dr. Roberts's 'Theory and Practice of Medicine' is so well known, and has been for so long deservedly appreciated both by students and practitioners of medicine, that no words of ours are necessary to increase its popularity. There is no more suitable book on general medicine than Dr. Roberts's. The present edition has been brought fully up to date."—THE LANCET.

SIXTH Edition, with Illustrations, post 8vo, 12s. 6d.

Handbook of Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I., Examiner in Ophthalmology to the University of Dublin; Surgeon to the National Eye and Ear Infirmary and Ophthalmic Surgeon to Adelaide Hospital, Dublin.

"We are glad to welcome another edition of this excellent manual."—THE LANCET.

"Will especially recommend itself to the student and practitioner anxious to know all that should be known without unnecessary detail."—BRITISH MEDICAL JOURNAL.

Illustrated with Plates, Diagrams, and Charts, demy 8vo, 15s.

A Manual of Infectious Diseases. By E. W. Goodall, M.D. Lond., Medical Superintendent of the Eastern Hospital of the Metropolitan Asylums Board; formerly Medical Registrar to Guy's Hospital; and J. W. WASHBOURN, M.D. Lond., F.R.C.P., Physician to the London Fever Hospital; Assistant Physician to Guy's Hospital, and Lecturer in the Medical School.

"The authors have produced an excellent and well-balanced hand-book."—THE LANCET.

"The authors have produced a work of great value to general practitioners and students of medicine."—GLASGOW MEDICAL JOURNAL.

"A beneficial text-book on a most important subject, well written and well illustrated."—DUBLIN MEDICAL JOURNAL.

"An excellent addition to the text-books."—EDINBURGH MEDICAL JOURNAL.

SECOND EDITION, with numerous Illustrations, large 8vo, 24s.

Diseases of the Skin; their Description, Pathology, Diagnosis, and Treatment. By H. RADCLIFFE CROCKER, M.D. Lond., F.R.C.P., Physician for Diseases of the Skin in University College Hospital, and late Physician to the East London Hospital for Children.

"We have much pleasure in expressing the opinion that the work is a highly creditable testimony to Dr. Crocker's zeal, clinical acumen, and accuracy of observation, and that it will take a good place amongst the excellent manuals that have lately appeared in this country."—BRITISH MEDICAL JOURNAL.

*** *Complete Catalogue of Mr. Lewis's Publications post free on application.*

LONDON: H. K. LEWIS, 136, GOWER STREET, W.C.

A Clinical Lecture

ON

TWO CASES OF INJURY TO THE HEAD.

Delivered at St. Mary's Hospital on March 4th, 1898,

BY HERBERT W. PAGE, M.C. CANTAB., F.R.C.S. ENG.,

SURGEON TO THE HOSPITAL.

GENTLEMEN,—From time to time I have taken cases of head injury as the subject of clinical lectures and more than one of them has been published, but it is doubtful whether we have had before two cases of as much interest and instruction as those which I propose to-day to put side by side as the theme of clinical remarks. The first was that of a man, aged forty-nine years, for an account of whose history I shall draw from the admirable notes taken by Mr. Wells. He was brought to the hospital at 1.15 P.M. on Dec. 21st, 1897. He was a guard on the Metropolitan Railway and in the discharge of his duties, while in the act of waiting on the platform, in a manner which one sees every day, at Royal Oak Station, for the rear van of the moving train to come up to him, he was knocked down by an open carriage door. He was struck on the front of the forehead between the eyes and then was thrown violently on the back of his head. He was dazed but not unconscious and was brought at once to St. Mary's Hospital, arriving here within a short time of the accident. He was then extremely collapsed but was perfectly conscious. He answered questions and gave both his name and address. Blood and cerebro-spinal fluid were flowing from the left ear; his respirations were 20 and his pulse was 90. No fracture could be detected by external examination, but there was a bruise in the front of the forehead and some slight swelling over the left temporal region. The pupils were equal and reacted, though sluggishly, to light. There were no one-sided symptoms of any kind whatever, the bleeding from the ear alone excepted.

Let us here pause for a moment in the history. Up to this point of it the conclusion seemed warranted that the man had sustained a pretty severe concussion of the brain and in all probability a fracture of the base of his skull. The serious nature of his injury admitted of no doubt and in a case of the kind it would be no great surprise if in the course of the next few hours some more definite evidence than collapse and bleeding from the ear should arise to increase the anxiety about him. The scene changed with remarkable suddenness, and returning to the notes we learn that soon after being put to bed he began to lose consciousness, so that when I reached the hospital at 2 P.M., three-quarters of an hour after his arrival, the coma was fairly profound. In this interval there had been some clonic movements of the left arm, but these had quickly given place to spastic rigidity, which quickly involved all the limbs equally. When I first saw him cutaneous stimuli, such as pinching and pulling his hair, made little impression, and I could hardly believe that so short a time ago the man had actually given his name and address. The coma at once suggested that the brain was being subjected to compression, and as I stood beside him for a minute or two it was obvious to all that the unconsciousness was deepening, that both pulse and respiration were failing, and that artificial respiration might become necessary. Another indication of supreme importance was also present, for the pupils, which before had told us nothing, now told a great deal. No longer equal and mobile, they were now fixed and unequal, the left being much larger than the right. Clearly there was no time to lose if we were to give relief. Within a quarter of an hour of my arrival the man was in the theatre and we had begun to shave his head preparatory to opening his skull. This we proceeded to do in the usual way over the left middle meningeal, it being a warrantable assumption that inasmuch as there was bleeding from the left ear and the left pupil was dilated, suggestive of pressure on the left third nerve at the base of the skull, there might be bleeding from a branch of this vessel to which brain compression and the resulting coma were due. Opening having been made by the trephine it was at once evident that there was no hæmorrhage between the dura mater and the bone and that the suspected cause of compression must be sought for elsewhere. Those of you who saw the man on the table will remember that the dura at once bulged prominently into the trephine hole and that it had the blue appearance which is so striking when there is blood beneath it. Furthermore, no brain pulsation could be felt. I therefore proceeded to open the dura freely and this at once gave exit to a considerable amount of blood. Feeling confident, however, that the extravasated blood lay chiefly at the base of the skull a small tube attached to the irrigator was passed down to this part and a very considerable quantity of blood, both fluid and clotted, was thus washed out. The effect was remarkable, for not only did the respiration and pulse materially improve but, what is of greater interest, the left pupil now became of the size of the right and was no longer dilated. This, unhappily, was the full measure of the improvement, and inasmuch as the bleeding came from some inaccessible source there was no alternative but to sew up the wounds and to send the man back to bed. I had no hope that his life could be saved. As a matter of fact he never regained consciousness and died at 8.30 P.M., the respiration having at times been extremely laboured and somewhat like Cheyne-Stokes in character, the pulse having been as high as 169, the temperature having steadily risen to 107° F. immediately before death, and more bleeding having obviously occurred. The necropsy was made by Mr. Low and I was myself present at it. I wish you had been present also, for you would have had the opportunity of seeing in an unusual degree one of the varieties of intracranial hæmorrhage as the result of injury. The so-called sub-arachnoid space over both hemispheres was practically filled with blood, fluid and clotted, but the greatest quantity of blood was at the base, and it had evidently accumulated again in much the same position and amount as we had seen on the operation table. Doubtless it had come from more vessels than one. Extensive laceration of the left orbital lobe and of the anterior extremities of both temporal lobes was found, but the internal parts of the brain were unaffected. There was most extensive basal fracture, for not only were several of the sutures sprung, but lines of fracture ran longitudinally from the sutures and also transversely through the basilar process. These fractures must, I think, have been caused by the fall on the back of the head and not by the blow on the brow, for the lambdoid suture was sprung and gaped almost throughout its entire length. With such lesions it is no wonder that the patient died, but it is at any rate remarkable that he should for a time have been conscious and been able to give his name and address on arrival at the hospital.

I ask you to bear this fact about the case in mind, for the second case which I will briefly relate to you presented in less degree the same features. For the notes I am indebted to Mr. Hunt. From these we learn that a man, aged fifty years, was admitted into St. Mary's Hospital on Jan. 14th, 1898. While walking on the Metropolitan Railway he was caught in the back by the buffer of an engine and knocked down so that his head came violently in contact with the edge of some iron girders lying on the ground. On admission he was half unconscious and brain matter was protruding from a severe lacerated wound over the left temple. The finger at once detected that there was considerable comminution and depression of bone and we had the patient moved straightway to the theatre. He was not so unconscious that we could do without the aid of an anæsthetic, and the parts having been exposed fragments amounting in all to something larger than a five-shilling piece were removed from the temporal and parietal bones. The membranes were extensively lacerated and the finger passed into a large area of broken-up cerebral matter. This being so it will be no surprise to hear that the man was absolutely hemiplegic on the right side. Moreover, his breathing was entirely diaphragmatic. The pupils were unequal, the left being the larger, and both reacted to light. The patient never regained consciousness and before his death on the morning of the 17th the temperature had risen to 104° F. Mr. Low made the post-mortem examination, but was permitted to examine the head only, an unfortunate restriction, because the mode of accident and the after-symptoms rather suggested that the man might have received some injury to the spine as well as to the head. The fracture involved the

squamous portion of the left temporal and adjoining parietal bones and the damaged parts of the brain included the lower part of the left Rolandic area and the upper part of the temporo-sphenoidal lobe. There was extensive sub-arachnoid hæmorrhage over both hemispheres and the upper surface of the cerebellum. Save the lateral ventricles, both of which contained some blood-stained fluid, the internal parts of the brain appeared to be normal.

I have purposely put these two cases in apposition, because although both of them were inevitably fatal they serve to throw into the prominence of contrast the sort of evidence for which the surgeon seeks in all severe head injuries that he may determine whether or not he is likely to be able to save life by resort to surgical measures. As far as injury to bone is concerned it goes without saying, in these days of asepsis, that there ought never to be hesitation or delay in removing useless fragments of displaced bone or in restoring bone or portions of bone to their normal position and it was on this principle that we acted in the second case, where a large piece of the side of the skull had been driven in. You have seen many cases thus successfully treated, but unhappily in this instance the extent and character of the injury sustained by the brain itself rendered operative proceedings futile. An absolute hemiplegia following a compound depressed fracture and not relieved by the elevation of bone told its own tale. In the first case, however, a totally different condition of things presented. No *direct* evidence of fracture was to be obtained—in basal fractures there rarely is—and certainly as far as the skull was concerned there was no reason for resort to operation. Nevertheless, I felt that in the first case much more than in the second the need for operation was urgent and I was much more anxious to have the patient quickly on the table in order to open his head. For we were in the presence of this most suspicious indication of intracranial pressure, the result of injury, that the man had become more and more unconscious each minute that he was in bed, having originally as you remember been distinctly conscious and able to give his address and name. To the very partial loss of consciousness which first characterised his state when the collapse was extreme there was clearly being something added to produce unconsciousness in an increasing degree the further he was removed in time from the collapse in which he first came to the hospital. The strong presumption therefore was that bleeding was going on within the cranium and that the brain was being gradually compressed and rendered anæmic and functionless by the squeezing to which it was being subjected. Here, indeed, was incontrovertible evidence of the need for resort to surgical measures in the hope of averting the peril of death. Was the trephine hole, however, to be made at any haphazard spot? Clearly not; and the question had to be asked, What in the circumstances was the probable source of bleeding? The answer to this question admitted of little doubt. From the anterior or other branch of one of the middle meningeal arteries, the proximity of that vessel to the bone making it liable to be torn across in cases of fracture and frequently to be the source of hæmorrhage between the dura mater and the bone. But you will ask why we chose the left side. For this weighty reason, that there had been bleeding from the left ear and that in the progress of the coma the left pupil had become dilated and larger than the right. It is an established fact that in middle meningeal hæmorrhage this symptom is of not uncommon occurrence, because the clot of blood in increasing tends to make its way towards the base of the skull and pressing forwards on the sphenoidal fissure there directly interferes with the function of the third nerve.

Many years ago in a clinical lecture[1] Mr. Hutchinson directed attention to this phenomenon as regards the pupil and the cases he records are worth mentioning. In one case, that of a boy admitted to hospital with slight concussion of the brain and indications of fracture in the anterior part of the base, it was noticed on the second day after admission, when consciousness had been to a large extent regained, that the right pupil, which had previously been of the same size as the left, had become dilated and fixed. A few hours afterwards the house surgeon found the boy insensible, with difficult and irregular breathing, and within a few minutes the patient died. He had been conscious up to within half an hour of his death and beyond the symptoms which usually attend severe concussion there was none excepting the dilatation of the right pupil. After death a fracture was found crossing the line of the meningeal artery and there was a large clot of blood between the dura mater and the bone extending downwards into the sphenoidal fissure and compressing the third nerve. In another case with the like symptoms precisely the same condition of things was found and many cases have been recorded since by other surgeons. I show you a drawing of the sort of fracture which may be associated with rupture of the middle meningeal artery. The line of fracture is in this case vertical, running to the base and passing through the anterior inferior angle of the parietal bone, but the same thing may happen when the fracture is horizontal in direction. Do not go away with the idea that pressure of blood is the only cause of a dilated pupil, but do not in any case fail to attribute to it such value as accompanying indications may seem to warrant. For these you will, of course, always look; for evidence of the direction of the fracture if any there be, for indications of paralysis, at the character of the coma and the period of its onset, at the state of both respiration and circulation and any marked change in either,—these in combination and each one separately may help in the diagnosis or in the attempt to arrive at one. Certain diagnosis is, however, often impossible, approximate diagnosis is perhaps the best to be attained to, erroneous diagnosis is to be excused, and increasing experience will only tend to teach you that in head injuries the symptoms will too frequently belie the classical indications of this or that lesion. Every case, however simple, presents its own problems to be solved.

Let us return, however, from this digression to our own case and ask if we were right in our conclusions and in what we did. We were both right and wrong—right in the conclusion that the brain was being subjected to pressure, right also in using the trephine, but wrong in our conjecture as to the source of the blood. Here conjecture alone is possible, for it is obvious that in these cases until the opening has been made there is no means of telling which vessel may be bleeding within the skull and we must be prepared to find a condition of things for which no relief can be given. In a case which I have published we found ourselves in the same dilemma. Intracranial hæmorrhage had been correctly diagnosed from symptoms of intense urgency, but the source of the hæmorrhage was a rent in one lateral sinus and the bleeding could not be stayed. It is, however, a great thing in any case to be able to speak with comparative certainty as to the existence of intracranial bleeding, for relief may perchance be given if resorted to without delay. So great, however, may be the urgency that artificial respiration alone will keep the patient alive until his head has been opened. I have already touched on the several indications which really guide us, but they are very likely to be missed unless the patient be carefully watched minute by minute. My last house surgeon, Mr. Hanson, deserves, therefore, every credit for his careful observation of this man's condition and I would commend to you the exercise of the same care in all cases of head injury.

In this connexion may anything be said of our second case and the symptoms which were there present? Increasing unconsciousness and one-sided phenomena are the very things which have been named as likely to be of value in determining whether the brain is being compressed. We knew, however, by the simple observation that there was a large open fracture and the skull was no longer a closed cavity that the symptoms could hardly be due to intracranial pressure. Under these conditions intracranial pressure was well-nigh impossible, depression of bone is *per se* an insufficient cause of it, and had blood been extravasated it must either itself have escaped from the wound or caused cerebral matter to protrude. Things might perhaps be different were blood extravasated in large quantity beneath the tentorium cerebelli. From this point of view, therefore, the contrast of the two cases is worthy of our notice. Had they aught in common? In both of them there was extensive injury to the brain and in both also there was great rise of temperature, an indication perhaps of the severity of the brain lesions and of the degree in which the cerebral control had been withdrawn from the processes of organic life. This also they had in common, that their end was the same. I wish it could have been otherwise, but it is impossible to forget or deny that many cases of head injury are inevitably fatal from the character and severity of the injuries to the brain itself. It is, moreover, because of the multitudinous effects of the

[1] London Hospital Reports, vol. iv., 1867.

injuries to the brain that precise symptoms of this or that lesion are so often masked and obscure and that certain diagnosis is so difficult. Shall the surgeon therefore withhold his aid? Rather let him look the more carefully for any indications to tell him whether relief may perchance be given by exploratory operation. He may fail, but to abandon the patient to his fate may not be the best that he can do. A life may now and then be saved where the actual condition could only thus have been determined and where relief could have been brought in no other way.

ABSTRACT OF

The Hunterian Lectures

ON

THE SURGERY OF THE KIDNEY.

Delivered before the Royal College of Surgeons of England on March 21st, 23rd, and 25th, 1898.

BY HENRY MORRIS, F.R.C.S. ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

LECTURE III.[1]

Delivered on March 25th.

FISTULA CAUSED BY RENAL CALCULUS; OBSTRUCTIVE ANURIA DUE TO RENAL CALCULUS; THE TECHNIQUE OF THE EXPLORATION OF THE KIDNEY AND URETER FOR CALCULUS.

MR. PRESIDENT AND GENTLEMEN,—In the second lecture I endeavoured to show (1) that the errors and uncertainties in the diagnosis of renal calculus had in many instances been of distinct advantage because they had led to the exploration of the kidney and this in turn to the discovery and cure of various morbid conditions other than those due to stone; (2) that unsuspected, quiescent, and migratory renal calculi cause very destructive and even fatal consequences and that we ought to revise our practice with regard to the early treatment of renal calculus; and (3) that the low mortality of nephrolithotomy (i.e., the operation for renal calculus in its early stages), and the high mortality of nephrotomy, and the still higher mortality of nephrectomy (i.e., of the operations performed for the advanced disorders due to renal calculus) show the advisability of operating at as early a stage as possible. In further support of this conclusion I may point to the exploratory operations and the operations for moveable kidneys. There are 42 of the former and 57 of the latter without a death due in any way to the operation.

At the Middlesex Hospital, where renal operations are freely undertaken by the members of the surgical staff, a good many persons nevertheless die from the effects of renal calculus who are too ill to be operated upon when admitted. During the years 1885 to 1895 inclusive calculi were found in the kidneys in 45 out of 3331 post-mortem examinations, and hydronephrosis due to calculus impacted in the ureter was found in 4 others. That is, in 1½ per cent. of persons dying from all causes calculi were found in one or both kidneys or ureters. Many of these 45 bodies found their way to the post-mortem room entirely because of calculous disease, and in the rest renal calculi contributed more or less to the fatal result. Amongst the 45 cases there were 10 instances of suppuration in one or both kidneys; 11 cases of perinephric abscess; 4 cases in which calculi were present in both kidneys; and 4 others in which only one kidney could be said to exist, the other having undergone complete atrophy due to obliterated ureter in three of them and cystic degeneration from obstruction in the fourth. Besides these 45 cases there were 63 instances of suppurative nephritis, in most of which both kidneys were affected, and in many of them renal calculus had played a conspicuous part.

FISTULÆ.

In considering the harmful effects of renal calculi it is impossible to leave out of account renal and ureteral fistulæ. It is after nephrectomy for calculous pyonephrosis especially that a fistula due to operation is most likely to occur. It is exceptional for a permanent or long-standing fistula to result from nephrolithotomy, or an operation for movable kidney, or a simple exploration. Fistula is also exceptionally rare after nephrectomy except when perinephritis or perinephric abscess has previously existed. In cases of nephrectomy for calculous disease perinephritis, however, has usually preceded the operation, but in spite of this a fistula followed in only one out of twelve of my surviving nephrectomies for stone, and in that case the fistula was superficial and probably healed shortly after the patient left the hospital, though I have no certain knowledge that it did so. Out of my 33 nephro-lithotomies which survived a superficial sinus occurred in two and a urinary sinus in two. In the two latter very large incisions involving the pelvis of the kidney had to be made for the extraction of stones of great size. After nephrotomy for advanced calculous conditions—e.g., calculous pyonephrosis—fistulæ, either temporary or permanent, occurred in 37·5 per cent. of the cases operated upon. Though in many of these the fistulæ subsequently healed, still the fact that even a temporary fistula followed in so large a proportion of cases affords a further argument in favour of early operation for stone in the kidney. But the fistulæ which occur independently of any operation, which are due, in other words, to long-retained renal calculi, should appeal even more strongly to surgeons as an argument against delaying operative treatment for stone. The persistency of these fistulæ, the recurrence of deep suppuration if the external orifice of the fistula is allowed to close, together with the abiding troubles caused by the continued presence of the stone in the kidney or ureter, will sooner or later induce the patient to demand surgical assistance. Then the patient has to undergo risks and the surgeon to face difficulties which only occur when the perinephric structures are matted and hardened by long-standing inflammation or suppuration and have become so densely adherent to the kidney capsule that it is often no easy matter to find the kidney.

Another and very important fact is that these condensed contracted tissues fill the hilum and surround the whole of the kidney with a fibro-lipomatous mass which shortens and stiffens the pedicle and compresses and destroys the elasticity of the renal vessels and of the ureter. The result of this is that the kidney gets tucked close up against the spinal column and as firmly set in its surroundings as if it were embedded in plaster-of-Paris. If nephrotomy is done under these conditions the renal artery cannot be controlled when the renal parenchyma is incised and the kidney cavity is explored and thus bleeding is apt to be very free. If nephrectomy is performed the risks and difficulties in dealing with the pedicle are enormously increased. When a fistula is in course of formation the perinephric abscess should be opened as soon as possible lest the matter should burrow and discharge in some dangerous direction. It is true the abscess will often make for the loin or groin and open spontaneously on the surface if it be not incised, but it should not be suffered to do so. It is, however, as a rule unsafe to search for and explore the kidney when the tissues surrounding it are in an acutely suppurating condition. The safer course is to defer the exploration of the kidney till after the abscess is healed. This necessitates a lengthy convalescence followed by a fistula and a second operation before the cause of the abscess can be removed. After this second operation, whether it be nephrotomy or nephrectomy, it is not unfrequent for the healing of the wound to be delayed by profuse and prolonged suppuration.

The same drawbacks attend operations for calculous affections of long standing if perinephritis without abscess or fistula has existed. If perinephritis has commenced before nephrotomy is performed neither the extraction of a calculus nor the evacuation of pus from the renal cavity may prevent the spreading of the inflammatory process in the surrounding cellular tissue and the formation of a fistula at a long distance from the kidney.

The closure of the fistula by surgical treatment is tedious and sometimes impossible; and in some cases, after having been successfully treated, and remaining closed for many months or a year or two, it will reopen. Those which do not communicate with the kidney or ureter should be treated on the ordinary principles applicable to all fistulæ; those which do so communicate must be dealt with differently in different cases. If there is a calculus in the kidney it must be removed; if the kidney

[1] Lectures I. and II. were published in THE LANCET of April 16th and 23rd, 1898, respectively.

is quite disorganised nephrectomy is requisite; if the kidney is not disorganised the fistulous track should be cut out and the cut surfaces united by sutures. When no stone is found in the kidney the ureter will probably be the seat of some kind of obstruction. There may be an impacted calculus, a stricture following inflammation or ulceration caused by a calculus which has escaped, or a stricture as the result of contraction after periureteritis, or the duct may be distended in one part and contracted in another by suppurative ureteritis. In most cases a renal or ureteral fistula of calculous origin will, I believe, close permanently after nephrectomy even if a stone be left impacted in the ureter or the ureter be in a state of suppuration at the time of the operation. But should it not do so it may be necessary, as in the case of fistula kept up by tuberculous ureteritis, to perform partial or complete ureterectomy. A urinary fistula due to obstruction in the ureter may in time cease to discharge urine owing to complete atrophy of the kidney. The length of time required for this to be accomplished depends on the degree of obstruction which the fistula, on the one hand, and the ureteral block on the other hand offer to the escape of urine. The more complete the obstruction the more rapid the atrophy and *vice versâ*. In a case of my own the process took seven years.[2] Even after a fistula ceases to be urinous it may persist as a suppurating sinus.

Two objections to early operations for renal calculus are: (1) that calculi will be missed if sought for very early because of their small size; and (2) that very small calculi, if they once enter the ureter, pass through the urinary passages without risk to life. Both these objections are unsound and lead to dangerous delay. In the lists of my operations for calculus it will be found that stones of all sizes, from two grains to ten ounces, have been removed by nephro-lithotomy or nephrotomy; and I do not think one, however small, will be missed because of its small size with the present method of exploring the kidney and ureter. The second objection is more invalid than the first, for there is ample proof that a very minute calculus may provoke the complete destruction of the kidney or become the immediate cause of death from suppression of urine. In some of my cases the most continuous and profuse hæmaturia has been caused by small stones. But—worse than hæmaturia or the destruction of a kidney—calculi weighing less than two grains have caused death. Sir William Roberts, in his admirable chapter on "Obstructive Suppression of Urine," records a case where three little oxalate of lime calculi about the size of hemp seeds, and weighing altogether one and a half grains, were found in the lower part of the ureter, where it passed through the coats of the bladder; this was the cause of the obstruction which resulted in the death of the patient from anuria.

CALCULOUS ANURIA.

Calculous anuria is the gravest and most fatal of the many serious complications of renal lithiasis. Special attention was given to it in 1872 by Sir William Roberts in the second edition of his classical work on "Urinary and Renal Diseases" (p. 23, *et seq.*); and in 1881 an exhaustive thesis on anuria by Pierre Merklen was published in Paris; but neither in this nor in Sir William Roberts's book is the subject of the surgical treatment of calculous anuria considered. In his 1885 edition Sir William Roberts, it is true, says in a footnote: "Lately it has been recommended to open the ureter or pelvis of the kidney above the obstruction and so establish a permanent urinary fistula." But though anti-spasmodics and a variety of mechanical means are recommended and diuretics are rightly condemned, still surgical aid was not seriously discussed by either Sir William Roberts or Merklen. Even at the present time the principle of the operative treatment of calculous suppression of urine is either imperfectly known or improperly appreciated by the profession in this country, because operations are certainly neither sufficiently early nor sufficiently often performed. Worst still, patients are sometimes told that no surgeon in his senses would dream of an operation in their condition. Since 1885 excellent theses on this subject have appeared in France by Legueu, Donnadieu, Glantenay, and Vailhen; and in England, though nothing bearing generally on the surgical treatment of calculous anuria has been published, some brilliantly successful operations by the lumbar route have been reported, notably by Clement Lucas, Ralfe and Godlee, and Kirkham, who were amongst the first English surgeons to operate in these cases.

Etiology.—Calculous anuria occurs when the ureter or renal pelvis of one kidney is occluded by a calculus, the other kidney being absent, atrophied, or diseased. It often affects persons in robust health and may be sudden and complete in its onset. It is then due to the cessation of function of a kidney which has undergone compensatory hypertrophy and which up to the moment of obstruction had been secreting the whole or the chief part of the urine. Occlusion of one ureter never gives rise to fatal anuria if the opposite kidney and ureter are normal.

Anuria may occur at any age and in either sex; it is more frequent in males of thirty-five years and upwards and more especially in elderly men. Instances of children and even infants at the breast dying from convulsions from calculous suppression have been recorded (Rayer). Much importance ought to be attached to the antecedent history of patients who become the subjects of suppression of urine from ureteral obstruction. Commonly they have had several previous attacks of renal colic or of lumbar pains followed by the discharge of gravel or small stones months or even years before the attack in which the anuria begins. But cases have occurred of sudden suppression of urine from obstruction by a calculus without a previous attack of any kind. In such cases both kidneys have been simultaneously obstructed or one kidney has been destroyed by disease of another kind or has been congenitally absent or abnormal. Calculous anuria is often determined or immediately induced by fatigue, a drive or some other shaking movement, such as jumping from an omnibus, violent coughing, rapidly running from the garden to the house on hearing a loud peal of thunder, are some of the causes, in my own cases, which started the descent of the calculi from the kidney into the ureter.

Symptoms.—The symptoms of calculous anuria are not simply those of uræmia. Though in rare instances the onset is insidious pain is almost invariably experienced in the region of the kidney involved last at the outset of the suppression. The pain so started may continue throughout the anuria, but more commonly it is temporary, lasting only a day or two or less, and then subsiding. Less frequently the first symptom is a dull and continuous aching in the lumbar region with or without pains radiating along the course of the ureter. In very exceptional cases the anuria has come on without pain on either side and without the history of previous attacks of renal colic, or the patient has quite forgotten on which side the previous attacks of colic were. These, fortunately rare, are the cases in which the surgeon has no guide as to which kidney to operate upon. With the pain there may be troubles of micturition, such as continual desire to pass urine though not a drop of urine may be in the bladder, or the urine is passed with difficulty and sometimes only in drops or teaspoonfuls; or, on the contrary, there may be polyuria, the urine being pale and of low density and showing evidence of imperfect renal function. In other cases the anuria is intermittent, ceasing, after some hours or a few days, to reappear and become definitely established.

Calculous anuria may be complete or incomplete. In the complete suppression the bladder is quite empty or if not contains but a few teaspoonfuls of bloody urine. In the incomplete form the anuria is intermittent but progressive and interrupted by discharges of urine, insufficient to satisfy the requirements of the system but sufficient to retard the fatal termination of the disease. When the working kidney is hydronephrotic the uræmic condition may be deferred for a longer time than otherwise, even if there are no polyuric intermissions. Calculous anuria once established may last many days without causing any symptoms of uræmia. This is perhaps its most striking feature, which it shares with other forms of obstructive anuria, and with anuria from ligation of the ureters, as distinct from the non-obstructive forms. Even when the suppression is complete seven, eight, or ten days may elapse before the symptoms of uræmia appear and sometimes death occurs without any of the characteristic symptoms of uræmic poisoning arising at all. When the uræmic phenomena supervene after a longer or shorter time death follows rapidly or at any rate within a day or two. In the period of tolerance the patient, though he may not pass a single drop of urine for several days, may yet walk about, eat, and do mental work in all the appearance of good health. This fact must never be forgotten if a serious mistake in diagnosis and prognosis is to be avoided.

[2] See Injuries to the Ureter, Edinburgh Medical Journal, January, 1898

It is, however, all the more likely to escape notice because it is so opposed to the course of suppression due to non-obstructive causes. In certain cases polyuria occurs and retards the appearance of uræmic phenomena as well as the fatal termination, which however at length arrives. In Paget's case polyuria occurred on the thirteenth day and death was deferred till the twenty-second day. In Weber's case a succession of remissions of polyuria took place and the fatal result was not reached till the thirtieth day from the onset of the anuria.

Symptoms when hydronephrosis is associated with anuria.—When the working kidney is hydronephrotic patients with calculous anuria may escape uræmic accidents for a much longer time than others without having polyuric remissions. Thus in a fatal case of a man, aged sixty-four years, recorded by Rayer,[3] with an enormous hydronephrosis, the anuria lasted twenty-five days, with only a slight remission on the tenth day. James Russell published a case of anuria lasting twenty days, which terminated by the discharge of ten litres of urine in twenty-four hours; but a year later the patient died and at the post-mortem examination there was discovered double hydronephrosis with calculi in the pelvis of each kidney. Sir William Roberts cites a case of calculous anuria of ten days' duration, with an increasing tumour in the left iliac fossa; recovery followed a veritable urinary crisis coincident with the disappearance of the tumour.

Prognosis.—The usual termination of calculous anuria when left to itself is death about the tenth or eleventh day. If, however, the suppression is interrupted by intermittent polyuria, whether hydronephrosis exists or not, life may be prolonged by many days. Spontaneous cure sometimes occurs. Legueu states that out of 56 cases of calculous anuria, which neither followed nor were treated by operations, recovery took place in 16—i.e., in 28·5 per cent. In 1 the secretion recommenced on the third day; in 10 between the fifth and tenth days; and in the rest on the thirteenth, fourteenth, fifteenth, twentieth, and in two instances on even a still later day. Of the 40 deaths 23 occurred between the fifth and fifteenth days, one on the fourth day, and the rest on and after the sixteenth day. Of the 48 cases not operated upon 38 died and 10 recovered; of the 49 cases operated upon 24 died and 25 recovered. Thus there is a percentage of recoveries in cases operated upon of 51 as against 20·8 in cases not operated upon.

The pathological anatomy of calculous anuria may be summed up in the statement that the ureter or renal pelvis of one side has become recently occluded, whilst the kidney of the other side is either congenitally absent or functionally suppressed, or structurally destroyed by calculus or some other form of renal disease. Rarely does simultaneous obstruction of both ureters by calculi occur, although this has been known to happen.

Diagnosis.—The occurrence of former attacks of renal colic in a gouty person, followed by the sudden onset of pain on one side, and this accompanied or immediately followed by anuria, points at once to obstruction of a calculous nature. The diagnosis will be further strengthened if a swelling or distinct tenderness on pressure is present in the renal region or in the course of the ureter of the side recently become the seat of pain. But in some cases there is not a distinct history of previous attacks of renal colic and yet one kidney may have become silently but entirely obstructed or destroyed by calculi, as shown in Lecture II. In other cases there have been previous attacks of renal colic or pain, but the patient has forgotten on which side the pain was felt. If under these circumstances anuria sets in it may be difficult or impossible to diagnose on which side the recent obstruction exists. The surgeon thus in doubt must seek information by the examination of the patient in the following manner:—1. The course of the ureter should be palpated, if possible, through the abdominal parietes. This is often an impossibility owing to the stoutness of the patient. The ureter in which a calculus is impacted is likely to be inflamed and painful as well as tender; even when a calculus has passed along the ureter it is likely to be followed by pain, lasting several days after its escape. 2. Rectal and vaginal examination should be made. In the male digital examination per rectum has led to the discovery of a calculus impacted in the lower part of the ureter, as in Rawdon's and Cecil's cases; in the female the same discovery has been made by vaginal examination by Emmet and by myself, and I have also detected the presence of a stone by vesical examination after dilating the female urethra. 3. Catheterization of the ureters, though easy of application in the female, does not afford satisfactory assistance in these cases, whether done across the bladder through the dilated ureter, or by vaginal cystotomy as practised by Bozemann and Emmet, or by the aid of suprapubic cystotomy. The cystoscope in the cases of anuria is quite unnecessary and can give no information which is not more fully ascertained by rectal or vaginal examination and a sound in the bladder.

If there be a calculus in the terminal part of the ureter it will almost certainly, if of any size, be detected by either rectal or vaginal examination and can be extracted by one of the operations to be mentioned later. But if by these modes of examination nothing is detected in the inferior extremity of the ureter we ought without delay to explore one or both of the kidneys through the loin and to select first the side on which pain or tenderness or swelling or a hard contracted condition of the abdominal walls exists or has recently existed. Through such an incision the kidney and adjacent part of the ureter can be seen and felt and the rest of the ureter catheterised, and if a stone be found it will be possible to remove it, and if no stone be found then by establishing a renal fistula relief will be given to the congested state of the kidney and a condition will thereby be brought about favourable to the resumption of the secretion of urine.

Calculous anuria and uræmia have to be diagnosed from non-obstructive forms of anuria and from other forms of obstructive disease. A case of anuria from double polycystic disease, in which the symptoms and history were those of calculous obstruction, has been under my care lately. Cancer of the uterus after calculus is the most frequent cause of obstructive anuria. Primary cancer of the bladder may obstruct the ureters. Many cases after operations for myoma of the uterus succumb to anuria with dilatation of the ureters and renal pelves. Calculous anuria will be diagnosed from traumatic anuria, in which the vessels of both kidneys are thrombosed by the symptoms following an injury, and from the anuria following catheterisation and other operations on the lower urinary passages by the absence of the general malaise at the onset and of the rigors, high temperature, and intense prostration which accompany urinary fever.

Treatment.—The treatment of anuria up to fifteen years ago was entirely medical. Death was the common result. No wonder; for what else could be expected from purgatives and diuretics, from diaphoretics and anti-spasmodics, from baths, forced exercise, and massage? Drugs, such as digitalis and pilocarpine and others, which induce the elimination of a considerable quantity of water from the system, remove only a small quantity of urea with the water and thus leave the blood proportionately more highly charged with urea. For this reason such supposed remedies ought to be ordered with extreme precaution in obstructive anuria. The surgical treatment of calculous anuria is a question of the day and one of the greatest importance. Formerly no one dared to do more than suggest operation, though Rayer and Gigon in 1856 had strongly recommended it. Nephrotomy should be performed in the gravest cases to prevent death from uræmia; in the slighter and intermittent cases it should be performed to extract a stone which may at any time produce complete persistent anuria. When the calculus is in the lower portion of the ureter or within, or close to, the vesical orifice the advisability of adopting one of the special methods for reaching the ureter in these parts will have to be considered, but in many cases the state of the patient will make it necessary to postpone this for a time at least. Should the obstruction not be removed at the primary operation a lumbar renal fistula should be established and ureterotomy may be subsequently successful, or the stone may be naturally expelled, and thus the normal channel will be opened up and the fistula allowed to close.

Opinions have hitherto differed as to the precise time when the surgeon should interfere. To be successful it is certain that the operation should be done early and before the uræmic stage is reached. But since this stage is generally delayed till after the sixth day some writers have advocated the fifth or sixth day as the period of surgical operation. In Demon's case the intervention was made on the eleventh day and in Chevalier's on the fourteenth with complete success; but on the other hand operations on the third day have been unsuccessful in restoring the secretory function. Moreover, eclampsia necessitating immediate operation may occur as early as the third or fourth day of

[3] Maladies des Reins, tome iii., p. 490.

the anuria, as in Vailhen's case. Sudden death may occur early in an anuric person who seems to be in fair general health. My opinion is that an operation ought to be performed as soon as the anuria is established and the diagnosis is satisfactorily made. We should operate on the side last affected when the indication on this point is clear. It is not the kidney which has longest suffered or which has yielded most calculi which ought to be incised. The contrary ought to be the rule, because the more the kidney is affected the more extreme its degeneration, the less the secretion which it will yield, and consequently the less the benefit from nephrotomy. In the absence of exact history drawn from the patient himself it is necessary to try to ascertain by careful examination of the abdomen which kidney to explore. When there is no enlargement of the kidney and no pain or tenderness there may yet be a considerable degree of hardening from contraction of the abdominal muscles over the kidney which is last involved. In most cases it will be best to explore the kidney first, but in certain exceptional instances, as when the stone can be felt per rectum or per vaginam, or evidence clearly points to the side and precise spot at which it is impacted, ureterotomy should be done. For this nothing less than actually feeling the stone through the abdominal parietes (a most unlikely thing in persons suffering from calculous anuria) ought to satisfy. The localisation of stone, as to whether it be in the kidney or ureter, is very uncertain; most frequently, when impacted in the ureter, the symptoms it causes are referred to the corresponding kidney; but occasionally the reverse obtains and a stone in the renal pelvis gives rise to fixed abiding pain and acute tenderness at one particular spot in the course of the ureter.

The nature of the operation performed in the 49 cases was as follows:—1. Operation stated as nephrotomy or (in a few cases) merely exploration of kidney, in 36 cases. In one of them the operation was performed by the thermo-cautery. 2. Incision of the renal pelvis, 5 cases. One was done by thermo-cautery. 3. Incision of the ureter, 7 cases. One was performed through the rectum. In one additional case an attempt was made to remove an obstruction from the lower end of the ureter by means of the finger in the bladder.

THE TECHNIQUE OF THE OPERATION FOR EXPLORING THE KIDNEY AND URETER.

The method I adopt for exploring the kidney and ureter for stone is the following. The incision I have from the first always employed is a very oblique lumbar one commencing an inch above and in front of the anterior superior iliac spine and continued outwards and backwards to the outer edge of the erector spinæ muscle, about a finger's breadth below the last rib. The length of the incision varies with the figure and degree of stoutness of the individual. More frequently than not it is unnecessary to begin so far forward and sometimes it is advantageous to continue the skin incision backwards a little over the erector spinæ muscle. The direction of the lumbar incision is, however, always in the line between the points mentioned. When more room is required a short vertical or slightly curved incision is made upwards from the oblique wound extending over the back of the twelfth rib. This greatly facilitates deep manipulation and is a step towards clearing the last rib in the event of the excision of that bone being requisite. Manipulation is also sometimes facilitated by snicking the outer edge of the quadratus lumborum. When more room in front is required either for freeing or inspecting the kidney, controlling bleeding in the deep part of the wound, or for tracing the ureter, the incision should be carried in a curvilinear way toward Poupart's ligament and then forward parallel to and an inch above that ligament as far as the internal abdominal ring or further. Bleeding points should be controlled as they occur by pressure forceps, and if the last dorsal or the ilio-hypogastric nerve is in the way it is best to excise an inch or more of it. When freed of its connexions anteriorly, posteriorly, and at both ends the kidney should be brought bodily on to the surface of the loin. This in a large number of persons can be done without difficulty and without causing tension of the renal pedicle, but in others with thick-set trunks and very fat parietes it is not possible to bring the kidney quite out of the body even when great traction is made upon the pedicle. Forcible pulling upon the pedicle, however, must be avoided. When owing to these conditions the kidney cannot be brought out of the wound the wound should be made amply large enough to allow the surgeon to see clearly the kidney which he is about to incise. Unless this be done there is always the risk of wounding the branch of the renal artery or vein which runs over the back of the renal pelvis before entering the parenchyma on the posterior surface of the organ. Moreover, small branches of the renal artery anastomising with the lumbar vessels may be wounded and should be seen to be ligatured. If no calculus is felt an incision is next made into the kidney along its convex border whilst the finger and thumb of the left hand steady the kidney and compress the pedicle. This compression of the pedicle serves a double purpose: (1) it limits hæmorrhage, and (2) it prevents a small calculus which might drop out of one of the calyces from falling into the ureter. Through the wound in the kidney the right index finger is introduced and a careful detailed manipulation is made of every part of the interior of the organ. Needling the kidney for diagnostic purposes is most unreliable and should be abandoned. Whether or not a calculus be found in the kidney the ureter should always be catheterised from end to end to test if its lumen is quite free. If this is not done a small calculus may be missed.

If the ureteral catheter can be passed readily through the renal cavity by way of the incision in the convex border of the kidney this should be done, but it is often impossible or troublesome to hit off the orifice of the ureter in this way. If so, the back of the infundibulum should be cleared and a minute longitudinal incision should be made into it with the point of a narrow sharp scalpel or sharp-pointed scissors, and through this incision the catheter should be conducted. In doing this care must be used not to mistake the renal vein or a branch of the vein for the renal pelvis. Should such an error be made bleeding will be readily controlled by pinching up the edges of the tiny wound and applying a circular ligature. When any doubt arises the vein will be distinguished by watching for the return of blood after compressing it. There is often quite a plexus of fine blood-vessels on the surface of the infundibulum and ureteral wall which must be avoided if possible. If there be a stone in the ureter the catheter will be obstructed at the point of impaction. In the male, whether this point be in the abdominal or the pelvic course of the ureter, the calculus can be reached and removed retroperitoneally by prolonging the anterior or lower end of the incision in the direction mentioned before.

In the female the same procedure answers for the abdominal and first portion of the pelvic course of the ureter, but for the removal of a calculus from the ureter within the broad ligament, especially near the uterus or vagina, the vaginal or sacral route is the best. If situated quite at the vesical orifice of the ureter it can be extracted through the bladder after dilating the urethra and, if needful, slightly incising the ureteral orifice. No attempt should be made to extract a calculus through the bladder unless it be situated quite at the internal opening. A calculus, if it is of fair size, may be felt through the bladder when it is in the ureter just above the point where the duct enters the vesical wall. When here it cannot be so removed without exposing the patient to the danger of an intra-peritoneal urinary fistula. In one of the recorded cases of uretero-lithotomy this accident happened and the patient died. If the ureter is dilated above the stone and the stone can be readily pushed back into the dilated portion this should be done, whether the point of impaction is above or below the brim of the pelvis. The incision in the dilated tube may then be closed by one or two Lembert sutures. Care should be taken to provide drainage for any urine which may extravasate through the ureteral wound, otherwise serious mischief in the pelvic cellular tissue may occur after the too early closure of the external wound. In operating upon the sound kidney I do not hesitate to cut directly down upon a calculus wherever it may present; still less need one do so in a kidney the cavity of which is pouched and the parenchyma atrophied. When so made the incision should preferably radiate from the hilum, but when the parenchyma is very thin and a large branched calculus or several calculi are present the incision may be made in any direction which gives the greatest facility for extracting the stones.

In calculous pyonephrosis I have removed seven stones through as many separate incisions in the thin parenchyma. As long ago as 1829 Gerdy[4] had advised that the convex

[4] P. N. Gerdy: Anatomie des Formes Extérieures du Corps Humain, Paris, 1829. See note on p. 153.

border of the kidney should be selected for incision in nephrotomy. The advantages depending on the anatomical arrangement of the blood-vessels within the kidney of an incision along this border are considerable. Moreover, through no other single incision can a complete examination of the cavity and substance of the kidney be so conveniently made.

After removing a calculus from the renal pelvis, if the convex border has not been incised the interior of the kidney should be palpated either through the opening or if this be too small to admit the finger then by invaginating the infundibulum. When the renal cavity is sacculated and suppurating it should be freely irrigated with a hot weak solution of Condy's fluid, perchloride, or carbolic acid. In a few instances the calyces have been found packed with a putty-like mass of muco-pus, which was thoroughly cleared out with the finger and little swabs of cotton-wool. In every case a drainage-tube is inserted into the wound around the kidney, but not into the kidney cavity itself. I prefer a tube to iodoform gauze, which, by sucking up and retaining the serum and blood, keeps the surfaces of the wound apart and prevents immediate healing. In closing the parietal wound I transfix the whole of the layers, skin, muscles, and fasciæ, with the same sutures carried by means of Hagedorn's large curved needles. I have for some considerable time abandoned the use of buried sutures for the separate layers of muscles and fasciæ. The length of time required for convalescence of course varies. In cases of simple nephrolithotomy patients are often able to sit up on the eleventh or twelfth day with their wounds soundly healed, and many have returned to their homes between the second and third weeks after the operation. Nephrectomy is frequently as rapidly followed by complete recovery. When the kidney and the perinephric tissues are much disorganised healing is apt to take place for the most part by granulations and then four or five weeks are required.

THE MANAGEMENT OF PATIENTS BEFORE AND AFTER LAPAROTOMY.[1]

BY FREDERICK HOLME WIGGIN, M.D.,

VISITING GYNÆCOLOGIST TO THE NEW YORK HOSPITAL; SURGEON TO ST. ELIZABETH'S HOSPITAL; THIRD VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION, ETC.

IN the early days of the decade now drawing to a close it was generally considered to be a fact that operations within the abdominal cavity could only be performed with a reasonable degree of safety to the patient when undertaken in expensively constructed special rooms attached either to public or private hospitals. But as time has gone on and our knowledge of bacteriology has increased antiseptic surgery has been gradually replaced by aseptic work, and we have found, especially those of us whose fortune it has been to perform operations of the class under consideration in ordinary dwellings, that although the personal effort and responsibility are increased, abdominal operations can be performed with as little, if not less, danger to life in a properly prepared room in the patient's dwelling, as in the best equipped modern hospital. This, coupled with the fact that abdominal wounds are more frequently closed without drainage and therefore allowed to heal under one dressing than was formerly the case, seems to make it evident that the time is not far distant, if indeed it has not already arrived, when patients suffering from abdominal disorders will ordinarily prefer to be operated upon in their own homes rather than to go among strangers in a strange land at this critical time. Hence it will come to pass that the general practitioner in the near future will more often have an important part to play in the management of patients, both before and after the performance of laparotomy, than has hitherto been customary. On this account chiefly the discussion of this important subject has seemed timely, for it is my belief, founded on a considerable experience, that the patient's welfare depends not only upon the technique of the operation itself being properly carried out but also upon the successful management of many so-called minor, and therefore neglected, details both before and after the operation.

[1] A paper read before the Hartford Medical Society and the New York Medico-Surgical Society at their January, 1898, meetings.

Years ago I, then under the pupilage of that great surgeon Professor James R. Wood, learned that the most successful surgeon was he who could best carry out not only the major but the minor details of his work; and this must be my excuse, if one is needed, for the minuteness with which the minor points of routine work are about to be gone into.

Preparation of the patient.—When the condition for which the operation is to be undertaken is chronic, and all the time desired can be had for the preparation of the patient for the ordeal which he is to undergo, much can be done which will not only diminish the risk about to be incurred by him but which will ultimately hasten convalescence. In such a case it is for the patient's welfare that the hospital where the operation is to be performed should be reached, or the trained nurse employed if the patient is to remain at home, at least one week prior to the date fixed upon for the operation. This allows the individual to become accustomed to the attendants or the environment, which is of undoubted importance, as it tends to lessen the dread and nervous tension, both of which are great in such a crisis even under the best of circumstances. During this week the sufferer should be encouraged to spend the greater part of the time in bed for the purpose of getting thoroughly rested, as patients too often come under operation physically exhausted. During this period massage may be employed to advantage in lieu of physical exertion as it improves the circulation, promotes digestion and the general bodily welfare. As far as is compatible with a healthy mental condition, visitors and friends should be excluded. A daily record of the patient's bodily temperature, pulse, and respirations should be kept. An examination of the heart and lungs and a final analysis of the urine should be made at this time. As it is of great importance that the intestinal canal should be thoroughly collapsed at the time of operation, careful attention should be paid to unloading and emptying the bowels as well as to getting the digestive organs in good working order. This is best accomplished by giving early in the week several small doses of calomel and soda daily for three days. There are to be followed each morning by a saline, and this, in turn, on each of three succeeding mornings by a large enema, unless contra-indicated (3 to 4 quarts of saline solution, 1 drachm to the quart). The rectum should be finally washed out with a pint of the same solution six hours before the performance of the operation. The large enema just alluded to is best given with the patient lying on the left side, a fountain syringe being used for this purpose the reservoir of which should not be elevated more than 3 ft. above the patient's body. A bulb syringe should not be used for this purpose, for in the first place it injects the fluid irregularly and with too much force and consequently only a small quantity can be employed; in the second place it is apt, if carelessly used, to permit the entrance of air into the bowel. An extreme instance of this sort came under my observation some years since. A nurse having been directed to give a patient an enema undertook to force fluid contained in a pitcher into the gut by means of a bulb syringe. She worked away vigorously for a time, directing all her attention to the patient, who complained bitterly, but she failed to notice until it was too late that the distal extremity of the tube had escaped from the liquid and the patient's abdomen was greatly over-distended. The family physician was hastily summoned and with some difficulty relieved the patient from a very severe attack of wind colic. The water for the enema should have a temperature of 100° F., and should be introduced into the canal slowly, being frequently intermitted as the patient complains of a feeling of distension or of intestinal colic. Both of these sensations pass off with the cessation of the flow and by persevering in this way three or four quarts of saline solution can usually be introduced into the colon in the course of half an hour with but slight discomfort to the patient. The patient should be encouraged to retain the fluid for another fifteen minutes before it is allowed to escape. The administration of these enemata should be supervised by the physician, as the nurse seldom knows how to accomplish the introduction of the desired quantity of fluid into the intestinal tract, or if she has the knowledge and experience she has not sufficient authority over the patient to effect the desired result. I have often been told by nurses entrusted with this duty that they have given the enema of four quarts not as ordered but in divided doses, thinking probably that as "twice two equals four" they had performed their duty in a satisfactory manner. It is this misunderstanding that so often causes the

patient's bowels to act on the operating table, not only to the great discomfort of the surgeon and his assistants, but frequently, when the operation is about the vagina, endangering the patient's life.

The course indicated for cleaning and emptying the intestinal tract has proved in my experience to be a much more satisfactory one than that generally employed—i.e., the administration of a single large dose of calomel the evening previous to the day set for the operation and followed in the morning by a saline and a small enema. The latter method usually fails to properly empty the colon, but succeeds, as has been already said, in causing several movements after the patient has been placed under the anæsthetic and on the operating-table.

The patient's diet during this week of preparation should be of an easily digestible nature, and he should be encouraged to partake freely of fluids for the purpose of restoring the normal quantity of fluid in the body. If needed cardiac stimulants should also be given. Hot baths (110°) of ten minutes' duration should be given daily, not only for cleansing purposes but to promote the secretions of the skin and kidneys. Special attention should be paid to the navel and pubic region, which should, if practicable, be shaved on the day previous to that fixed upon for the operation, otherwise it must be done after the patient has been placed under the anæsthetic. If the individual is a female the time of the operation should be, when possible, arranged for a date a few days after the cessation of the menstrual flow and a vaginal douche should be given consisting of boric acid and followed by one of formalin (½ per cent.) or of bichloride, 1 to 4000. It is well during these days preceding the operation to give the patient a mild hypnotic every other night. I have found a combination of sulfonal and chloralamid to answer the purpose. This hypnotic should be always given on the last night of the period under consideration.

The patient's skin covering the abdomen should be prepared for the surgeon by thoroughly cleansing it, applying a soap poultice for two hours over the site of the proposed incision and then replacing it by a compress moistened in weak bichloride solution. This compress is allowed to remain until the patient is placed on the operating table. These final preparations can be made the evening before if the operation is to be performed at an early hour in the morning or in the morning if an afternoon hour has been decided upon. It is wise to fix upon as early an hour of the day as practicable, as the patient in this case has less time in which to become exhausted from want of food or restless or nervous from the dread of what is to come. It is of great importance that once the hour has been determined there should be no postponement, as I have seen patients almost collapse under the extra nervous strain entailed by half an hour's delay.

If the operation is to be performed at an early morning hour—i.e., 8 A.M.—the patient should be given a peptonised milk punch at 11 o'clock the previous evening, and if he awakens at 5 or 6 A.M. 1 oz. of liquid beef peptonoids may be given, but nothing more. It has been my experience that a small amount (1 oz.) of stimulating and concentrated food administered about two hours prior to the taking of the anæsthetic diminishes the liability to heart failure and also lessens the nausea and vomiting which frequently follow the return to consciousness. If an afternoon hour has been decided upon another peptonised milk punch may be given the patient when he awakes and 1 oz. of liquid beef peptonoids at 11 A.M. If the case is of an acute character and an immediate operation is demanded little more can be done than to cleanse the skin in the manner already described and douching out the vagina if the patient is a female. A stimulant should be administered if the pulse is feeble or if the patient is suffering from collapse due to intestinal perforation. In this condition if the patient does not respond to the stimulants the operation should not be performed as it will prove of no avail. If, on the other hand, the patient rallies the operation should be done with as little delay as is practicable, but even in those cases it should not be forgotten, as Dr. Abbé has pointed out, that if we would have our work come to a successful issue we must have good light, good assistants, and proper facilities for intra-abdominal irrigation.

If the operation is to be performed in a private residence, a room with a north light should be preferably selected. Its furniture should be removed at least twenty-four hours before the room is to be used. After it has been thoroughly cleansed, the windows should be left wide open for two or three hours, then closed, and the woodwork wiped over with bichloride solution, 1 to 1000. The floor should be liberally sprinkled with a similar solution. A table, 20 in. wide by 30 in. high, and varying in length according to circumstances, will be needed, as well as several smaller tables or stands, a few wooden-bottomed chairs, several large pitchers, four or five basins, several meat-platters, and a receptacle (a fish-kettle) for sterilising the surgeon's instruments. All these articles should be cleaned and washed over with bichloride solution before being placed in the operating-room. The room should be closed after all the articles have been placed in it, and should remain so until needed. A dozen towels, sterilised by boiling or by steaming in a steriliser, and several gallons of cold and hot water, sterilised by boiling, complete the arrangements to be made before the arrival of the surgeon, who usually provides instruments, ligatures, suture materials, and dressings. For emergency operations it is best to make no attempt to clean the room, but the floor should be covered with a sheet wet with bichloride solution. This avoids vitiating the air of the room with dust—a thing greatly dreaded by the surgeon.

The patient should be so clad for the operation as to reduce to a minimum the bodily exposure. The clothing should consist of a warm undershirt, drawers and stockings, the two last-named often being made in one piece. The anæsthetic should be administered to the patient before he is brought into the operating-room. If the anæsthetic to be employed is ether it is advisable to administer hypodermically ¼ gr. of morphia and $\frac{1}{150}$ gr. of atropia, half an hour before the induction of the narcosis, as this tends to diminish bronchial secretion and materially lessens the amount of ether to be given. If, for the administration of the ether, a closed inhaler is used of the Clover type, and the gauze contents are saturated with the fluid at the start, and the mouthpiece is rapidly brought down over the patient's nose and chin, so as to exclude the air, the anæsthetic state will be quickly induced, and there will seldom be a stage of excitement. It is a fact that patients can be rendered unconscious and kept in this condition for an hour with only 4 oz. of ether, and for the second hour with only 2 oz. additional. After the patient has been placed under the influence of the anæsthetic agent and put upon the operating table, on which sterilised blankets have been placed in such a manner as to admit of their being folded over the patient's chest and lower limbs, leaving only the abdomen exposed, the bichloride compress previously alluded to is removed and the skin is finally scrubbed with hot water and tincture of green soap. The pubic region should receive special attention. This scrubbing is to be followed by irrigation with sterilised water, ether, and alcohol. If the patient is a female it should be the rule to cleanse the vagina in the same manner, but instead of scrubbing the tissues with a brush it is better to use a piece of gauze held in the jaws of a sponge-holder as the brush tends to excoriate the tissues and thereby increases the danger of septic infection.

While the technique of abdominal operations is not within the scope of this paper I ask leave to say that for a long time past I have been in the habit of entering the abdominal cavity by means of an incision through either the left or right rectus muscle as the case required, the muscle being simply split and not divided. This incision heals readily and there appears to be little danger of ventral hernia provided the edges of the fascia are approximated. The appendix can be readily reached and removed through the incision over the right rectus muscle. Not long since I removed the greater portion of a long and adherent appendix through an incision made over the left rectus muscle for the purpose of removing the left ovary. Of course this last incision is not recommended for the removal of the appendix. Before closing the wound in the abdominal wall it has been my custom in most instances, notably in those cases where the formation of adhesions between the viscera was undesirable, to leave behind in the general cavity a considerable quantity of so-called normal salt solution (½ a drachm to the pint) at a temperature of 110°, after irrigating the cavity freely with the same solution. This not only, in my opinion, tends to prevent the formation of intestinal adhesions, but also serves to stimulate the patient, who generally leaves the table in good condition and with a warm, moist skin. The edges of the wound are approximated by means of a single row of silkworm gut sutures which pass through all the

different layers of tissues. I have gradually learned that these deep sutures should be placed at least 1 in. apart and loosely tied so as to allow for the swelling of the parts, which is considerable and varies in amount with the thickness of the wall. The interference with the circulation by means of these deep sutures when placed too closely together and tied so as to approximate the edges of the skin accurately is, I believe, a more frequent cause of stitch abscess than is infection. After the deep sutures have been tied, as indicated, the edges of the skin should be accurately adjusted by means of a buried running suture of silkworm gut or by a continuous suture of catgut. While the operation is progressing the anæsthetiser, who should be an experienced physician, should watch the patient constantly and pay no attention to the operator. As soon as the reflexes have disappeared he should raise the inhaler from the patient's face to replace it as soon as they return. In this way the patient inhales the minimum amount of ether and carbonic acid gas. As soon as the pulse increases twenty or thirty beats a minute a stimulating hypodermic injection of strychnia should be administered and repeated as needed from time to time until $\frac{1}{\overline{30}}$ gr. has been given. To this may be added $\frac{1}{100}$ gr. of nitroglycerine every fifteen minutes. If in spite of these stimulating injections the pulse exceeds 150 beats per minute it is well to open either the right or left median cephalic vein and introduce into the circulation one to two pints of saline solution at 100°. This solution should be made ready in advance. For giving such an injection a simple apparatus, consisting of a rubber tube with a funnel at one end and a blunt hollow needle at the other, is all that is requisite.

After-treatment.—The operation having been completed, the wound dusted over with acetanilide powder, and the usual dressings applied, the patient should be returned to his bed, being placed directly within the folds of a blanket and surrounded, if necessary, with hot water bags or bottles. Care should be taken lest they be overheated and so blister the still partially unconscious patient. This warning is given because it is not at all uncommon, when the matter is left entirely to the nurse, for the patient to receive one or more severe burns from this cause. When a quantity of hot saline solution, already alluded to, is allowed to remain in the abdominal cavity, the patient generally leaves the operating table in good condition and with a warm, moist skin. If the patient's pulse is weak and rapid it is wise to raise the foot of the bed somewhat and soon after consciousness has been fully regained to administer $\frac{1}{4}$ gr. of morphia and $\frac{1}{100}$ gr. of atropia to quiet the patient and combat shock. There is, however, usually very little shock unless there has been much blood lost during the operation. After this one dose the use of morphia should be discontinued, as it deranges the digestive system and obscures the various symptoms. It is not necessary to keep the patient in one position during the first three or four days. In a recent hospital case this was well demonstrated by the fact that although the patient fell out of bed the night following the operation convalescence was smooth and uneventful.

During the first twelve or eighteen hours following the operation the patient should not be allowed anything by the mouth except a little warm water from time to time. If ether has been administered intelligently in small quantities and in the manner previously described there will generally be little or no vomiting or nausea and when it does occur it can be overcome by the external application of chloroform to the epigastrium. If the demand for fluids is urgent, which is seldom the case where the saline solution is left in the general cavity, it is due to gastric irritation and can usually be successfully combated by two or three large doses of subnitrate of bismuth. The patient should during these early hours of convalescence be stimulated and nourished, if necessary, by means of enemata, unless the operation has involved the breaking up of extensive and firm adhesions in the pelvic cavity, in which case a weak place in the bowel may be ruptured and the enema and fæcal contents of the lower bowel be forced into the general peritoneal cavity. This accident has occurred twice in the past two years in my practice. After the passing of the first twelve or eighteen hours, if the patient is not suffering from nausea or vomiting and the pulse-rate is much the same as before the operation, a drachm of liquid beef peptonoids or of some other similar preparation may be given and repeated, if well borne, every twenty minutes until four doses have been taken, when, after an interval of two hours, a small quantity of equal parts of milk and lime-water or of peptonised milk may be given from time to time until 4 oz. have been taken. After this there should be an interval of two hours, and then $\frac{1}{2}$ oz. of liquid beef peptonoids may be administered. After another interval of two hours 4 oz. of peptonised milk may again be given. The quantity of milk should be gradually increased and the interval lengthened until the patient takes 8 oz., or its equivalent, every three hours, but once during the twenty-four hours the interval should be lengthened to six hours. The general tendency is to give too small quantities of nourishment at too frequent intervals, which fatigues the stomach and is apt to cause irritability of this organ and to engender a disgust for food. During the interval, if the patient desires more liquid, egg-albumen and water (the whites of three eggs to a pint of water to which a little salt has been added) may be allowed him frequently. During the first forty-eight hours following the operation, if the patient is disturbed by reason of intestinal gas, great relief is often afforded by the introduction through the sphincter ani of a short rectal tube, or even the nozzle of a fountain syringe. Some time since I performed a laparotomy upon an out-of-town patient and left her the following morning in the care of her physician, whose experience in abdominal cases after operation was limited. A few hours later the woman began to complain of severe abdominal pains and distension. The medical man was summoned and after examination he diagnosed the condition as symptomatic of peritonitis. Fortunately, instead of giving morphia, a brother physician who had had more experience in the care of such cases was called in. After examining the patient the latter inserted the rectal tube of a fountain syringe into the bowel and was rewarded by a rush of escaping gas. The abdominal distension and pain quickly disappeared, and in thirty minutes from the time the tube was introduced the patient was sleeping quietly. If this simple procedure proves inadequate friction may be applied over and along the colon, as has been recently mentioned by Dr. A. E. Gallant. This complication, however, will seldom arise if during the week preceding the operation proper attention is paid to clearing out the intestinal contents. If the patient continues to do well and retains nourishment and the intestinal canal has been well emptied no cathartic need be administered until the third or fourth day when $\frac{1}{10}$ gr. of calomel and 1 gr. of soda should be given every half hour for five hours. If the bowels do not act within three hours after all the calomel has been taken a seidlitz powder should be administered and repeated after another interval of three hours. After the bowels have moved, if all has gone well, the pulse-rate will be much as it was prior to the operation, and by the evening of the fourth day the body temperature should be normal, in which case the patient may be rapidly allowed to resume ordinary diet.

The dressings should be removed on the fifth day, and if the sutures are beginning to cut the tissues they should be removed and the wound supported by strips of adhesive plaster; otherwise they should be allowed to remain a few days longer. The dressings having been removed the wound should be washed with hydrozone and bichloride solution and freshly dusted with acetanilide powder before they are replaced. Before the sutures are removed the wound and its surroundings should be thoroughly cleansed. A suture is then picked up at one side by means of a pair of thumb forceps and the skin at the angle is depressed by the flat surface of a pair of scissors, the blades of which straddle the strand of gut, which is then cut through. The object of this manœuvre is to cut the portion of suture which has been buried in the tissues and which is therefore clean, so that in dragging the gut through the deeper tissues and the peritoneal cavity the danger of infection will be reduced to a minimum. The patient should remain in bed for about eighteen days, and may then be allowed to sit up and soon thereafter to walk about and resume his ordinary occupation.

Complications.—The complications which may be encountered during the period of convalescence and which change this ordinarily peaceful period into a more or less stormy and anxious one for both the patient and the physician, taxing the latter's ability to the utmost, occur in the following order: concealed hæmorrhage, peritonitis, intestinal paresis, intestinal obstruction and stitch abscesses.

The occurrence of concealed hæmorrhage, which fortunately at present seldom happens, especially when the vessels are tied with catgut taken directly from alcohol in which it is preserved, manifests itself during the first

twenty-four hours by a rapidly rising pulse, decreased in volume, and accompanied by a falling body temperature, dilatation of the pupils, and a clammy perspiration. When this condition is followed by a rapid rise of body temperature to 103° F. or over, dissolution is imminent. As soon as this complication is recognised an intravenous injection of saline solution should be given and the patient should be stimulated by hypodermic injections of ether, whisky, strychnia, or digitalis, and if there is a reasonable response the abdomen should be at once opened and the bleeding point searched for and secured; otherwise the operation would prove useless and would only be an ante-mortem instead of a post-mortem examination. The decision as to the occurrence of hæmorrhage and the necessity of reopening the peritoneal cavity should be made with great deliberation, as the unnecessary performance of this operation may seriously endanger the life of the patient.

The onset of peritonitis is indicated by a gradual but persistent rise of pulse beginning on the second or third day, intestinal distension, and rigidity of the abdominal muscles, whether accompanied by elevation of body temperature or not. If the pulse-rate rises and remains in spite of our efforts above 120 per minute the outlook is generally unfavourable. As soon as this tendency of the pulse to increase in frequency after the first day is recognised an effort should be made to move the bowels by the administration of calomel followed by a saline. If this does not act in a reasonable time another dose of calomel should be given, followed after an interval of several hours by another saline. A stimulating enema of 7 oz. of a saturated solution of sulphate of magnesia and one ounce of glycerine is often very effective. If the bowels act freely the patient is generally safe, but if the symptoms persist instead of subsiding the stitches should be removed from the abdominal wound, the cavity freely irrigated and its contents cleansed in the manner recommended by Finney.

The advent of intestinal paresis is marked on the second or third day by distension of the abdomen and the occurrence of more or less persistent vomiting, the contents of the stomach being ejected without nausea and the fluid being at first of a yellowish and later of a brownish colour, but not having a fæcal odour. As the colour of this fluid darkens the prognosis becomes less and less favourable. It is well to bear in mind that vomiting resulting from the administration of the anæsthetic subsides usually during the first twenty-four hours, but that it may follow the administration of morphia. When the diagnosis of intestinal paresis has been made the stomach should be washed out and salines given at frequent intervals until the bowels act, even if the saline be partially ejected by the patient. My efforts have been crowned with success in more than one instance by the persistent administration of salines after the patient's condition had seemed hopeless. The stimulating enema already alluded to should be given and friction should be applied over the colon. If the bowels act the patient usually has no further trouble.

Intestinal obstruction, which fortunately has seldom or never occurred in those cases in which the writer has left saline solution in the general cavity, is differentiated from intestinal paresis by the pain over the site of the obstruction and more persistent vomiting accompanied by nausea, the vomited matter having sooner or later a fæcal odour. This condition should be treated as soon as recognised by re-opening the abdominal cavity and finding and freeing the constricted portion of gut.

Stitch abscesses usually announce themselves by the occurrence of a rise of body temperature towards the close of the fourth or fifth day and should be treated by the application of hydrozone and the removal of the sutures. The opening in the skin should, if necessary, be enlarged to allow of the free evacuation of the pus.

While the various symptoms described have individually to be considered and their meaning weighed they also have to be considered collectively and in judging of the gravity of the patient's condition the facial expression is of great value to those who have had experience. A depressed and anxious countenance generally denotes a grave condition, while a cheerful one, even if accompanied by an elevation of pulse and temperature, indicates that the condition is not serious. The physician charged with the care of a patient upon whom a laparotomy has been performed should not think too constantly of peritonitis—that bugbear of all who have had little experience with abdominal work—and consequently feed the patient upon salines rather than with milk or soup. On more than one occasion the writer has known this fear to be the father of the thought, and either the patient's life to be sacrificed or convalescence to be needlessly prolonged by this error in judgment.

In closing this paper, it is my desire to again call attention to the points which I think of importance, and which, as they are considered minor ones, are often overlooked. They are as follows:—1. The importance, whenever practicable, of prolonged preparatory treatment of patients about to undergo an abdominal operation. 2. The importance of the administration of cathartics in the early part of this period, followed by large enemas for the purpose of cleansing the intestinal tract. 3. The importance of keeping a record of the body temperature, respirations, and pulse-rate for several days in advance of the operation and of making a final examination of the urine. 4. The necessity, in the female, of arranging to have the operation performed a few days after the menstrual period and the cleansing of the vagina even when it is intended that the operation shall be by the abdominal route only. 5. The administration of a small quantity of peptonised food (1 oz.) containing stimulants two hours before giving the anæsthetic for the purpose of lessening the tendency to nausea and vomiting after the recovery of consciousness. 6. The necessity of the anæsthetic being given by an experienced physician and in the smallest possible quantity. 7. The necessity of protecting the patient's body properly with clothing and blankets during the operation. 8. The advantage of stimulating the patient before the heart has become much exhausted and of using intravenous saline injections before the radial pulse has become extinct. 9. The leaving in the abdominal cavity after free irrigation of a quantity of hot saline solution for the purpose of stimulating the patient, preventing (?) the formation of intestinal adhesions, and lessening the danger of septic infection of the peritoneum. 10. The necessity of making the patient comfortable by change of position during the first two days of convalescence and by the use of the rectal tube. 11. The necessity for the early administration of food in reasonable quantities and at proper intervals. 12. The necessity of withholding stimulating enemata after operations in which extensive and firm pelvic adhesions have been broken up. 13. The necessity for deliberation as to the wisdom of re-opening the peritoneal cavity in a given case of supposed concealed hæmorrhage. 14. The importance of washing out the stomach as soon as the diagnosis of intestinal paresis is made and of the persistent use of saline cathartics till the bowels move. 15 The importance of not administering cathartics too early or in too large doses to those convalescing from abdominal operations and who are pursuing a normal course.

New York.

A CASE OF ICTERUS GRAVIS.

BY EDWARD O. DALY, M.D. OXON.,
PHYSICIAN TO THE HULL ROYAL INFIRMARY.

UNDER the term "icterus gravis" cases of jaundice occasionally occur, either in endemic or epidemic form, which usually prove very rapidly fatal. These cases closely resemble those of acute yellow atrophy and are therefore probably due to a very similar poison.

A woman, aged twenty-six years, married five years, the mother of two children, had not been in good health for some months. The catamenia had been irregular and pain had been complained of both in body and limbs from time to time since her last confinement in 1894. On Feb. 7th last she appeared to be in her usual health but the next morning, although not feeling well, she kept an appointment at her dressmaker's, when she was attacked with faintness, shivering, and vomiting. After her return home she vomited several times and the bowels acted freely once. Dr. Coates of Patrington (her usual medical attendant) saw her in the evening and ascertaining that there had been some uterine hæmorrhage (after two or three months' amenorrhœa), and finding some enlargement of the uterus, thought a miscarriage was threatening. He visited her again the next day (Feb. 9th) at noon and finding her flushed, with congested conjunctivæ, a temperature of 102° F., and a pulse of 120, and hearing that she had vomited several times during the night, he suggested

a consultation. Mr. Howlett saw her about 1.30 P.M. During that short interval a great change for the worse had taken place. The whole surface of the body and conjunctivæ had become deeply jaundiced and she had passed into a "typhoid condition." When I saw the patient for the first time at 5 P.M. she seemed hardly conscious, the skin was hot and dry, and the colour was very dark. The temperature was 102°, the pulse was 130, and the respirations were 24. The pupils were dilated but equal. The cardiac and respiratory sounds were normal; the tongue was dry and brown. Hepatic dulness was increased slightly. Apparently there was some tenderness in the splenic region but no definite enlargement. No urine had been passed since the evening before. As both Dr. Coates and Mr. Howlett had found the uterus enlarged it was decided to dilate and examine its interior. Nothing, however, was found, nor were any signs of recent abortion discovered. The catheter drew off about an ounce of black thick fluid. An enema of soap-and-water was quickly returned and it presented a dark black colour; this and some dark green matter vomited shortly after the uterine examination and the fluid drawn off from the bladder were sent up to the Clinical Research Association. On the morning of Feb. 10th at 9 A.M. the patient was restless and unconscious. The skin was deeply jaundiced. There was complete suppression of urine. There was no diminution in liver dulness. The abdomen was not distended. The temperature was 100°, the pulse was 130, and the respirations were 30. The bowels had not acted. Examination of the blood showed some increase of the white cells. After a wet pack the patient freely perspired and seemed temporarily better. During the evening of the 10th the pulse and respiration gradually increased in frequency though the temperature was found to be subnormal, the abdomen became distended, and total suppression of urine continued. The liver dulness did not appear to be altered. The patient never regained consciousness and died at 11 A.M. on the 11th.

The report received from the Clinical Research Association threw no light on the case. Phosphorus was certainly absent from the vomited matter and from the fluid from the bowel, and by no method could leucin and tyrosin be separated from the urine, though the quantity of urine was very small for the purpose. No mineral poison of any kind could be found in any of the specimens.

Remarks.—Jaundice with cerebral symptoms occurs (1) in phosphorus poisoning; (2) in typhus, yellow, and relapsing fevers and in pneumonia; (3) in pyæmic abscesses of the liver; and (4) in acute yellow atrophy, in Weil's disease, and in other severe cases of icterus gravis. Poisoning by phosphorus can hardly be distinguished from acute yellow atrophy unless the patient owns to having taken the drug or unless some of it is found in the vomited matter or fæces. None could be discovered and there was not the slightest reason to suspect that any had been taken either intentionally or otherwise. There was no evidence that the patient was suffering from any of the acute specific diseases, so that the diagnosis seemed to rest between acute yellow atrophy or icterus gravis and pyæmic abscesses of the liver. Pyæmic abscesses of the liver seemed contra-indicated (1) by the absence of any cause, external or internal, likely to induce them; (2) by the absence of rigors and profuse perspirations throughout the illness; and (3) by the very sudden supervention of intense jaundice. By a process of elimination the diagnosis of acute yellow atrophy or some other closely allied condition was arrived at. The points against acute yellow atrophy were: 1. Absence of diminution in the hepatic dulness. In order to establish the diagnosis of acute yellow atrophy we should observe a rapid diminution in the size of the liver. Even in the bodies of patients who have died four days after the commencement of symptoms the liver has been found much reduced. 2. Neither leucin nor tyrosin was found in the urine, but the quantity of urine obtainable was very small. 3 Complete suppression of urine. Although as a rule the urine undergoes important changes its quantity is not materially altered. Changes similar to those found in the liver have been noted as occurring in the kidneys, but I have not been able to find any case of acute yellow atrophy reported where total suppression of urine was present. As unfortunately no post-mortem examination was allowed the exact condition of the liver and kidneys must remain doubtful.

Hull.

THE OPERATION OF GASTRORRHAPHY (GASTROPLICATION), WITH NOTES OF A CASE.[1]

BY BERKELEY G. A. MOYNIHAN, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON, LEEDS GENERAL INFIRMARY; DEMONSTRATOR OF ANATOMY, YORKSHIRE COLLEGE.

GASTRORRHAPHY or "gastroplication" is an operation which has been designed for the treatment of dilated stomach not depending upon any obvious or removeable cause in or around the pylorus or duodenum. The postulate upon which the claim of the operation is based is that there are certain cases of dilatation of the stomach, of the "atonic" variety, where the grave and distressing symptoms depend very largely, if not solely, upon the enormous physical bulk of the organ. In such cases the operation by reducing the mass of the stomach and by lessening its cubic capacity would afford a reasonable prospect and probability of an abatement or a complete recession of all the disabilities due merely to such enlargement. It is an operation which consists, not in the removal or resection of any part of the stomach, but merely of the folding in, and subsequent fixing, of the anterior wall, or part of it, or of portions of both anterior and posterior walls. Various methods of carrying out this idea have been suggested and these I propose briefly to enumerate and describe later. I have recently had under my care a patient upon whom I have performed gastrorrhaphy with very signal relief to his symptoms and, although the time which has elapsed since the operation is altogether too short for me to give an idea as to his future immunity from suffering, I think a useful purpose may be served by my giving some details now of his history, treatment, and present condition.

A man, aged forty-seven years, was sent to me by Mr. Metcalfe Sharpe of Farnley on Aug. 16th, 1897, with the following history. During the last five or six years he had suffered from "indigestion" and occasional vomiting. For an hour or more after a meal he would feel comparatively tranquil and comfortable, but at the end of that time a feeling of weight and oppression in the epigastrium gradually developed until the pain became acute and at times wearing and intolerable from its mere persistence. His mouth was parched, his tongue was dry, harsh, and hot, and his thirst was almost unquenchable. During the period of distress there was occasional eructation. Vomiting, which latterly had been self-induced, was always followed by considerable relief, and he volunteered the information that at the early onset of this symptom fragments of food partaken of some few days before had returned in the vomit. Medical treatment both at the Leeds Infirmary and elsewhere had been for some time continuous and unremitting. Every drug with any sort of action on the stomach, every artificial aid to digestion known to science, and almost all the intestinal antiseptics seem to have been tried upon him, with at times occasional benefit, but latterly he had lost his faith in the medicine bottle and had abandoned drugs entirely. At the infirmary, where he was labelled "Dilated Stomach," he was taught to practise lavage of the stomach with very great temporary benefit. The washing out relieved him so much that for the last six months he had employed it twice daily. Large quantities of water were used on each occasion and he had roughly calculated that the stomach would hold five quarts. That his apparently exggerated reckoning was fairly accurate I feel sure, as on one occasion he had vomited a measured three quarts and his stomach was still splashy. Even by this careful attention to his stomach, however, he was never for very long quite free from pain, uneasiness or oppression, and he was anxious to know if anything further could be done for him. There was no history of jaundice or of hæmatemesis.

On examining him he was seen to be a thin, shrunken, sallow-complexioned man, wasted, nervous and ill. On uncovering the abdomen I found the stomach to be enormously dilated and I roughly computed that it would fill about two fifths of the whole abdominal cavity. At the pylorus I could feel nothing abnormal—no tumour, no special tenderness, and no rigidity of muscle. I could not elicit any obvious

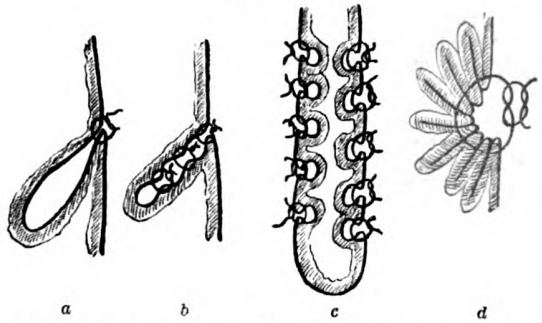
[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society, January, 1898.

peristaltic contraction of the stomach wall. I suggested to him an exploratory abdominal operation. If any pyloric disease were found it was to be appropriately dealt with by removal, by separation of adhesions or by gastro-enterostomy. If I found only a dilated stomach with no perceptible cause I was to perform gastrorrhaphy. He very willingly consented and on Aug. 31st I operated in the manner I shall presently describe, having negatived so far as I was able the presence of any obstructive condition in the region of the pylorus. His recovery from the operation was rapid. I think I never saw a patient suffer less from the usual post-operative troubles. He had none of the common drawbacks incident to almost all abdominal operations, no vomiting, no headache, and no thirst. From the very first I allowed him fluid by the mouth in small but gradually increasing qualities. He expressed immediate and complete relief from all his symptoms, but I attributed this as much to his lessened diet and recumbent position as to any immediate benefit attributable to the operation. He was kept in bed for a fortnight and was then allowed to get up and go home. His improvement has been uninterruptedly maintained. All sense of gastric uneasiness has left him. He has vomited once only and this seizure he ascribed to a specific and not improbable cause. He has gained slightly in weight. Before the operation he was 8 st. 1 lb.; now he weighs 8 st. 11½ lb. His food is varied much more than at any time during the last five years and his dietary is fairly liberal. He is amply satisfied with the result of his treatment and only wishes he had undergone the operation a year or two sooner. It is, of course, too early to speak of a cure in this case, but the patient has at least had four and a half months of such enjoyment of life as he had thought impossible and the hopes of which he had long ago abandoned, and I see no reason why this improvement should not be still longer maintained. His stomach is now on percussion a shade larger than a normal stomach, but it has undergone no increase since the first examination I made at the conclusion of the operation.[2]

I will now speak of the operation itself. It is to a Swiss surgeon, Bircher of Aarau, that the credit of having first performed the operation, which was forecast by Ewald, belongs[3]; his first three cases were published in 1890. He was followed by Weir of New York in 1892,[4] by Brandt of Klausenburg in 1892,[5] by Bennett of London,[6] and by Shattuck of Boston in 1896.[7] The method of carrying out the principle of the operation seems to have differed with each operator and I shall show by means of diagrams what particular procedure was employed by each of the surgeons I have named.

In Bircher's method (Fig. 1, *a*), which was adopted by

FIG. 1.



a *b* *c* *d*

a, Bircher's method—vertical section of the stomach. *b*, Weir's method—vertical section of the stomach. *c*, Brandt's method—five parallel folds are shown, but Brandt himself only made two. *d*, Method adopted by myself.

Shattuck, the operator used a series of sutures, thirty-five in number, which at one end passed through the serous and muscular coats of the stomach at the greater curvature and at the other end picked up a similar portion of the stomach wall at the lesser curvature. On tying these stitches almost the whole of the anterior wall of the stomach was doubled upon itself and formed a wide fold projecting into the interior of the cavity. The introduction of the sutures was facilitated by passing the end sutures first and holding the stomach up by means of them. A pair of heavy forceps laid on the anterior wall of the stomach made the infolding easier. When the stitches were tied the surfaces brought into accurate and close apposition were not more than ½ in. in breadth and would be therefore not unlikely to be torn asunder if any great tension were put upon the adhesions.

The disadvantage in Bircher's operation just alluded to was recognised by Weir of New York, who describes his operation (Fig. 1, *b*) as follows: "In the centre of the space between the upper and lower borders of the stomach a dimpling in of the gastric wall was made, first, by the pressure of a sound to a depth of 1 in. A row of eight or ten interrupted silk sutures was now made, passing through the serous and muscular coats for a distance of from 6 in. to 8 in., and the sound was then withdrawn. A second series of sutures about 1 in. from the first was again made, dimpling in an additional portion of the stomach wall and in a similar manner. A third and fourth row were applied until through a distance of some 4 in. or 5 in. the greater curvature was applied to the lesser. When the row was completed a double fold of the stomach equal to the breadth of the hand and nearly its length was formed." This method is, I think, a very decided improvement upon Bircher's, but the introduction of the sutures is more tedious and the time spent is considerably longer.

The next operator was Professor Brandt of Klausenburg (Fig. 1, *c*), who, operating in 1894, makes the statement that he had planned and demonstrated his operation, which he terms "gastroplication," in 1889. His method consisted in the introduction of sutures both on the anterior and posterior walls in such manner that two or more parallel folds were formed on each surface, one reef being taken in above the other. In this operation 200 stitches were introduced. This operation is more complicated than is desirable. To get to the posterior wall of the stomach and to make two parallel folds in it by means of 100 stitches is by no means an easy matter. The operation is necessarily more prolonged and when completed has no advantages which I know of as compared with other methods.

In 1896 a paper was published in THE LANCET by Dr. Ewart and Mr. Bennett of St. George's Hospital. Mr. Bennett, not knowing that the idea of diminishing the size of the stomach had been previously carried out, performed an operation very like Bircher's, but did not infold the whole of the anterior wall. The fold in his case was about 3 in. deep and 12 in. in length. It was intended to take in a second reef at the greater curvature, but the condition of the patient was very unsatisfactory, and the project had to be abandoned. Mr. Bennett's patient when seen seven months after the operation had some symptoms pointing to a recurrence, and it was suggested that the narrow line of adhesions might be giving way as a result of the constant dragging upon it. Mr. Bennett therefore proposed in any subsequent operation which he might perform to pass the sutures in and out through the stomach wall twice or thrice, so that, on tying, larger surfaces of the serous covering of the stomach would be apposed. The method which I adopted in my case was a carrying out of this suggestion of Mr. Bennett. I passed twelve sutures at a distance of about 1 in. from each other and each suture picked up the stomach wall at nine points. (Fig. 2.) The sutures were made to radiate from the lesser to the greater curvature and included all the anterior part of the stomach wall except for a small area at the pyloric and cardiac extremities. The sutures were drawn upon, held up and tied one by one. It was then seen that there were slight bulgings at each end of the reef which had been made and a second and third series of sutures were passed, one at each end of the stomach, so as to do away with this irregularity of outline. Special care was taken to round off the pyloric end so that no bulging or kinking would be possible. Previously to the introduction of the sutures I had made a careful examination of the pylorus and duodenum and had satisfied myself that there was no growth or stricture or other abnormal condition there. Such is a brief account of the various surgical procedures which have been suggested and adopted, and, so far as the mere manipulative part is concerned, I think there can be little doubt that the operation I

[2] I have seen this patient to-day (April 12th). He now weighs 9 st. 6 lb. and makes no complaint save one—of temporary loss of appetite. He looks well, eats well, and enjoys his food. There has been no return of the vomiting.

[3] Correspondenzblatt für Schweizer Aertze, vol. xxi.

[4] New York Medical Journal, 1892, vol. ii., p. 29.

[5] Centralblatt für Chirurgie, April 21st, 1894.

[6] THE LANCET, July 4th, 1896.

[7] Transactions of the American Surgical Association, 1897.

employed has considerable and striking advantages over the others. It is easy to perform, rapid in its execution, and has the advantage, possessed by none of the others, that one can see exactly how much of the wall of the stomach is being included; all the sutures can be passed before any one is tied, and, finally, it brings into apposition the walls of the stomach in a way best calculated to produce firm adhesions. The roll which projects into the cavity of the stomach is much smaller than might be anticipated and has, I should

FIG. 2.

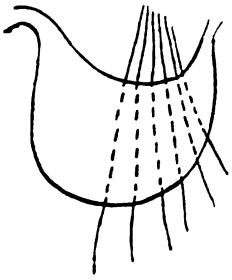


Diagram illustrating the method of introducing stitches.

suppose, none of the possible disadvantages possessed by the long, flaccid, and pendulous folds produced in other operations. The abdominal incision in Bircher's and Brandt's operations was made parallel to the costal margin. In Bennett's case and in mine a medium incision was employed.

Such then, is the operation of gastrorrhaphy or gastroplication. It is a procedure which, so far as one can judge from the scant material at hand, is likely to have a certain range of usefulness when employed in suitable cases. What the ultimate position of the operation in surgery will be it is at this early period quite impossible to say. There are many points upon which we require more precise and more accurate information before a trustworthy and reliable decision can be arrived at. We must learn the frequency of the condition of atonic dilatation, so-called, of cases, that is, of enlargement of the stomach where the symptoms are due, not to any catarrhal or other organic disease in the walls of the viscus, but merely to the bigness of the organ, and where medical treatment has proved of little or no avail. Upon this point the physicians are the most competent to pass an opinion. It will be for them to say when, and in what case, a procedure of this sort is likely to be useful. We must so far as is possible guard against operative interference in cases not wholly suitable. In one case, at least, amongst the few already recorded there was an ulcer with some thickening at the pylorus and no very great distension of the stomach.

In judging of the mortality we cannot place any reliance upon statistics based on so few cases, but it is only reasonable to suppose that as the time occupied by the operation is brief, and as little or no material damage is done to any organ, the risks cannot but be very slight.

As regards permanence of relief there is again very little evidence upon which to base one's judgment. The only case of recurrence of symptoms is that under Mr. Bennett's care already mentioned. What seems most striking on reading the records of these cases is the immediate relief from the severe and most disabling symptoms which is invariably observed; whether such relief is permanent is a question which can only be answered in the future; but I think we may fairly argue that the more permanent the adhesions we produce by the operation we select the more likely are we to secure prolonged or possibly complete and lasting relief. The operation is as yet only in a tentative stage and it is solely for the purpose of calling attention to it as a procedure with some arguments to recommend and facts to justify and support it that I have ventured to introduce the subject.

Leeds.

DRAINAGE OF TAUNTON.—At a special meeting of the Taunton Town Council held recently it was decided to adapt the present Taunton sewage works to the septic tank system and to apply for sanction for a loan of £18,250 for carrying out these works.

ACUTE ATROPHY OF THE LIVER.

BY WILLIAM O'NEILL, M.D. ABERD., M.R.C.P. LOND.,
LATE PHYSICIAN TO THE LINCOLN GENERAL DISPENSARY AND TO THE LINCOLN LUNATIC ASYLUM, ETC.

WITH kind permission I would mention in THE LANCET a case of acute atrophy of the liver, or, as the disease is sometimes called, fatal or malignant jaundice, which came under my care some little time ago.

On Nov. 16th, 1897, I was requested to see a respectable married man, aged forty-six years. He was tall and slender and up to this illness he had not required medical advice since he consulted me sixteen years previously for some slight ailment. He was abstemious and correct in his mode of living and fortunate in having little or no anxiety on his own account or on that of his family. His house, which was rather small, was pleasantly situated and the drainage of the premises was very good. I found that the patient was slightly jaundiced and in a state bordering on collapse. He complained of headache, nausea, and vomiting, but more especially of an intense pain in the hepatic region. I ascertained that the temperature was below normal and that the pulse was small and weak and about sixty beats in the minute. The tongue was furred, the bowels were confined and the urine was scanty and contained some bile. There was no distension of the abdomen and he only felt tenderness when I pressed my fingers under the right ribs. The illness began on the 13th with chilliness and headache, followed by sickness of the stomach, pain in the right side, some yellowness of the skin, and rapid loss of strength. On the 12th the patient had spent the greater part of the day in laying down oilcloth on his kitchen floor and his wife thought that he had caught cold in so doing owing to the frequent opening of the back door, which admitted currents of cold air. The patient was ordered a stimulant and anodyne draught in effervescence, hot fomentations to the painful part, and injections of warm water, which brought away dark-coloured evacuations. The next morning I found that the pain and sickness of the stomach had subsided and the patient expressed himself as feeling so well and comfortable that a speedy restoration to health was confidently anticipated by himself and family and it was proposed that on the following Sunday thanks should be offered up in church in gratitude for the quick relief he had obtained from his great sufferings. His mind was quite clear, but his manner was more excitable than usual and the yellow colour of the skin had increased a little in intensity. The temperature was normal and the pulse was good and about 70 to the minute. On examining the abdomen I discovered that the liver was much smaller and the spleen was considerably larger than in health. A dose of a purgative saline mixture with ammonia was directed to be given every three hours, but few doses of it were taken. In the course of the evening the patient began to wander in his mind and to be drowsy. The delirium and drowsiness increased during the night and on the following morning he was lapsing into deep coma. The coma becoming profound he passed quietly away without having been convulsed in the slightest degree. Two hours before the patient's death the temperature had risen to 104° F. and the pulse was very quick and irregular.

The interesting points in this case were the short duration of the disease, which barely exceeded five days, and the great intensity of the pain in the hepatic region, which so resembled the pain caused by the passing of gall-stones that on my first seeing the patient I thought this might be the case. The following morning, however, although he felt better and appeared to be so to his family, I began to suspect the possibility of the development of a more serious state of things than I had apprehended the evening before and my suspicions were strengthened when I discovered that the liver was shrunken and that the spleen was larger than normal. When the symptoms of coma set in there could be no longer any doubt about the nature of the disease and the result to be expected.

It is evident that acute atrophy of the liver is a general disease in which all the organs of the body suffer more or less as well as the liver and in all probability micro-organisms of a malignant character are the exciting cause of the malady. In the above case the wind coming in through the back-door or the effluvium arising from the oilcloth may have been carriers of the microbes, which could

easily enter the body through the medium of the lungs. But whatever the noxious poison was, the effects, especially toward the end, resembled, to my mind, those of opium poisoning with the exception that opium contracts the pupils of the eyes whereas in this case the pupils were widely dilated.

Shrinking of the liver in connexion with fatal jaundice was noticed as far back as 1826 by Dr. Allison of Edinburgh and a few years afterwards by Dr. Bright of London, and subsequently to this the same pathological appearance was observed by Dr. Graves of Dublin. In 1840 an interesting account of three cases of this disease was sent by Dr. Hanlon of Portarlington, Ireland, to Dr. Graves. The three patients were sisters, the oldest of whom was seventeen years of age and the youngest eight years of age. The two elder patients died comatose and the youngest recovered, a very unusual occurrence in this disease. In 1845 Mr. Busk and Dr. George Budd examined microscopically a liver that was taken from a man who died from fatal jaundice in the Seamen's Hospital and the appearances they noticed were much the same as those described by modern observers. But shrinking of the liver is not a necessary or constant pathological appearance in fatal jaundice. In 1891 a case came under my observation in which the liver was much larger than normal. The patient was a stout woman, aged forty years, who had suffered a long time from disease of the heart of an obstructive character. The abnormal size of the liver was caused, I think, by the diseased heart, and it may be that the congested state of the liver prevented its shrinking, which it might have done if the disease of the heart had not existed. The woman, who had an enlarged spleen, died comatose about a week after the jaundice set in. Neither of the foregoing patients presented any indication of hæmorrhage, but I remember a case of fatal jaundice in which it was a formidable complication. The patient was a fat, fair-haired woman of about forty-six years of age, who after a severe wetting and prolonged exposure to cold was seized with pain in the right side, followed by vomiting and other severe symptoms and jaundice. To relieve the pain leeches were applied and when they had fallen off the bleeding continued and could not be effectually stopped; then followed hæmorrhage from the bowels and stomach and patches of ecchymosis appeared on the skin and also an innumerable number of small spots of blood extravasation resembling fleabites. Soon after the bleeding set in the woman lapsed into coma, in which state she died after an illness that did not exceed ten days.

Fatal jaundice is one of the rarest diseases in this country with which the physician has to contend, and happily for his peace of mind that this is so, for in his encounter with it he hardly ever comes off victorious. It may therefore be conjectured that the treatment of the malady is most disappointing. Treatment can relieve pain and suffering it is true, and this in itself is a great boon to the sufferer, but it is, I think, nearly futile in arresting that downward course which ends in Sheol. Saline purgatives, quinine, mineral acids, and astringents when bleeding takes place have been recommended. But from the nature of the disease what we want is some ingredient which would grapple with, and render innocuous, the microbes or other noxious matters circulating in the blood.

Lincoln.

THREE UNUSUAL CASES OF RENAL CALCULUS.[1]

BY WILLIAM HENRY BATTLE, F.R.C.S. ENG.,
ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL AND SURGEON TO THE ROYAL FREE HOSPITAL.

I HAVE thought that a short account of some unusual cases of renal calculus would be of interest to the Fellows of the Medical Society of London and have selected three from amongst those which have been under my care during the past year or so. The surgeon is so frequently called upon at the present time to perform the operation of nephro-lithotomy that the account of an ordinary case is no longer of interest excepting to the surgeon himself and the patient who is relieved of the stone. The cases which I have selected are as follows: (1) a case in which constant hæmaturia, although the patient was lying in bed, had persisted for some time unaccompanied by pain of a nature to permit of our diagnosing the site of the calculus; (2) one in which some pain in the kidney had persisted for ten years without renal colic but in which the symptoms made diagnosis easy; in this case the stone was of unusual formation; and (3) a case of acute pyonephrosis due to obstruction of the ureter, in which nephrotomy was required and a stone removed, subsequent exploration of the ureter performed, and later a pultaceous mass expelled per urethram after which the lumbar wound closed.

CASE 1.—A woman, aged forty-four years, was admitted to the Royal Free Hospital under the care of Dr. Calvert on Jan. 4th, 1894. Five years before she had undergone abdominal section for the removal of uterine appendages, but otherwise, with the exception of symptoms of cardiac trouble, she had had nothing noteworthy in the way of illness. Six weeks before admission she had had a more severe attack of pain in the region of the heart than ever before and a month ago she had noticed blood in the urine. It was dark in colour and there was a little pain after micturition. This had continued unchanged until admission. On admission she had pain and tenderness over the cardiac area with evidences of hypertrophy of the heart and disease of the mitral valves. The urine was of a dark red colour and was acid with a specific gravity of 1014; it contained blood but no pus cells, casts or crystals. The patient said that there was some pain on both sides of the spine in the lumbar region and she complained of tenderness on pressure over both kidneys, but the kidneys could not be felt nor was there any difference in the amount of resistance on the two sides. I saw the patient for the first time with Dr. Calvert on March 1st. There had been little change in the state of the urine since her admission to the hospital although she had been kept in bed all the time. The urine had been acid and uniformly of a dark red tint. Many examinations had been made and although the quantity of blood corpuscles found did not quite account for the amount of colouration of the urine there was no doubt of their presence and in addition a varying amount of pus had been observed from time to time. Examinations for tubercle bacilli had yielded a negative result. She admitted that during some months she had suffered on and off from backache, but affirmed that this had not been more marked on one side of the spine than on the other. I recommended operation, but the patient did not agree to it, and a trial of hammamelis was made but without appreciable effect on the bleeding until the dose had become about a drachm three times daily, when the urine cleared somewhat. During the next few days she had a good deal of backache and stated that the pain invariably began if she turned on her left side and started in the right side, being relieved if she turned on the right side or on her back. Before she gave consent to the operation, which was performed on July 7th, there had been but little improvement in the condition of the urine, although for a time the amount of blood passed appeared to almost disappear under the use of the hammamelis. The state of the heart was better, the pulse becoming more regular and less rapid, whilst there was less complaint of pain. Ether was administered and the operation was well borne. An incision was made through the old scar in the middle line and the kidneys were explored. The right one was larger than the left and contained a hard substance in its pelvis. The abdominal wound was therefore temporarily closed, the patient turned on the left side and a stone removed from the right kidney through the loin in the usual manner. The substance of the kidney on its posterior aspect close to the pelvis was incised and the finger was inserted. The stone, which was very irregular, with one branch running at right angles to the main part and posteriorly, was extracted with some difficulty as the forceps frequently slipped in consequence of the crumbling of a layer which covered the surface. Altogether it measured about 2½ in. in circumference and was composed of a hard dark mass covered with a softer, greyish, friable layer of phosphates. The main portion was oxalate of lime. The upper part of the kidney pelvis was dilated, but no change in the lining of the pelvis was apparent to account for the bleeding. The wounds were then closed, a drainage-tube being inserted into the lumbar one. The left kidney was apparently normal. The weight of the calculus was 116½ grains.

Recovery was slow although there was nothing noteworthy as to the manner in which the wounds closed. At the end of a fortnight there were no blood corpuscles to

[1] A paper read before the Medical Society of London on April 25th, 1898.

be found on microscopical examination of the urine but pus cells could still be found. During the early part of August she passed small fragments of calculus per urethram; this was probably the result of the crumbling of the phosphatic envelope of the main calculus when it was taken away at the operation, for considerable difficulty was experienced in clearing away the smaller pieces from the renal pelvis. The state of her heart necessitated her remaining in the hospital until the end of the year, and whilst under treatment she frequently complained of backache and pain across the loins, but it is very probable that much of this was neurotic, for as her health improved so the pain diminished. It was not easy to account for the hæmaturia in this case, for the amount of blood in the urine was considerable, it had persisted for some time, and it continued although the patient was kept strictly in bed. We agreed that the diagnosis was between calculus of the kidney and new growth. In favour of the former was the history of lumbar pain with on more than one occasion a paroxysmal attack, although nothing like renal colic was described. The absence of renal enlargement was in favour of this, and later the presence of an uncertain though always small amount of pus in the urine. It was not, however, possible to guess as to which kidney was affected, there being an almost complete absence of localising signs. I spoke to the patient about the pains in her back when she was convalescing from the operation and said: "But you never had pain in the right side more than in the left," to which she replied: "Oh, yes, I had." I asked: "When?" and the answer she made was: "Why, the night before the operation."

The only case of stone in the kidney with such excessive hæmaturia which has been under my personal observation was one associated with a villous tumour of the renal pelvis and I ventured to diagnose tumour in addition to calculus on account of the excessive hæmorrhage. It was hardly possible to exclude villous growth of the pelvis of the kidney without exploration, but the absence of the other signs of new growth made it evident that no malignant growth was present in this case.

CASE 2.—A woman, aged twenty-one years, was sent to be under my care at St. Thomas's Hospital from Rugby by my friend Mr. Relton and she was admitted on April 10th, 1897. She had been seen by Mr. Relton ten years before for pain in the side and hæmaturia. He had diagnosed a renal calculus and recommended operation, but her parents had refused. She had never had severe pain nor did it at any time resemble renal colic and she had been able to do her work regularly, but the pain was fairly constant and of a dull, aching character, worse on exertion and when she was tired. Recently her parents had been alarmed by three or four attacks of hæmaturia of rather more severe character which had compelled her to lay up. When four years old she had had jaundice and had suffered from dysmenorrhœa for the last five years, but otherwise with this exception she has managed to do her work. The family history was good. When admitted to the hospital she was a healthy looking girl of good colour and complained of a dull, aching pain in the right side. Nothing abnormal could be felt in the abdomen. There was no tenderness over the kidney and no rigidity of muscles or undue fulness in the side. The urine was of specific gravity 1020, acid, clear, and pale, with a slight deposit of mucus; there was a very slight amount of albumin but no sugar. Dr. Blacker kindly examined the case in the x ray department with the screen and made the following note: "Fluorescence extremely good; indistinct opacity was seen in the right upper half of the abdomen, marked towards the middle line, but no definite area of opacity was made out. The whole of the right side of the abdomen was darker than the left." When lying still she had no pain, but the visit to the x ray department caused her to complain again of it, but there was no blood in the urine. On the 26th there was still a fair trace of albumin and the urine showed the presence of oxalate of lime and a few uric crystals on microscopical examination. There were also a few pus cells. On May 5th there was no albumin in the urine and on that day I removed a calculus from the kidney through a lumbar incision. This calculus was felt on palpating the kidney to be placed in the upper part. An opening was made through the substance and the finger was passed into the pelvis of the organ. A very rough stone was felt in the upper part which could not be dislodged with forceps until it had been actually dug out of the renal tissue by means of the fore-finger and a director; it was embedded in the tissue of the posterior and upper part of the kidney and its separation was attended and followed by a good deal of bleeding. The kidney was apparently quite normal. Afterwards for the first few days there was a good deal of blood in the urine and the drainage-tube which had been inserted after the operation was removed and the wound was plugged with cyanide gauze for five days. No suppuration followed and the after-course of events was satisfactory excepting for the presence of blood in the urine. This, however, was found for a fortnight only, gradually disappearing. She left for her home on the 30th and has continued well.

The stone which was removed was apparently divided into two parts, the smaller somewhat rounded part, to which torn renal tissue adhered, and the larger, which was almost of the size of a peach-stone and greatly resembled a dry one on the surface, the crystals being large and arranged in laterally opposed plates with sharp edges. It was a pure calcium oxalate stone.

This case is interesting from the peculiar arrangement of the oxalate crystals, which had caused the stone to assume a very uncommon appearance. This has been decribed by Mr. Shattock and Dr. Ord in their paper read before the Pathological Society of London, but is not mentioned in our text-books and is found in very few of our museums. Moreover, surgeons with large operative experience have not met with it. This case is additionally interesting from the peculiar way in which the stone was held up in the kidney, which accounts, I think, for the absence of renal colic. Movement would jar the stone but would not dislodge it and although the history was of unusually long duration and the stone had reached a considerable size there was no evidence of disease of other parts of the kidney. From the difficulty in separating the stone and from the fibrous character of the soft tissue which remained on the part of the stone which had been buried, as well as from the hæmorrhage attending its removal, I am of opinion that it had formed in the renal tissue and not in the pelvis or in a calyx.

I have here another oxalate of lime-stone which I removed from one of the cases on which I operated last Wednesday. It resembled in appearance a miniature hen on a pedestal, the body of the bird being bent down as if pecking at something near its feet. The pedestal part, which is the smaller, was contained in a dilated calyx, whilst the narrow part was tightly nipped by the opening into the renal pelvis. The small calculus accompanying was in a cyst which communicated with the dilated calyx in which part of the larger stone was held. The patient, a young man, had had symptoms for many months but had not had a definite renal colic.

CASE 3.—A girl, aged seventeen years, was admitted under my care into St. Thomas's Hospital on Dec. 15th, 1894, suffering from severe pain in the right side of the abdomen. Two years before she had had an attack of pain in the right side and vomiting, followed by the passage of a small calculus, and she was ill for a week. Some months afterwards she had another similar attack, which passed off in a few days, but no calculus was passed on that occasion. The present illness commenced suddenly three days before admission with severe pain in the right side of the abdomen and vomiting which lasted until admission. There was no history of tubercle in the family, but her father had undergone the operation of nephrectomy for some disease of the kidney the nature of which they did not know. The muscles on the right side of the abdomen were rigid and much tenderness was complained of on palpation. A large swelling was present in the right lumbar region extending from the level of the anterior superior spine of the ilium to the under surface of the liver. There was absolute dulness in the flank, but the exact limits of the swelling could not be well defined on account of the acute tenderness. No fluctuation could be felt. The specific gravity of the urine was 1030; it was scanty, neutral in reaction, with some deposit of urates. The rapid course, large size, acute pain, and tenderness of the swelling and its extension into the iliac fossa made the question as to its origin in the appendix one to be considered, but it was thought most likely to be a pyonephrosis due to obstruction of the ureter by calculus. Hot fomentations were applied and the patient was kept quiet in bed on a liquid diet. Two days after admission the swelling was larger, better defined, and fluctuating. She was irritable but inclined to sleep. The temperature was 102·4°F. There was now no vomiting. In the afternoon the kidney was exposed through a lumbar incision, tapped, and a large quantity of pus was

evacuated. Through the enlarged opening an ovoid uric acid calculus measuring 1 in. by ½ in. was extracted; it was lying loose in the abscess cavity. No other stone could be felt either in the kidney or the ureter and it was considered inadvisable to make any prolonged search, although the opinion was held that the cause of the condition had not been found. This opinion was confirmed by the later progress of the case, for no blood appeared in the urine after operation nor was its amount increased. The patient was much relieved as a result of this incision into the kidney and urine escaped from the wound without any diminution in its quantity until Feb. 5th, 1895. During the earlier part of this time there was an admixture of pus, but later it was almost normal. The quantity of urine passed by urethra varied from 10 oz. to 25 oz. in the twenty-four hours. A drainage-tube had been kept in the loin wound as it was considered best to give the opening in the kidney a chance to heal before the soft parts. As the flow of urine did not diminish and the diagnosis was that a small calculus obstructed the ureter exploration of the ureter was decided on and carried out on Feb. 5th through an incision in the right linea semilunaris. The ureter was traced from the renal pelvis down to the bladder. No stone could be felt and the only thing that appeared unusual was a limited thickening, not well defined, where the ureter crossed the pelvic brim; above this the ureter appeared to be somewhat dilated, below it was apparently normal. The pelvis of the kidney was normal and it was very interesting to find that the kidney itself had resumed its proper size and shape. Examination of the bladder after dilatation of the urethra with the finger yielded a negative result, as also did examination by the rectum. The wound was sutured in layers. Incontinence of urine followed and lasted for five days, but she suffered no further inconvenience from the examinations. As no calculus had been found in the urinary passages and obstruction continued it was decided to try what pressure from above would do and with this object the drainage-tube was removed from the loin wound which was allowed to close. No result was apparent until Feb. 19th, when the patient complained of severe pain on micturition and passed a pulpy mass of greyish colour, of the size of a hazel nut with 11 oz. of urine. In less than three hours' time 18 oz. were passed without pain. The wound in the loin rapidly closed, the quantity of urine passed daily was natural, there was no pus in it, and the patient was able to leave the hospital on Feb. 24th and has continued well since.

The history of old attacks of renal colic made it appear probable that the case was one of blocking of the ureter by a calculus and the formation of an acute pyonephrosis. At all events it appeared probable that the sudden onset of symptoms indicated an obstruction of the ureter from within, and when at the first operation the only stone found was in the abscess cavity and not definitely in the pelvis of the kidney or entrance of the ureter, when the urine from the affected kidney all came through the lumbar wound and it was evident that the obstruction continued, exploration was clearly indicated. The result of this being negative as regards calculus made it probable that the block was caused by some softer substance, but the condition of the ureter as found at the second operation did not help very much in the clearing up of this point. The complete recovery from such a large pyonephrosis is also noteworthy, for the kidney was apparently normal when examined on Feb. 5th through the abdominal incision.

Mansfield-street, W.

ON PRIMARY ENTERECTOMY IN CASES OF INTESTINAL GANGRENE, WITH AN ILLUSTRATIVE CASE.

BY CUTHBERT LOCKYER, M.B., B.S. LOND., F.R.C.S. ENG.,

PATHOLOGIST TO THE SAMARITAN FREE HOSPITAL FOR WOMEN; SURGICAL REGISTRAR TO CHARING-CROSS HOSPITAL AND DEMONSTRATOR OF SURGERY IN THE MEDICAL SCHOOL.

PRIMARY resection as a treatment for gangrenous bowel was for years the subject of controversy among surgeons. Before the use of the various cylinders and plates it was doubtless preferable in many cases to produce an artificial anus with a view to subsequent resection rather than immediate enterectomy, on the ground that owing to the very critical condition of patients suffering from acute obstruction the prolonged and tedious operation for suturing the gut after resection would not be well borne. By the aid of the various mechanical devices of recent invention the slow process of Lembert's stitching is rendered unnecessary and the time taken to complete the anastomosis is reduced to a minimum. It has thus come about that the entire operation of resection and bowel union has been effected in the short space of twelve minutes and the possibility of such a feat has given popularity to the plan of removing gangrenous or suspicious bowel as soon as the latter has been cut down upon. On turning for a moment to the teaching of statistics overwhelming evidence is to be found in favour of primary resection of gangrenous bowel; for instance, Lockwood,[1] after analysing 37 cases of gangrenous hernia treated by artificial anus at St. Bartholomew's Hospital, finds that this method yields a mortality of 89·18 per cent. Again, Mikulicz[2] showed that in 168 cases which were collected from the practice of seven operators and in which the two operations—resection and the formation of an artificial anus—were included the mortality after resection amounted to 47·1 per cent., whilst that after the formation of an artificial anus amounted to 76·6 per cent., and Mikulicz himself performed 21 resections with 14 recoveries, and of the 7 deaths only 2 were attributable to the method employed, whilst in 7 cases in which he made an artificial anus all ended fatally. Zeidler's[3] figures throw light upon the treatment of gangrenous hernia; 289 cases of resection show a mortality of just over 49 per cent., whilst 287 cases of formation of an artificial anus show a mortality of over 74 per cent. — i.e., 25 per cent. greater. Glass[4] in 1897 collected 48 cases of resection with 3 deaths, or 6·25 per cent. McCosh[5] tabulates 115 cases of resection, of which 50 per cent. were fatal, and Razoumowski of St. Petersburg collected 26 cases of primary resection for strangulated hernia with 7 deaths only—12·26 per cent. It will be seen, therefore, from the above statistics that primary resection of sphacelating gut gives the patient the best chance of recovery in the majority of cases. I do not mean to imply by this that the older operation is to be entirely abandoned; that cannot be, for in cases of diffuse peritonitis or in cases of profound collapse resection would be out of the question and the establishment of an artificial anus the only justifiable surgical procedure. Likewise in cases of marked meteorism and distension all that can be done is to make a temporary opening in the distended gut.

Having assigned to primary enterectomy its proper place in surgery the question which next presents itself is—What method shall be employed in the intestinal anastomosis? Having regard to methods in vogue a threefold choice is open to the operator: (1) simple suturing; (2) suturing with the aid of temporary splints; and (3) the use of metal buttons. The method of suture with a temporary splint is the oldest, for French surgeons employed the trachea of a calf for this purpose in the thirteenth century. Next in point of antiquity is the simple suture which was first successfully performed by Ramdohr in 1780. The metal bobbin was first heard of in 1847, when Deman[6] employed a combination of three rings and a spring in bowel union; this is the prototype of the Murphy button. I may say at once that each plan has its supporters. There are surgeons who advocate the use of unaided suture to the exclusion of all mechanical assistance; on the other hand, there are surgeons who invariably give the sutured bowel the support to be derived from a button or a bobbin. The latter class of operators differ only in their opinion as to the relative advantages of the metal buttons as compared with the bobbins made of decalcified bone. With regard to simple suturing several plans have been devised. First come the Lembert and Czerny-Lembert stitches. To the use of these for end-to-end anastomosis there are objections. Both Jacobson and Treves are agreed that from twenty-five to forty-five stitches are required, and these will take considerable time to adjust. Moreover, for approximation by suture one requires good healthy peritoneum to work upon, and this cannot always be obtained, especially in cases where adhesions exist, for here peritoneum

[1] Annals of Surgery, 1890.
[2] Schmidt's Jahresbücher, Leipsic, May 13th, 1892.
[3] Centralblatt für Chirurgie, Leipsic, Jan. 21st, 1893.
[4] Transactions of the Medical Society of New York, 1897, p. 383.
[5] Medical and Surgical Reports of the Presbyterian Hospital, New York, 1896, vol. i., p. 160.
[6] Cheliu's Surgery, 1847.

as such may have disappeared in newly formed tissue or after separation become too attenuated to support the sutures; therefore it is clear that there are cases where simple suture cannot be carried out. Many surgeons argue also that it is not always possible to effect a watertight union by the Lembert stitch. Maunsell's method of suturing has promised much, especially in intussusception, but it is open to the serious objection that the stitches pass through all the coats of the bowel and leakage of intestinal contents may follow its use, as was shown to have occurred in three cases recorded by Bidwell from the practice of the West London Hospital; and, further, the line of union has been known to yield, giving rise to septic peritonitis. Mayo Robson says the peritoneum is more likely to be infected by this than by any other method of suture. A method of suture not generally practised, but which strongly appeals to me, is that devised by Leonard Rogers.[7] He acts on Greig Smith's statement that a sero-fibrous is the firmest union, and accordingly strips a collar of serous membrane from one of the cut ends of the gut, thus baring its muscular elements; he then sews the serous coat of the other end to the muscular coat of the end prepared, draws the peritoneal collar over the first row of stitches and sews the edge of the collar to the serous coat of the other end of bowel. There are therefore two rows of stitches, one through serous and muscular (now buried) and one uniting serous to serous. The serous coat strips easily and the operation takes half an hour. This plan acted well in the case of dogs experimented upon by Rogers, but has not yet to my knowledge been tried on the human subject. The time taken up in suturing will, I think, militate against its becoming the favourite method of union, but it has very strong supporters in Harrison Cripps, Bruce Clarke, and Abbé, the latter surgeon having discarded his catgut rings in favour of plain suturing. In comparing the statistics of the suture with those of approximation by mechanical means I find that in Mayo Robson's[8] 26 cases the mortality for unaided suture was 55·3 per cent., whereas the mortality in cases where his bone bobbin was used was only 8·3 per cent. Weir was able to collect 35 cases of primary suture in which all the patients died. It is only fair to mention that Edmunds and Ballance,[9] as the result of operations on the thicker intestines of dogs, came to the conclusion that simple suturing is the best plan both for lateral and for end-to-end anastomosis. For the former they advise Halstead's and for the latter Maunsell's method. The salient objection to simple unaided stitching is that it takes up so much more time than union by a button, and since it must be granted that it cannot be suitably adapted to meet all cases I will take in review the various mechanical appliances at the command of the surgeon. Some are digestible but others are not. Of the former I may mention Neuber's, Mayo Robson's, Allingham's, Ball's, and Bailey's decalcified bone bobbins, also Senn's plate and Paul's invagination tubes, Abbé's catgut bobbin and Beasley's catgut and rubber ring. Then come the non-digestible supports, such as Murphy's button, with modifications by Jackson Clarke and also by Miller, Frank's coupler, Chaput's bobbin of malleable tin, A. J. Downe's (Philadelphia) rubber collapsable bags, and further suggestions have been offered by Cheatle, Hastigan, and Frank.

To make a comparison between the relative merits of the several appliances would occupy more space than is placed at my disposal. I will content myself by saying that were it not for the fact that Murphy's metal button has such a brilliant record of successes to show I would leave the metal bobbin out of consideration altogether. The great plea for the use of any appliance is that by so doing the operation is shortened in point of time and better union is likely to be got when the bowel is kept at rest by a temporary splint. Since Murphy's button has been so far the most popular instrument its merits and demerits are worthy of discussion. Its merits rest on results. Murphy[10] records 27 cases in which the button was used with 9 deaths, and 5 only of these were from preventable causes. In Robson's hands the button had a mortality of 20 per cent. In 1896 Banks records its use in 7 cases with 2 deaths. Kummell[11] collected 17 cases of resection in 15 of which Murphy's button was used; 3 deaths occurred soon after operation, and of the remaining 12 all lived for some considerable time and 6 are recorded as having completely recovered. Carle[12] has used the button fifty times with good results and he also records that during the last two years he and his assistant Fantino have used the button twenty times for gastro-enterostomy with no death. In Graff's collection of 25 cases for 1893 to 1895 the button was in no case the cause of death. Individual successes are far too numerous to mention. Despite such a run of good fortune very serious objections present themselves in the use of the button. Amongst the many drawbacks may be mentioned (1) stenosis of the gut as a sequel; (2) obstruction of the small lumen; (3) failure to pass (4) gangrene extending from the seat of pressure or set up by the button in its passage down the canal; (5) injury to the bowel during closure by the pressure of the fingers causing the sharply cut apertures for drainage to lacerate the mucous membrane; (6) impossibility of disarticulating the button once it is closed; and (7) erosion of the spring by gastric juices. Chaput[13] cites 3 cases of stenosis and Ball[14] records a case, but this is not peculiar to Murphy's method; in my opinion it is far more frequent after simple suture. Chaput mentions 4 cases of obstruction and he does not agree with Meyer and Murphy, who say that purgation will overcome this difficulty. As to delay in passing there are many cases on record where the button has not passed at all. Murphy mentions 4 cases, Meyer 2, and Morton 1. In Allas's[15] case the button was retained for 16 months and in Wyeth's[16] case for 127 days. In Quenin's case it was retained till death 16 months later. Kammerer attempted extirpation after the button had been retained for 12 weeks and the patient died from peritonitis. The ileo-cæcal valve is the point of hindrance to the passage of the button, for in the case of double resection recorded by Glass the button he inserted into the large intestine passed on the fifth day, whilst the one which united the ends of the small gut took 28 days in its passage. The long delay of the button in the bowel is a very serious drawback. Its presence, as will be seen in the case published below, gives rise to sharp attacks of colicky pains and localised tenderness; but, what is worse, it may give rise to a series of ulcers along the alimentary tract and some of these may perforate. Again, gangrene and perforation have occurred 20 times to Chaput's knowledge. Quite recently this accident happened in a case at Charing-cross Hospital under the care of Mr. Morgan, and most surgeons are acquainted with this serious objection. I believe the objection raised to the use of the button in operations on the stomach is entirely theoretical, for there is very little hydrochloric acid present in cases of gastroectasis, especially if the stricture is malignant, and it would be a very simple matter to gild the button if necessary. These manifold objections have resulted in modifications of the button being devised by Jackson Clarke, Miller, and others, and new methods of anastomosis are still being suggested by Cheatle, Frank, and Hastigan. In point of dispatch Murphy's plan of anastomosis is *facile princeps* and its introduction is a matter of extreme simplicity, and for these reasons it will always have a place in intestinal surgery. The main risks in its use lie in its slow passage endangering the entirety of the bowel and the liability to gangrene of the bowel around the button whilst it remains *in situ*. I predict, therefore, that the decalcified bone bobbins will ultimately prove to be of greatest service in aiding intestinal anastomosis.

A woman, aged seventy-seven years, was admitted into Charing-cross Hospital under the care of Mr. Bloxam on Aug. 16th, 1897. She was suffering from strangulated femoral hernia. Two months before admission to hospital she fell down a flight of twelve steps and afterwards noticed a swelling in the right groin. Four days before admission to hospital acute symptoms set in and became aggravated up to the time of admission. The patient was operated upon at once. When the sac was opened a quantity of thick, grumous, fœtid fluid escaped and a knuckle of small intestine about 4 in. in length was exposed. The loop was intensely congested and at its convexity there was a gangrenous patch of the size of a florin. The vessels of the

[7] Brit. Med. Jour., 1896, vol. i., p. 903.
[8] Transactions of the Clinical Society of London, 1896, vol. xxix., p. 142.
[9] Edmunds: Transactions of the Royal Medical and Chirurgical Society, 1896, vol. lxxix., p. 256.
[10] THE LANCET, April 27th, 1895.
[11] Archiv für Klinische Chirurgie, Berlin, 1896, Band liii., p. 87.
[12] Riforma Medica, Napoli, 1897, vol. xiii., part 3, p. 541.
[13] Bulletin de la Société de Chirurgie, Paris, July 24th, 1895.
[14] Brit. Med. Jour., vol. i., 1897, pp. 1021, 1095, 1320.
[15] Presbyterian Hospital, Philadelphia, March 3rd, 1895.
[16] Nashville Journal of Medicine and Surgery, 1896, pp. 79, 161.

corresponding portion of the mesentery were congested but were not thrombosed. Having regard to the patient's great age the establishment of an artificial anus was suggested, but the anæsthetist (Mr. Bellamy Gardner) agreeing that the operation could proceed a portion of the gut 4½ in. in length was removed, the stricture having been eased by a vertical cut directly upwards through Poupart's ligament. A Murphy's button with a diameter of 1⅛ in. was inserted in the usual way and all bleeding points in the mesentery were secured. The parts were cleansed with a 1 in 2000 perchloride solution and the bowel together with the mesentery was returned into the abdominal cavity through the enlarged crural opening. The sac was ligatured and cut off, the deep parts were united with a fishing gut stitch, a drainage tube was inserted between the skin and the muscular planes and the superficial wound was sewn with interrupted fishing gut sutures. The pulse was 104, regular, and stronger after the operation than it had been before it. In the after treatment nothing was given by the mouth except sips of warm water for four days; small nutrient enemata were administered every two hours and all were retained. The patient passed a large stool from the lower bowel during the night after the operation. Two days after the operation flatulence became troublesome and great relief was obtained from turpentine enemata. The drainage-tube was retained for two days. The superficial wound suppurated for a while owing to contamination by the fluid in the hernial sac at the time of the operation. Hypostatic congestion set in at the bases of the lungs ten days after the operation. The patient suffered from colicky pains and some localised tenderness in the right iliac fossa which was worse at some times than others and these were complained of until the button was passed on the thirtieth day after operation. She left the hospital five weeks after the operation. I visited the patient at her home on Jan. 19th, 1898, and found that the wound was sound, that there was no sign of hernia on coughing, that the bowels were acting quite regularly and without pain, and that beyond the fact that she was seventy-eight years of age she had nothing to complain of.

I believe that the pain and tenderness in the right iliac fossa noted in the above case were caused by the button's passage being obstructed by the ileo-cæcal valve. That the button might be in the rectum was put out of court by examination for it in that situation. With regard to the division of Poupart's ligament, as Ball has pointed out, this does not weaken the abdominal wall any more than an incision in any other part of the abdomen. In the above case the soundness of the wound at the present time bears out this statement. Resection through the original wound presents less risk of infection than the plan practised by some surgeons of opening the abdomen and drawing the gangrenous bowel from the crural canal across the peritoneal cavity and resecting through a second wound. The great age of the patient is the most remarkable feature in the case. I am indebted to Mr. Bloxam for permission to publish the case and also to Mr. Morgan for permission to mention a recent case of his by way of illustrating a point in this paper.

Charing-cross Hospital.

LLANELLY HOSPITAL.—Owing to the resignations of the nursing staff at the Llanelly Hospital the committee of that institution has decided to temporarily close the hospital except in cases of serious accidents.

THE NEUROLOGICAL SOCIETY OF LONDON.—This society held its first meeting out of London on April 23rd, when, at the invitation of Dr. Alexander Hill, vice-Chancellor of the University, a meeting was held in the Physiological Laboratory at Cambridge. The following communications were made:—Dr. Alexander Hill: Some Specimens of Granules (demonstration).—Professor MacAlister: The Race-characters of Australian Brains (demonstration).—Dr. J. N. Langley: Some Points relating to the Sympathetic System (demonstration).—Dr. Gaskell (for Miss Alcock): The Distribution of the Facial Nerve in Ammocœtes.—Dr. F. E. Batten: (1) Nerve Terminations in Muscle Spindles (demonstration); and (2) (for Dr. Sihler of Ohio), Motor Nerve Termination within the Muscle Spindle (demonstration).—Dr. Mott: Degeneration of the Neuron (demonstration). At the conclusion of the meeting members and visitors were entertained at dinner by the Vice-Chancellor in Downing Hall.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON FOUR CASES OF PUERPERAL ECLAMPSIA.

BY G. FOWLER, L.R.C.P. EDIN.

CASE 1.—The patient was a married woman, aged eighteen years, eight months pregnant with her first child. There was no neurotic family history. The patient enjoyed perfect health till the day before I was sent for. She then complained of giddiness and flashes before her eyes and voided a very small quantity of urine which coagulated into a semi-solid muddy-looking mass. When I arrived at the house in the morning she had passed a restless night and complained very much of "slight twitches" (spasmodic contractions) of her hands and feet. I gave her full doses of chloral and applied mustard sinapisms to her calves. Two hours after I was hastily summoned as she had had a general convulsion and was quite unconscious. I found her in a violent general epileptiform seizure, having bitten her tongue rather severely. I tried to prevent her from further damaging her tongue by means of a gag and at once administered chloroform and kept her under its influence for nearly half an hour. As long as she was under the anæsthetic no convulsion existed, but as soon as its effects had passed away the fits came on again at regular intervals. As a last resource, considering the gravity of the case, with the consent of those most interested in her, I induced premature labour, dilating the os by means of Hegar's dilators and Barnes's bags, and when the os had fully dilated ruptured the membranes and delivered her with Simpson's long forceps. The whole operation lasted some time but was to my entire satisfaction. The child was stillborn. After delivery the mother had one severe convulsive seizure and from this time all proceeded well, the patient gradually recovering consciousness but having no recollection of what had occurred for some hours previous to or during labour. Since then I have delivered this patient of her second child, a healthy male, which presented in an occipito-posterior position.

CASE 2.—The patient was a married woman, aged twenty-one years, seven months pregnant with her first child. I was hurriedly summoned to see her as she had had a number of fits and was quite unconscious. When I arrived I found that both the upper and the lower extremities were very much swollen and œdematous. Urine had not been voided for twenty-four hours. Digital examination revealed an almost fully dilated os, a roomy pelvis, a cranial presentation, and the membranes intact. Fearing the onset of further convulsions I at once ruptured the membranes and awaited the result. This increased the uterine contractions, but unhappily while the head was rapidly descending a severe convulsive attack came on resembling an epileptic fit and this seemed to stop the further progress of the labour. This convulsion was soon followed by another, the fits occurring at regular intervals. As the head appeared to me to be acting as an irritant by its pressure, and being also well within reach, I resolved upon instrumental delivery and delivered the patient without any difficulty of a living male child. The placenta followed rapidly. The patient had no more fits, passed urine eight hours after the birth of the child, and progressed favourably, the urine remaining albuminous for about three days. Both child and mother are now doing well.

CASE 3.—This patient resembled Case 1 in every respect. I treated her in the same manner and was successful in delivering her of a living child. Both mother and child progressed favourably.

CASE 4.—The patient, a rather anæmic young woman with a good previous history, was taken in a fit four days after the birth of her first child, which was born without the aid of a medical man. The temperature was normal and the lochia were healthy. The urine was albuminous. There was no rupture of the perineum. The fits occurred at regular intervals and the patient remained in a semi-comatose state between them. I gave her full doses of chloral by the

rectum and administered chloroform and injected pilocarpine hypodermically. This treatment benefited the patient, especially the administration of chloroform, which kept the seizures well under control. She had no convulsive seizures for about a couple of hours after the administration of chloroform had been stopped. I then left her to see another urgent case and returned just in time to see the patient in a violent general convulsion in which she died (probably asphyxiated).

Certain points are worthy of note in these cases: (1) the disregard the majority of patients pay to the premonitory symptoms, sending for medical aid only when the eclamptic seizures come on; (2) the value of instrumental delivery and the induction of premature labour in certain cases of puerperal eclampsia; (3) the value of chloroform in controlling the fits; (4) the appearance of albumin in the urine of all four patients and its complete disappearance three or four days after delivery in the first three cases; and (5) the fact that all four patients were primiparæ.

A CASE OF SPASMODIC DYSPNŒA.

By J. E. S. BARNETT, F.R.C.S. ENG.

THE patient in the present instance was a male child who soon after birth began to suffer from attacks described by his mother as "grunting and blue all over." When he was three and a half months old I saw him and learned that the fits were becoming more frequent and enduring. His breathing was laboured, with suprasternal and subcostal recession during respiration, locomotion of the larynx, and action of the nares. During an attack these symptoms were intensified and in addition cyanosis became marked in the lips, face, and finger-nails. In the intervals there was free but noisy entrance of air into both lungs. The temperature was 97·8° F. in the groin, the heart sounds were normal, and the apex was in the natural position. The child was unusually fat and big for his age and he took his mother's breast well. The fits became more severe, threatening dissolution, and the mother was anxious that something should be done. Treatment by hot fomentations and by a steam-kettle under a tent proved useless. Papilloma and spasmodic catarrhal laryngitis were thought of as possible conditions. Tracheotomy was performed on March 17th, 1898, the infant being then four months old. No difficulty was experienced except in the introduction of the tube; the smallest vulcanite was used. There was no marked immediate relief, but next day the breathing was less laboured, and although the fits persisted the cyanosis was lessened and for the next day or two was absent. No œdema, emphysema, or suppuration occurred about the wound and the child's condition improved; his temperature remained normal throughout except for a rise to 100° on one evening. When the vulcanite tube was removed it was replaced first by a Parker's and afterwards by a Morrant Baker's rubber tube. Three weeks after the tracheotomy the child suffered from a prolonged attack of dyspnœa, became gradually more and more cyanosed, and eventually died. At the post-mortem examination it was found that the thymus gland was enlarged and that outlying lobules of gland tissue extended well into the root of the neck. Perhaps the recurrent laryngeal nerves were irritated and set up spasm of the larynx which the tracheotomy relieved, but the gland still growing caused direct and fatal pressure on the trachea. From the appearance of the parts when the deep fascia was divided this pressure must have been considerable. There was neither ulceration of the trachea nor papilloma of the larynx.

Paddington.

A CASE OF SHINGLES OCCURRING PRINCIPALLY ON THE SCAR OF A BURN.

By HERBERT FREDERICK, L.R.C.P. LOND., M.R.C.S. ENG.,
LATE ASSISTANT HOUSE SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE patient in this case was a boy, nine years of age, who came under my care on Dec. 6th, 1897, for well-developed shingles on the left side of the trunk. On Nov. 22nd, 1893, he had an extensive burn on the left thoracic and abdominal regions, owing to his nightshirt catching fire. He was treated as an in-patient at St. Mary's Hospital for eigh weeks. When I first saw the patient I was informed that twelve hours previously—i.e., about 9 P.M. on the previous evening—he had suffered from great pain in his left side which was so severe as to make him scream and to keep him awake during the early part of the night. On examination I found that he was a well-nourished boy with an extensive scar on his left chest, side, and abdomen. The skin was puckered and reddish in colour, with bands of thick fibrous tissue running in all directions. He was suffering from typical shingles on the left side. The rash started from the tips of the eleventh and twelfth dorsal and the first lumbar vertebræ and was continued round the left side in a band varying in breadth from 1½ in. to 3½ in. The greater part of the rash was on the site of the scar, though several groups of vesicles were present on the otherwise healthy skin. Two or three spots were on the right side of the middle line both in front and on the back. The rash presented nothing atypical; it was confluent in places and pain of a neuralgic character was present with considerable intensity. The child seemed to be poorly and his appetite was bad. His mother told me that he had been "out of sorts" for the last few days. During the nights of Dec. 6th, 7th, and 8th he could only sleep lying on the left side—the side of the lesion. The treatment consisted in protecting the side with absorbent wool and in giving tincture of perchloride of iron internally; 3 grains of calomel were given on the nights of the 6th and 7th, followed for a week afterwards by 3-grain powders of mercury with chalk at bedtime. The disease ran the usual course and recovery took place without any unusual symptoms. The neuralgic pain disappeared completely on the 10th.

The interest of the case seems to lie in the following points. It is not often that one comes across a case of shingles occurring on the site of such an extensive burn. Personally I have never seen one before, nor have any of my medical friends to whom I have detailed the case. From the nature of the scar it is evident that the skin over the burnt area must have been pretty thoroughly destroyed down to the deeper layers of the dermis and consequently the nerve terminations must have been destroyed too. The few spots occurring on the right side of the median line both on the back and front demonstrate very prettily the overlapping of the nerve-supply in those regions. This point is noted by Fagge,[1] but the case negatives his assertion that "pain of a neuralgic character is entirely absent in young patients." The mother put the child to bed herself and is certain that no spots were present—in fact, until the morning she thought the pain was due to pleurisy.

Queen's Park, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

A CASE OF TRAUMATIC TETANUS TREATED BY ANTITOXIN ON THE SEVENTH DAY AFTER INJURY; DEATH.

(Under the care of Dr. CURNOW.)

ON several recent occasions we have published in "The Mirror of Hospital Practice" reports of cases of tetanus in which the antitoxin has been employed and we gladly print the following cases as it is advisable that as many of these cases as possible should be put on record, for the value of tetanus antitoxin is still debateable. We would not suggest that the antitoxin has no controlling power over the disease for its efficacy in this respect has been abundantly established, but it cannot be said that at present we are in any degree certain of the frequency with which the antitoxin should be given or even of the most suitable dose for any given case. Cases of tetanus vary

[1] Fagge and Pye-Smith: Text-book of the Principles and Practice of Medicine, third edition, vol. ii., p. 939.

greatly in severity and recovery follows even without antitoxin in no very small proportion of cases. The mortality has varied in statistics from 83 to 93 per cent., but as these statistics chiefly refer to pre-antiseptic days it is not improbable that the rate of mortality in recent years would be much less. It is the opinion of many that the treatment with the tetanus antitoxin has not materially modified the death-rate. So far as our knowledge goes at present the most important factor in the prognosis is the length of time which has elapsed from the infliction of the wound to the development of symptoms. The later the spasms appear the better the prognosis. It may also be said that if the patient survives the tenth day of the illness he will probably recover. Kneass [1] says that the mortality in 61 cases which he had collected and which had been treated by antitoxin was only slightly less than that under other treatment, but Marson [2] collected 38 cases treated with antitoxin and of these 25 recovered. For the notes of the case we are indebted to Mr. A. E. Griffin, house physician.

The patient, a seaman, aged fifty-two years, was admitted to hospital on Feb. 14th, 1898. He had been out of work for some months and had been doing odd jobs about the docks. On Feb. 7th, seven days previously to admission, he cut his right thumb when chopping some wood. On the 11th he had some pains in the neck which he attributed to rheumatism. On the 13th he complained of pains in the back and on the 14th on rising he noticed that his neck was retracted and that he was unable to depress his jaw. He was able to swallow at breakfast-time, but later in the day he could not swallow at all. On admission at 4 P.M. his temperature was 98·6° F. and his pulse was 84 and regular. The respiration was normal. His head was thrown back and there was a compensatory curve in the spine. There was complete inability to swallow; he had spasm of the masseters with frequent grinding of the teeth. The muscles of the arms, legs, and trunk were not affected. The patient had walked to the hospital. Both knee-jerks were increased; the plantar reflexes were also increased, but no ankle clonus was present. On the palmar surface of the right thumb there was a superficial abrasion 1 in. in length grimed with dirt, but there was no inflammation or tenderness round the wound. Tetanus antitoxin having been sent for from the British Institute of Preventive Medicine, 10 c.c. were injected into the subcutaneous abdominal tissues at 9 P.M. on the day of admission and at the same time an attempt was made to pass the stomach-tube through a gap in the teeth, but the spasm of the pharynx was so great that the attempt was abandoned, and a simple enema having been administered nutrient enemata were given every four hours. The patient slept from 11 P.M. till 12 P.M. and it was noticed that he sweated profusely. His temperature was then 97·6° and his pulse was 84, strong and full. He had a slight spasm at 2.30 A.M. on the 15th and a somewhat more severe one at 4.30 A.M. When seen the spasm was over and he was lying quite quiet, his pulse being 108. 10 c.c. of antitoxin were injected at 5 A.M. When seen again at 10 A.M. he was sweating profusely; he complained of pain across the chest; the muscles of the neck were firmly contracted; there were occasional spasm of the masseters, with grinding of the teeth, and slight spasm of the back muscles with accompanying rigidity of the chest wall and slight dyspnœa during the spasms, which came on at intervals of about a quarter of an hour. The arms and legs were not affected; he could roll himself over and preferred to lie on the left side. His pulse was regular, 96, and the temperature was 98·2°. He had retained the nutrient enemata. The urine was highly coloured, acid, and of specific gravity 1020; there was a deposit of urates, but there was no albumin. At 2.40 P.M. a third injection of 10 c.c. of antitoxin was given and he was seen about this time by Dr. Curnow. At 4 P.M. the patient was much in the same condition but there was more inclination to spasm of the chest wall, synchronous with the spasm of the head and face muscles. There was no risus sardonicus; during the spasms there was slight rigidity of the arms and abdomen. At 5 P.M. the spasms became more frequent but not more severe. At 5.45 P.M. the patient had a violent spasm but no opisthotonos; after the spasm, which lasted three minutes, the patient's muscles became flaccid, then respiration and pulse gradually failed and he died at 6.5 P.M., the respirations apparently ceasing first. No post-mortem examination was performed.

Remarks by Mr. A. E. GRIFFIN.—Dr. Curnow has kindly given me permission to report the case. It is a matter of regret that I did not push the antitoxin to a greater extent. The patient died while I was in town getting a further supply, but the fact that seven days had elapsed before the patient sought relief greatly militated against a successful result. We were unable to obtain a post-mortem examination, but the wound was excised with the surrounding tissue. Dr. Newman, of the King's College Bacteriological Laboratory, kindly examined the excised portion and has demonstrated the presence of Nicolaier's bacillus. The case is of interest in that there was neither opisthotonos nor risus sardonicus, the pulse was never small and quick, and the temperature was subnormal.

[1] Journal of the American Medical Association, July 18th, 1896.
[2] THE LANCET, Aug. 10th, 1895.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.

THREE CASES OF TETANUS.

(Under the care of Mr. T. P. GREENWOOD.)

FOR the notes of these cases we are indebted to Mr. Stanley Copley, house surgeon.

CASE 1.—A man, aged thirty-four years, was admitted into the infirmary on Dec. 15th, 1897. He had suffered from an ulcer on the right leg for some years. He first noticed that his neck and jaw were stiff on Dec. 11th. When he was admitted he had well-marked risus sardonicus. The jaw was nearly closed and there was marked and continuous opisthotonos and the abdomen was rigid. Both legs were a little stiff; the rest of the body was unaffected. There was a very foul ulcer of a chronic character on the inner side of the right leg. The temperature was 97·4° F., the pulse was 80, and the respirations were 24. He had some spasms, affecting chiefly the back and limbs; there were about six spasms an hour. He was admitted at 1 P.M. and at 2.45 P.M. 3 grammes of Tizzoni's antitoxin were injected. At 3 P.M. A.C.E. mixture was administered, the ulcer was scraped to the bones and its edges were excised freely. The whole raw surface was then cauterised with fuming nitric acid. In the next three hours he had eight spasms. At 6 P.M. another 1½ grammes of Tizzoni's antitoxin were injected. He passed a bad night with very little sleep, being awakened by severe spasms, about ten occurring every hour. During the 16th his condition remained much the same, the spasms averaging ten an hour. He took food well. A gramme of Tizzoni's antitoxin was injected at 9.30 A.M., another gramme was injected at 1 P.M., and 1½ grammes were again injected at 6.30 P.M. He had no sleep until midnight; then 15 grains each of chloral hydrate and bromide of potassium were given and he obtained two hours' sleep. He had on an average seven spasms per hour during the night and on the next day (the 17th) he seemed to be holding his own. The bowels acted freely after an aperient pill. The pulse was rather slower (65). A gramme of antitoxin was administered at 10 A.M. and another gramme at 4 P.M. The bromide and chloral draught was repeated at night and it seemed to have a good effect in reducing the number of the spasms and produced two and a half hour's sleep. On the 18th the left leg was noticed to be stiff, the opisthotonos was more marked, and the jaw was more fixed. A gramme of antitoxin was given at 10 P.M. and between 10 A.M. and 4 P.M. the spasms were reduced to five an hour. From 4 to 10 P.M. the spasms increased in severity and in number (averaging eleven per hour), so 1 gramme of antitoxin was injected at 9 P.M. and at 10 P.M. 20 grains each of bromide and chloral were given. It was noticed that the right inguinal glands were enlarged and tender. The patient passed a bad night, having only one and a half hour's sleep; he had many severe spasms, these averaging eleven an hour. On the 19th the spasms were very frequent and severe. Both legs were rigid and marked opisthotonos was present. The jaw was quite closed. The ulcer was dressed. The slough was separating. The right inguinal glands were enlarged and tender and he declared the spasms started from these glands. At 10 A.M. 10 c.c. of antitoxin from the British Institute of Preventive Medicine were injected. The spasms continued to be severe and frequent; 20 grains each of bromide and chloral were given at midday with no effect and were repeated at 4 P.M. with 20 c.c. of antitoxin (British Institute of Preventive

Medicine). At 6 30 P.M. the patient was in great pain with severe and frequently repeated spasms. He had had sixty-nine spasms since midday. The draught of bromide and choral was repeated at 8 P.M. At 11 P.M. the severity of the spasms was still continuing. A temporary improvement was noticed between 8 and 9 P.M., there being only eleven spasms per hour, but he had twenty-six spasms between 9 and 11 P.M. At 11 P.M. the patient was crying out with pain. A hypodermic injection of morphia (¼ grain) was given and A.C.E. mixture was administered until the spasms relaxed. The breathing was a little laboured at first under the anæsthetic, but as the anæsthesia deepened it became quiet and he remained so for an hour. The spasms then gradually returned and became very severe between 2 and 3 A.M. (the 20th). Bromide and chloral (of each 20 grains) were given at 4 A.M. and were repeated at 8 A.M. The bowels acted freely between 9 and 10 A.M. after a minim of croton oil had been administered in the form of a pill. From 7 to 10 A.M. great improvement in spasms was noticed, there being on an average only four an hour. After 10 A.M. on the 20th he seemed to be better; the spasms were less frequent, being 3 or 4 per hour. Antitoxin (British Institute of Preventive Medicine, 20 c.c.) was given at 4 P.M. and 10 c.c. at 11 P.M. The administration of bromide and chloral (20 grains of each) was continued every four hours. He slept for short intervals during the day. An erythematous rash appeared on the upper part of the thighs. He passed a restless night, sleeping for two hours only, and the spasms averaging seven or eight per hour. On the 21st the rash was well marked; it consisted of irritable red blotches over the upper part of both thighs, the lower part of the abdomen and the upper part of the arms. Slight icterus was visible. Antitoxin (30 c.c.) was given at 10 A.M. and the bromide and chloral were continued every four hours. The temperature, the pulse, and the respirations kept about normal. The wound on the leg, which since the operation had been dressed with iodoform, was thoroughly washed with formalin solution (1 per cent.) and a compress of the same solution was applied. This was done, as the case gave the impression of its being one in which fresh toxins appeared to be formed from day to day, and it was concluded that all the tetanus bacilli in the wound had probably not been destroyed. Another 20 c.c. of antitoxin were given at 6 30 P.M. He passed a much better night, the spasms being less frequent and less severe. The chloral and bromide were omitted after 3 30 P.M. On the 22nd antitoxin (20 c.c.) was injected at 10 A.M. The patient expressed himself as feeling much easier and the rash was fading. 10 c.c. of antitoxin were given at 2 P.M. Altogether he had a much better day, but he again passed a restless night. The bromide and chloral were given every four hours during the night. On the 23rd antitoxin (20 c.c.) was administered at 7 A.M. The masseters appeared to be relaxing and allowed the little finger to pass between the teeth. The formalin dressing on the leg was reapplied. By 6 P.M. there was decided relaxation of the spasm all over the body and the index finger could be introduced between the teeth. The bromide and chloral were again omitted after 8 A.M. On the 24th the improvement was maintained, the spasms averaging during the day only three per hour; 10 c.c. of antitoxin were given at 10 A.M. He passed the best night since his admission. On the 25th 10 c.c. of antitoxin were given at 10 A.M. He was certainly improving and he had only two spasms per hour during the day. The dressing on the leg was changed to dry gauze dressing. From this date he steadily improved with gradual diminishing stiffness and spasms up to the 30th, when the spasms ceased entirely though some rigidity remained in the legs, the jaw, the abdomen, and the back, rigidity in the last preventing his sitting up. On Jan. 8th, 1898, he was so far recovered as to sit up and walk about, but some rigidity remained in the right leg and in the back. He was discharged on Feb. 1st. The ulcer was healing and looked healthy. There was still some slight stiffness about the back and the right leg. This remained up to the middle of March. No antitoxin was used after 10 A.M. on Dec. 25th, 1897. He had altogether 13½ grammes of Tizzoni's antitoxin and 180 c.c. of antitoxin from the British Institute of Preventive Medicine. His largest dose of antitoxin in one day was 50 c.c. on Dec. 21st, corresponding to the turning-point of his illness. It was thought that this large dose of 50 c.c. enabled his natural forces to gain the upper hand and in another similar case as much would be given at the first dose. The antitoxins did not appear to be as beneficial in controlling the paroxysmal spasms as chloral and bromide. Great relief to these spasms was also obtained by free purgation with croton oil. From the probable source of infection being a chronic ulcer of the leg it was not possible to calculate the incubation period. It will be noted also that the formalin dressing was also applied on the day of most improvement and this may have contributed to the subsequent recovery.

CASE 2.—A man, aged sixty-seven years, crushed his left hand between the wheel of a cart and a wall while he was carting manure on Feb. 23rd, 1898. The hand and wound were very dirty and the wound suppurated subsequently. He first noticed stiffness in his neck on March 1st and he was unable to swallow on the following day. He was admitted into the infirmary at 7 P.M. on the 2nd and it was noticed that the wound on the back of his hand, part of which was held together by two silver sutures, was suppurating and sloughing and that there was a fracture of the fourth metacarpal bone communicating with the wound. The risus sardonicus was marked and the muscles of the neck were stiff. The tongue could just be protruded between the teeth. Opisthotonos was present and the abdomen was very rigid. He was unable to speak clearly and he was quite unable to swallow anything. A.C.E. mixture was administered at 9 P.M. and the wound was cleansed, its edges and sloughs were excised and with them the whole of the fourth digit and its metacarpal bone. The wound was thoroughly swabbed with formalin solution (1 per cent.). The patient passed a bad night, having practically no sleep, and as he was quite unable to swallow anything 30 grains each of chloral and bromide were given per rectum at 11 P.M. On the 3rd he was very rigid and stiff and he was quite unable to swallow even the mucus in his throat, which nearly choked him at times. The pulse was 132. There were no spasms or rigidity of the limbs. He was fed every four hours with nutrient enemata and suppositories. He gradually became more and more cyanosed and he died at 1.30 P.M. Unfortunately no antitoxin could be procured in time for this case. It was severe in all its aspects.

CASE 3.—This case did not occur in the infirmary, but it has been thought well to give it in connexion with the two other cases of tetanus. A woman, aged forty-seven years, was first seen on Feb. 16th, 1898, when she complained of pain in the neck and head. Her temperature was 103° F. The case was thought to be one of influenza, but on the next day, the 17th, she had an anxious expression and slight trismus. A foul varicose ulcer was the only possible site for infection from tetanus which could be discovered. On the 18th chloroform was given and the ulcer was excised freely and its surface was cauterised with strong nitric acid. On the 19th the trismus was more marked and 20 c.c. of antitoxin from the British Institute of Preventive Medicine were injected in the morning and another 20 c.c. in the evening. On the 20th the spasms were frequent and painful; the trismus was rather less. A hypodermic injection of morphia (⅓ gr.) was given at night and 20 c.c. of antitoxin were injected in the morning and repeated again in the evening. On the 21st she seemed to be easier and the spasms were less severe; 20 c.c. of antitoxin were given in the morning. The patient died rather suddenly with symptoms of cardiac failure at 8 P.M. No post-mortem examination was allowed. It was thought that the patient was improving under the antitoxin and that the cause of death was cardiac failure of which the origin was not quite clear.

EXETER DISPENSARY.—The annual report of the Exeter Dispensary which has just been issued shows that 6338 patients had been treated during 1897, an increase of 67 on the previous year. Since the institution was founded in 1818 there have been 270,000 patients attended. The financial statement showed that there was an adverse balance of £50.

METEOROLOGY AT SOUTHPORT.—The report of the Corporation Meteorological Observatory for 1897 is a record of most careful and minute work on the part of Mr. Baxendell, the borough meteorologist, and his staff of assistants. The report contains an account of the varying instruments used and a number of very full tables of results. The publication of results of observations such as these on the meteorology of health resorts and watering-places in general must be of great interest as bearing upon certain departments of public health.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Albumosuria in which the Albumose was spontaneously precipitated.

A MEETING of this society was held on April 26th, the President, Mr. BRYANT, being in the chair.

Dr. T. R. BRADSHAW (Liverpool) read a paper on a case of Albumosuria in which the Albumose was spontaneously precipitated. The patient was a man, aged seventy years. There was no history of any previous illness. For nearly a year he had passed turbid milky urine two or three times a week which deposited a copious white sediment which was amorphous and gave the reactions of a proteid. The clear urine passed at other times contained in solution a proteid which gave reactions of an albumose and appeared to be the same body as was precipitated in the turbid specimens. It coagulated at a temperature of from 50° to 60° C. and was partially dissolved again on boiling. Coagulation took place at a lower temperature when the urine was made more acid. Coagulation took place with nitric acid and the coagulum dissolved on heating and came back on cooling. Coagulation was also brought about by hydrochloric acid and sulphuric acid. A detailed description was given of the characters of the urine. Dr. Bradshaw thought that spontaneous precipitation depended on variation in the quantity of the other constituents of the urine. Five cases reported by previous observers, in which a substance resembling that here described was found in the urine, were quoted. The present case was apparently unique in respect that the albumose was precipitated in the urinary passages. In several recorded cases the condition had been associated with disease of bones and bone marrow. Dr. Bradshaw's patient also showed kyphosis and immobility of the lower vertebræ, but the exact character of the disease in the bone was not yet evident.

The PRESIDENT thanked Dr. Bradshaw for his interesting communication. He was particularly interested in the surgical questions raised and from the appearance of the photographs he could not help wondering whether the case could possibly be one of osteitis deformans.

Dr. SIDNEY MARTIN said that some years ago he had had the opportunity of investigating a similar case in which there was spontaneous precipitation of albumose. The patient was a woman who was under the care of Dr. H. R. Spencer for an ordinary multilocular ovarian tumour which was removed. Soon after she began to pass albumose, the urine being milky, and at first it was supposed to be a case of chyluria. No bone disease was detected, but there was hypertrophy of the left ventricle and other signs of chronic renal disease. He agreed that there should be a distinction between these cases and those in which a small quantity of albumose appeared in the course of fevers. He was not inclined to lay very much stress on the exact form of albumose present, as the different albumoses — hetero-, proto-, and deutero- — formed a progressive series between albumin and peptone. The substance met with in the urine in cases like Dr. Bradshaw's was usually spoken of as hetero-albumose, but it differed from true peptic hetero-albumose in not being dialysable. It differed from deutero-albumose in being redissolved after coagulation in a 0·2 per cent solution of caustic soda. Further observations were necessary to show whether the body more closely resembled proto-albumose or the forms more allied to peptones. It had been supposed by some that the substances were formed by the action of pepsin in the urine on albumin, but there was hardly time for such a change to take place. In the cases associated with multiple new growth the rapid degeneration of the cells led to the formation of proteids which could not be used within the body and were excreted. A similar albumose to that found in the urine in these cases could be obtained by boiling splenic extract with caustic potash.

Dr. H. D. ROLLESTON asked whether the blood serum had been examined. Fifteen months ago Chataigne had described cases in which the blood serum was lactescent, the condition being specially associated with parenchymatous degeneration of the renal epithelium and met with also in cases of chylous ascites. With regard to the association with bone disease he mentioned a case of multiple myelomata recently reported in the *Journal of Pathology* by Dr. Parkes Weber. In that case there were homogeneous patches seen in microscopic sections of various organs which were possibly albumose precipitated by the hardening reagents.

Dr. LEE DICKINSON had met with both proto- and deutero-albumose in the urine of patients suffering from pneumonia, in some cases as much as 1 per cent. The cases were always marked by severe symptoms, depression, low tension pulse, and hæmorrhagic tendency, similar to what was observed on injection of mixed albumoses into the blood of animals. Virchow and others had shown the presence of albumose in the marrow in cases of fragilitas ossium. Thus this substance must traverse the body before being excreted by the kidney.

Dr. BRADSHAW, in reply, said that after careful examination of the patient no sign of osteitis deformans could be detected. It had been suggested that the spinal changes might be due to senile caries and a case of senile caries had been mentioned to him in which there was milky urine. But there was no necropsy in that case and it was possibly not caries. It had only been recognised of late years that many of the cases of fragilitas ossium were really cases of multiple sarcoma of bones, and he thought that it was probable that the case under the care of Sir Thomas Watson which had become classical through the investigation of the urine by Dr. Bence Jones was of this nature, and it was to this category that he would provisionally refer his own case.

MEDICAL SOCIETY OF LONDON.

Some unusual Cases of Renal Calculus.—Central Galvanisation in Cardiac and other Neuroses.

A MEETING of this society was held on April 26th, Dr. HOLMAN, Vice-President, being in the chair.

Mr. W. H. BATTLE read a paper on Some Unusual Cases of Renal Calculus, which will be found on page 1180 of this issue of THE LANCET.—Dr. HOLMAN recalled the days when there was intense antagonism to abdominal surgery and referred to the rapid strides which renal surgery had made. He detailed one case in which renal calculus had occurred in a patient who also had myxœdema. She rapidly responded to thyroid treatment, but pain began in the right kidney, and this had been preceded for some years by hæmaturia and pus in the urine. In July, 1897, as these attacks were more frequent and acute, and there were symptoms of blocking of the ureter followed by pyonephrosis, the kidney was incised and a large quantity of pus was evacuated, but no stone was found. Recently, however, he had been able to pass a probe down the ureter and could feel a stone, which he hoped might be extracted later.—Mr. BRUCE CLARKE referred to the necessity of passing some instrument down the ureter at the time of the operation. In several cases he had succeeded in finding a stone by this means, employing for the purpose a black rubber bougie, which could often be passed down as far as the brim of the pelvis. He thought that the excessive hæmaturia was due partly to the character of the stone and partly to its position.—Mr. MARMADUKE SHEILD asked what was Mr. Battle's experience as to the value of the x rays in determining the presence of a calculus. The chief difficulty in diagnosis was in the discrimination from renal tuberculosis. He asked whether Mr. Battle had ever employed the inoculation test. In one case under his care some of the urine from a doubtful case had been injected by a pathologist into the peritoneal cavity of a rabbit and gave rise to typical tuberculosis.—Mr. BATTLE, in reply, said that in one of his cases he had attempted to probe the ureter during the operation, but owing to the disturbance of parts he could not find the opening of the ureter. Hæmaturia was very variable. It was greater in the case quoted, in which there was a smooth phosphatic coating, than in the case where there was a spiny surface. No doubt this was due to closer attachment of the latter. His experience with the x rays led him to believe that, though occasionally successful, skiagraphy could not be relied on. He had no personal experience of the method of making inoculations for diagnostic purposes.

Mr. WILLIAM ARMSTRONG (Buxton) read a paper on the Therapeutic Value of Central Galvanisation in Cardiac and other Neuroses. He drew attention to four factors which had tended to discredit the use of galvanism to the higher nerve centres: (1) want of precision in application and failure to estimate the exact dosage administered; (2) use as a last

resort in hopeless cases; (3) extravagant claims made for it; and (4) the blatant quackery which has so often been associated with it. He contended that it had only a limited field of usefulness, like any other remedy, but that within those limits its effects were definite and fairly certain. The physiological effects were threefold—stimulating, sedative, and tonic. The stimulating effect was immediate, the sedative quickly followed, and the tonic came on more slowly. The most important effect was upon nutrition. During the passage of the current through the body heat was generated, substances were transferred from one pole to the other, endosmosis and exosmosis were modified, and there was a marked acceleration of the process of oxidation. Secretion was largely influenced, as was excretion, especially in those gouty cases where there was deficient excretion of urea and uric acid. The structures mainly influenced by this method were the medulla, the pneumogastric nerves, and the sympathetic system. The various methods of application were discussed, preference being given to the "Rockwell," in which the kathode was applied to some indifferent part to avoid vertigo and nausea. The necessary appliances were described and stress was laid upon the need for a good galvanometer and rheostat. The strength of the current and the duration of the sittings were detailed. The applications should neither be too long nor too strong and attention was drawn to the following symptons which showed need for special care: headache, insomnia, nausea, over-excited pulse, and prolonged reaction of the nerves of special sense. Cases presenting the following symptoms were considered as suitable for treatment, but stress was laid upon the necessity for elimination in the first instance of all reflex sources of irritation, especially in cases of cardiac neuroses, migraine, and spasmodic asthma: (1) cardiac and gastric neurosis; (2) neurasthenia and hypochondriasis; (3) cerebral exhaustion; (4) migraine; (5) exophthalmic goitre; (6) Raynaud's disease; and (7) spasmodic asthma. The therapeutic effects noted were a feeling of better health, an increase in brightness and clearness of thought, an improvement in appetite and digestion, and a marked decrease in the formation of indican, skatol, cresol, and oxalates. Sleep was markedly increased and was more calm and peaceful. The action of the heart became more regular, anginoid pains were relieved, the rapid pulse became slower, and the unstable nerve centres were steadied so that they were not so readily acted upon by reflex causes, such as flatulence, absorption of toxins, &c. Neurasthenia benefited largely, the vicious circle formed by the instability of the nerve centres and the abnormal products of deranged digestion being broken through. Details were given showing excellent results achieved in cases of cardiac neuroses, neurasthenia, cerebral exhaustion, exophthalmic goitre, migraine, Raynaud's disease, spasmodic asthma, "dry tongue," and diabetes insipidus.—Dr. G. HEBSCHELL said that he had used central galvanisation for ten years and could confirm what had been said as to its beneficial results. It was particularly valuable in relieving that class of neurasthenic patients in whom there was auto-intoxication. In such cases he, in addition, washed out both the stomach and the lower bowel. In applying the current he did not send it through the brain, but applied the positive pole to the nape of the neck and the negative pole to the epigastrium for ten minutes. He afterwards removed the electrode from the nape of the neck and placed it over the sympathetic ganglia in the front of the neck. He avoided the use of a dual collector on his battery, as the sudden changes in the strength of current produced by it caused vertigo He used a special graphite rheostat made by the Chloride of Silver Dry Cell Company of Baltimore. Patience was required, as much good was rarely seen until after from ten to fifteen sittings, but, on the other hand, treatment was rarely necessary for more than five weeks. He had seen galvanisation arrest the paroxysms of spasmodic asthma.—Dr. LEWIS JONES said that the value of general galvanisation had been rather lost sight of for some years. It was of the greatest value in the treatment of various disorders of nutrition and the effects could be particularly well seen in rickets, chilblains, and Raynaud's disease. He preferred to apply it in the form of an electric bath, using sinusoidal currents from the main. He had never seen any permanent benefit from its use in exophthalmic goitre.—Dr. ABRAHAM observed that central galvanisation and electric baths were very different things. He thought that central galvanisation had been largely abandoned in favour of D'Arsonval's method of currents of high intensity. He asked what was supposed to be the advantage of stimulating the cilio-spinal centre in connexion with cardiac neuroses.—Dr. HEDLEY confirmed the value of the treatment. He remarked that the high frequency currents which had been referred to were still on their trial, but he himself expected great things from them.—Mr. ARMSTRONG, in reply, expressed his great pleasure that Dr. Herschell, Dr. Lewis Jones, and Dr. Hedley concurred in the general principles he had laid down, although their modes of application differed somewhat from the one he had used. His experience confirmed that of Dr. Lewis Jones concerning the use and the value of the sinusoidal bath in rickets and chilblains. Dr. Abraham, in accusing them of using methods as diametrically opposed as a Turkish bath and a cold bath, must surely have forgotten that there was such a thing as reflex impression conveyed from the peripheral nerves and from the spinal sympathetic ganglia to the brain. Dr. Lewis Jones with his electric bath used the former method and Dr. Herschell the latter. With regard to the smallness of dosage in central galvanisation compared with that of the D'Arsonval current it must not be forgotten that in the former the whole current passed through the centres. In the latter probably but a small portion reached them and that indirectly. The suggestion that the best continental methods were neglected in England was disproved by the fact that he himself was largely using the sinusoidal current mentioned, but while he had found it most valuable in many cases it was much inferior to the central treatment in the class of case under discussion. The alleged uselessness of galvanisation of the cilio-spinal centre was at least open to argument, but he considered that as excitation of this point was so conducted to the cervical sympathetic as to cause dilatation of the pupil it at any rate seemed to point to a method of influencing that important part of the nervous system, and several competent observers have reported definite therapeutic effects following application to that centre only.

CLINICAL SOCIETY OF LONDON.

Renal Calculus.—Thrombosis of the Superior Mesenteric Vein.—Tuberculous Peritonitis with Thrombosis of the Mesenteric Vein.—Raynaud's Gangrene after Parturition.

A MEETING of this society was held on April 22nd, the President, Mr. LANGTON, being in the chair.

Dr. FREDERICK TAYLOR and Mr. ALFRED D. FRIPP related a case in which a Renal Calculus was detected by the Roentgen rays and successfully removed. The patient was a male, aged twenty-six years. He was admitted into Guy's Hospital on Sept. 8th, 1897, under Dr. Taylor. There was a history of mild attacks of colic for nine years, and the symptoms and signs while in hospital pointed clearly to the diagnosis of a right renal calculus, but Mr. Fripp was unable on Oct. 18th to detect it in the kidney through the usual lumbar incision. A week later, guided by a skiagram, he was able, by reopening the wound and removing part of the twelfth rib, to reach and remove the stone from its abnormally high position. It weighed exactly half an ounce and was of the size and shape of the distal segment of a small thumb. It was surrounded by a cyst consisting partly of the pelvis of the kidney and partly of atrophied kidney substance. This was removed as well. The patient made an uninterrupted recovery and has since resumed the active life from which he had been debarred for nine years by the colic. The points of interest in this case were (1) the indication given by a skiagram of the position of a renal calculus that had previously escaped detection by the lumbar exploratory operation; (2) the abnormally high position of the stone—above the twelfth rib, though on the right side; (3) the fact that the twelfth rib had its deep surface covered to a large extent by pleura, even on the right side; and (4) the completely atrophied condition of the kidney.—The PRESIDENT said that the symptoms appeared to be classical except for the absence of hæmaturia. Although he himself had never been able to detect a renal calculus by skiagraphy he had in one instance obtained a definite shadow from a calculus in the upper part of the ureter.—Mr. MAKINS said that there appeared to be great difficulties in obtaining successful skiagrams. Even so skilful an operator as Dr. Barry Blacker had failed repeatedly and in one case in which there were 16 calculi in a kidney no indication of them was revealed on the plate. Although, therefore, positive results were most valuable it

would be long before the existence of renal calculus could be excluded by this method.—Dr. BARRY BLACKER said that he had examined many dozens of supposed cases of renal calculus by this method, but had only been able to suggest the presence of a calculus in three.

Dr. BRADFORD read an account of a case of Thrombosis of the Superior Mesenteric Vein causing Intestinal Obstruction. A man, aged twenty years, was admitted into University College Hospital on Aug. 26th, 1897, complaining of pain in the abdomen and slight diarrhœa. Illness began on Aug. 20th with vomiting and abdominal pain and the diarrhœa did not appear until Aug. 23rd. On admission the diarrhœa had ceased, but there was considerable pain referred to the umbilicus and there was repeated vomiting of coagulated milk. The bowels were opened by an enema and the stools contained no blood or mucus. The abdomen was resonant all over and nothing abnormal was detected on examination. The respiration was rapid and jerky, the pulse was 96, the temperature was 101° F., and the lips were covered with sordes. The patient remained in much the same condition until Sept. 1st, when the abdominal pain became more severe and the vomiting became more frequent. The bowels were opened by an enema. On Sept. 2nd the vomited matter became distinctly stercoraceous and an indefinite mass could be felt in the left iliac region. A few fæcal masses were passed as a result of enemata but flatus was passed freely. On Sept. 3rd the abdomen was opened in the middle line by Mr. Pollard and a distended coil of small intestine was drawn out of the wound; this was purple in colour and greatly swollen and thickened. There was no volvulus and no constricting band was found. The wound was rapidly closed and the patient succumbed shortly after the operation. On post-mortem examination no band or other cause of strangulation was found. The mesentery was thickened and the veins in it were thrombosed; a portion of the jejunum some 18 in. long was greatly swollen and thickened. The superior mesenteric artery and all its branches were normal. The splenic vein was normal. The trunk of the superior mesenteric vein was greatly thickened and the lumen of the main vessel was filled with reddish puriform material. The upper part of the vein was blocked by firm decolourised clot. The disease of this vein extended into the main tributaries of this vessel, but most of the terminal branches had their walls of a normal thickness and appearance, and some of these were free from clot, although the trunk into which they opened was thrombosed. The upper part of the portal vein was healthy. The mesenteric glands were enlarged and congested and one of them lying on the lowest branch of the vein was enlarged and suppurating, and the abscess cavity communicated with the interior of one of the thrombosed veins.—Dr. FREDERICK TAYLOR said that some years ago he had brought before the Pathological Society a case somewhat similar to that described by Dr. Bradford except that in his case it was the artery and not the vein which was thrombosed.—Dr. LUCAS BENHAM asked what medical treatment was adopted and whether hiccough was a prominent symptom.—Dr. TOOGOOD had had a case under his care at Lewisham Infirmary exactly like that described by Dr. Bradford. The symptoms simulated intestinal obstruction, but on opening the abdomen the state of things was made clear. In that case there was not only blood in the peritoneal cavity but also in the mesentery. —Mr. MAKINS had once been called in to operate on a case which proved to be one of thrombosis of the superior mesenteric artery. In this case the onset of symptoms was sudden and not slow as in Dr. Bradford's venous case. The question had been raised whether thrombosis of the artery would lead to gangrene owing to the very free anastomosis of its branches. He reminded the society that last year Mr. Lockwood had read an account of a case[1] in which gangrene occurred from a stab which severed a branch half an inch from the bowel. Probably, however, the anatomical conditions in that case were exceptional. —Mr. FRIPP asked whether it was likely that inflammation had spread from the pancreas to the vein, which passed close by it. Recently there had been a little epidemic of acute pancreatitis, judging from the number of cases brought to Guy's Hospital. In several of them the symptoms during life were those of intestinal obstruction.—Dr. ALFRED HILLIER asked whether the condition of the veins might not have been secondary to some condition of the intestine.—Dr. BRADFORD, in reply, said that the treatment had been palliative only, as the nature of the illness was not recognised.

Mr. RAYMOND JOHNSON reported a case of Tuberculous Peritonitis in which symptoms of Intestinal Obstruction resulted, probably from Thrombosis of certain Tributaries of the Superior Mesenteric Vein. The patient, a woman, aged thirty-three years, who had been ailing for a month, was attacked with sudden abdominal pain four days before her admission to University College Hospital. Vomiting occurred repeatedly, and the bowels failed to act in spite of aperient medicines. On admission the patient presented in a marked degree the abdominal aspect; the tongue was dry and the pulse was rapid; the abdomen was slightly distended and uniformly slightly tender; there was impaired resonance in the left flank, but no tumour could be detected and the pelvic viscera appeared to be normal. The diagnosis of intestinal obstruction was made, but no evidence was forthcoming to indicate its exact nature. On opening the abdomen several ounces of clear fluid escaped and yellow tubercles were seen to be scattered sparsely over the intestines. No kinking or twisting of the bowel could be detected, but a solid mass was felt, which proved to be a fan-shaped portion of the mesentery much thickened and deeply congested. The corresponding eight inches of the intestine was much more congested and swollen than the rest and the tuberculous nodules more abundant over it than elsewhere. The whole length of the small intestine having been examined without finding any further cause for the symptoms the abdomen was closed. The patient was at first fed entirely by the rectum, but after a slight action of the bowels on the day following the operation liquid food was given in small quantities by the mouth without any return of the sickness. At the end of three weeks the patient was able to leave the hospital. The explanation was offered that the condition of the mesentery and bowel resulted from thrombosis of some of the branches of the mesenteric vein caused by the deposit of tubercle around them and that the symptoms of intestinal obstruction resulted from a temporary paralysis of that part of the intestine the circulation of which was interfered with. The case was reported as possibly affording an explanation of the occurrence of acute symptoms during the course of tuberculous peritonitis independently of the ordinary conditions occasioning intestinal obstruction.

Dr. LEE DICKINSON and Dr. W. A. HUBERT read a paper on a case of Raynaud's Gangrene in connexion with Parturition. The case was that of a woman, aged forty-two years, in whom Raynaud's disease set in severely on the second day after parturition but who had had slight attacks during her pregnancy. The fingers and toes were the parts chiefly affected and almost the whole of the ungual phalanges of both hands became gangrenous. There was intense pain in the affected parts. No ergot had been taken. The attack came on without any general or local exposure to cold and was evidently determined by the final strain of parturition after a pregnancy which had been attended by circumstances of privation and ill-health. The patient was suffering from chronic nephritis with hæmaturia and was very anæmic. A second case in which Raynaud's gangrene followed parturition was briefly described and reference was made to two others, one described by Raynaud and the other by Begg in THE LANCET, Sept. 17th, 1870. In the four cases, although ergot was given, it was in small quantities. The influence of conditions of debility, such as that from malaria, anæmia, and hardship, was referred to — Dr. LUCAS BENHAM asked if there were any septic condition following the confinement in either of the cases referred to.—Dr. DICKINSON, in reply, said that there was no history of any septic trouble and very little ergot had been taken.

[1] See THE LANCET, May 22nd, 1897.

HARVEIAN SOCIETY OF LONDON.

The Treatment of Epilepsy in Epileptic Colonies.—Oöphorectomy for Inoperable Cancer of the Breast.

A MEETING of this society was held on April 14th, Dr. JAMES F. GOODHART, the President, being in the chair.

Dr. ALDREN TURNER read a short paper upon the Treatment of Epilepsy in Epileptic Colonies. He referred to the success which had followed the establishment of these institutions in Germany and pointed to the development of this system in America and in England. The epileptic colony at Chalfont St. Peter, Bucks, to which attention was

especially drawn, was founded for the purpose of giving employment to those epileptics, both male and female, who, by reason of their disease, were unable to obtain work or who were discharged from remunerative posts on account of epilepsy. The experience of the colony during the four years of its existence pointed to the fact that the younger the epileptic and the sooner he is admitted after the onset of the seizures the more satisfactory is the result of the general management and *régime* adopted. The principles which direct the management are simple: (*a*) removal of the epileptic from the town to the country; (*b*) regular employment under direction; (*c*) the maintenance of a well-ordered and regular mode of life, with avoidance of excitement and abstinence from alcoholic liquors; and (*d*) abundance of good nourishment of a simple nature. The general result is that the fits in the majority of cases diminish both in number and severity, in some cases to quite an extraordinary extent; the physical health materially improves, while the mental condition in all but a few cases shows obvious improvement.—The PRESIDENT alluded to the beneficial effects which followed admission of epileptics to ordinary hospitals. Some were sent in as suffering from Jacksonian epilepsy and as being in urgent need of operation; but the fits would cease or subside in frequency and severity so long as the patient remained in hospital, although medicines were almost entirely withheld. He mentioned the difficulty of treating epilepsy occurring in those past middle life and instanced the case of a man who after being a great sportsman all his life had become epileptic. He would often be seized by a fit whilst out shooting and would lie down until the attack passed off and then resume his sport. He (Dr. Goodhart) had taken the responsibility of allowing the patient to continue his favourite pursuits in spite of the obvious danger entailed, thinking that the danger to general health would be still greater were the patient to forego the mode of life to which he was accustomed.—Dr. LEONARD GUTHRIE asked whether any provision was made at Chalfont St. Peter for the treatment of epileptic children. He considered that systematic moral training of these—which they rarely got at home—was of the highest importance to themselves and to the community, and it could best be carried out in such colonies as had been described.—Dr. KNOWSLEY SIBLEY remarked that after hearing the paper it had very forcibly struck him that the improvement, both as to the frequency and strength of the fits noticed in so many patients shortly after admission to the epileptic colony, might be the result of the removal of alcohol. His hospital experience had taught him that a large number of epileptics drank more alcohol than was good for them and in many cases they were easily influenced by comparatively small quantities. Undoubtedly the exciting cause of many of the fits was alcohol. The fact that on admission to the colony all alcohol was withdrawn from the epileptics' daily *régime* suggested a probable explanation of the improvement noticed. Dr. Sibley also spoke on the question of drugs and the doses employed.—Dr. TURNER, in reply, agreed that it was most important to deprive epileptics of alcoholic liquors. The question of receiving children at the colony had already engaged the attention of the governors, but there was difficulty in deciding how long they should be kept and what to do with them afterwards.

Mr. WATSON CHEYNE read a paper on two cases of Oöphorectomy for Inoperable Cancer of the Breast. The first patient, a woman, aged thirty-four years, was admitted to King's College Hospital on Oct. 23rd, 1896. Three years previously a cancerous tumour had been removed from her right breast. A year later some enlarged glands were removed from the right axilla. Three weeks before admission to hospital she felt pain along the old scar and noticed an ulcer in the mid-axillary line. On admission this ulcer was of about the size of a shilling, with considerable induration and redness of the skin around. A large, tender, hard mass adherent to the chest wall occupied almost the whole of the right axilla. There were also numerous enlarged glands in the posterior triangle of the neck, but there was no evidence of internal deposits. It was impossible to attempt complete removal of the disease and so with the patient's consent Mr. Watson Cheyne removed both ovaries and tubes on Oct. 28th, 1896. On March 16th, 1897, about four and a half months after the operation, a great deal of the infiltration had disappeared, the ulcer had shrunk to the size of a threepenny-piece, the mass in the axilla was distinctly smaller, softer, and freely moveable, the glands in the neck were very much fewer, they were only about of the size of split peas then, and the larger ones had entirely disappeared. By June 4th, however, there was again distinct increase in the size of the growth and reappearance of the large glands. In March, 1898, the ulcer had spread from the anterior to the posterior border of the axilla and was 1½ in. broad. There were a nodule on the pectoral muscle, a large mass on the axilla, and glands in the neck, one of them of the size of a walnut. The patient suffered great pain and had to have frequent doses of morphia. The second case, a woman, aged thirty-three years, was admitted to King's College Hospital on May 23rd, 1897, with cancer affecting both breasts. It was clearly a case in which no radical operation could be performed with any chance of success. Accordingly on May 26th both ovaries and tubes were removed. By June 19th there was thought to be slight improvement, but this was not maintained. Her condition steadily grew worse, internal deposits in the liver and probably also in the pleuræ appeared, and she died towards the end of October. In the first case oöphorectomy appeared to have had a marked effect on the growth of the cancer at first, but at the end of six months the disease began to grow again and since had made great strides. Mr. Watson Cheyne held it clear that there is a distinct connexion between the normal epithelium of the breast and the ovaries and also between cancerous epithelium of the breast and the ovaries. But unfortunately in all the cases it appeared that the effect of the removal of the ovarian influence is only more or less transitory, whilst in many cases no effect is produced at all. In future cases it might be well to remove at the same time as the oöphorectomy, or possibly later, as much of the noticeable disease as possible.—Mr. HAROLD STILES of Edinburgh said that those who had had the opportunity of seeing Dr. Beatson's first case felt that his treatment was based on well-established scientific fact. But, unfortunately, in no case had the patient been permanently freed from the disease by removal of the ovaries. Dr. Beatson a few days previously had given him (Mr. Stiles) an opportunity of seeing his first case, in which, after complete disappearance of the disease for several months recurrence had become manifest. In the Edinburgh Royal Infirmary Dr. Beatson's treatment had been carried out by more than one surgeon with the result that in some cases the disease had been temporarily arrested, whilst in others it had been uninfluenced.—Mr. ALBAN DORAN noted that Dr. Beatson laid down a rule of treatment which was that a cancerous breast should be removed early and if recurrence took place the ovaries should be taken away, the thyroid treatment being also necessary if the patient were near the menopause. Dr. Beatson admitted that his treatment was useless if secondary deposits had developed. If the greatest amount of good be sought it is clear, Mr. Doran insisted, that each ovary must be completely removed. He knew from experience that to do so and leave a safe pedicle was not always easy even if both ovary and uterus were normal. He described his method of removing ovaries for the relief of fibroids; the ovarian ligament was transfixed close to its uterine attachment. Unfortunately the stump of that ligament sometimes contained ovarian tissue. In Stanley Boyd's fourth case, where the patient was over sixty years of age, the ovaries had undergone extreme atrophy. Their removal for the suppression of an influence which they had ceased to exert naturally proved useless. Altogether Mr. Doran was not surprised to hear of the ill-success of oöphorectomy in inoperable cancer since he was never certain that all ovarian tissue could be removed nor were the advocates of the method certain that perfect extirpation ensured perfect cure. The mere operation might cause somehow the temporary arrest of the cancer, just as abdominal section was sometimes followed by parotitis without evidence of sepsis.—Mr. MALCOLM said there seemed to be little doubt that a simple exploratory incision into the peritoneal cavity was occasionally followed by a temporary diminution of size of a malignant abdominal tumour. The improvement of cancerous mammary growths after oöphorectomy appeared to be also temporary and did not always follow this operation. It had occurred to him that the cause of the improvement in these two cases might be similar although as yet unexplained.—Mr. WATSON CHEYNE, in reply, said that in his two cases he had completely extirpated the ovaries and was certain that no ovarian substance was left behind. He thought that the disappearance of lumps in the abdomen which had been mentioned was accounted for by their being

inflammatory and not malignant. It was difficult to explain the good results which occasionally followed simple laparotomy. He alluded to Dr. Lauder Brunton's recent advocacy of laparotomy in cases of pulmonary phthisis.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A MEETING of this society was held at the London Institution on April 13th, the President, Mr. COTMAN, being in the chair.

The following cases were exhibited:—

Mr. JOHN ADAMS: 1. A child with an Extensive Scar on the Face and loss of the Digits of both Hands except the Left Thumb. There was no history of the case and the exhibitor attributed the lesions to Raynaud's disease. 2. A girl, aged eighteen years, with Congenital Heart Disease. There had been no hæmoptysis and the area of cardiac dulness was very wide on the right of the median line.

Sir HUGH BEEVOR: Two cases of General Alopecia which had been treated with Thyroid extract; in both instances marked improvement had occurred.

Dr. F. J. SMITH: Two cases of Primary Myopathy affecting the Legs of young men. There were no sensory disturbances and the electrical reactions were normal in quality though diminished in quantity. No reaction of degeneration. There was no family history of any similar disease.

Dr. SEQUEIRA: A case of well-marked Pseudo-hypertrophic Paralysis in a child; and a boy, aged seven years, with symptoms of Cerebellar Tumour.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Sanitary Supervision of Elementary Schools.

A MEETING of this society was held on April 15th, Dr. EDWARD SEATON, President, being in the chair.

Dr. REGINALD DUDFIELD read a paper on the Sanitary Supervision of Elementary Schools with Special Reference to the Spread of Infectious Diseases. There was no denying the general overcrowding of these schools which was favoured by the regulations of the Education Department. The superficial and cubic space per head required for calculating the accommodation of a school was far too small; while 350 cubic feet was the lowest allowance in factories 120 was fixed by the Department for schools, which to maintain a purity of 0·2 per 1000 of CO^2 would demand a renewal of the air twenty-five times in the hour. But even this scanty allowance might be curtailed under certain conditions. This was dependent on the interpretation of the expression "habitual" in Clause 73 of the Code, which stipulated that the average attendance should not habitually exceed the legal accommodation by more than 15 per cent. The intention was to avoid the exclusion of a child from the appropriate class pending redistribution and the drafting of the number in excess to other classes. Memoranda and instructions had been issued interpreting the expression so as to discourage overcrowding, but it was evident that the teachers took it as permitting serious overcrowding during certain months to compensate the scanty attendance in others so long as the *average for the whole year* did not exceed the accommodation by more than 15 per cent., a practice to which the payment to the head teachers of a proportion of the grants still retained in many voluntary schools was a strong inducement. It was, however, clear from Mr. Acland's explanation that the permission extended only to the temporary and unavoidable overcrowding of particular class-rooms which it was the duty of the teacher to relieve as soon as possible by drafting the scholars or redistributing the classes and to occasional aggregations of the children in the principal hall or otherwise. Inadequate, however, as was the cubic space in the schools the conditions of many of the homes were no better, and the gravity of the matter lay rather in the influence of overcrowding on the spread of diseases, among which measles, not notified, widespread, highly infectious, and causing on the whole more deaths than scarlatina and several other fevers put together, was that which had the greatest influence on the attendance, and led most often to the extreme resource of closure and called for serious efforts at its limitation. It was useless to impose the duty of notification on the medical attendant in a disease for which he was rarely called in until alarming complications arose, and parents might plead ignorance; but school-teachers and visitors should notify to the sanitary authority and prompt notification might be made one of the conditions affecting the grant (Section 85), the teacher inquiring into or reporting to the visitor the unexplained absence of any child. He recommended inter-notification between adjacent districts, disinfection of rooms, &c., that exposure of persons suffering from measles should be penal, and that to ensure uniformity the Local Government Board or Education Department should publish a schedule of quarantine periods. Absences under Section 101* might be specially marked in the attendance book. He read letters from Dr. Herbert Peck, medical officer of health of Ormskirk, who found a system of notification imposed on the School Board visitors and requested of the teachers to work admirably, the latter having brought to his knowledge during the past year 247 cases, including several of scarlet fever, of which he had no other intimation. For such notification forms with counterfoils had been drawn up, copies of which were shown.

Dr. PARKES doubted the need for disinfection in measles and thought that infant schools might be closed on the approach of major epidemics.

Dr. NEWSHOLME feared that these could not be foreseen with such certainty as to justify anticipatory closure. But since 75 per cent. of the deaths were of children under six years of age the closure of infant schools would effect a great saving of child-life. He would not, however, have infants under five years of age admitted, though their exclusion would lead to the detention of the older girls at home unless day nurseries were provided everywhere. In Brighton full advantage was taken of Section 101* and the Education Department allowed for the absence of all children in infected houses.

Dr. WILLOUGHBY was inclined to agree with Dr. Parkes as to the impracticability of official disinfection after every case of measles and would rather inculcate thorough house-cleaning and a general wash. He looked on Section 101* as the fruit of his own efforts in this direction, having long urged it in the columns of the *Schoolmaster*, &c. As to the cubic space they might be interested to know that in Ontario the Board of Education, after a scientific study of the whole question, fixed on 250 cubic feet per head and insisted on the adoption of jacketed ventilating stoves on the principle of the Calorigen. He wondered that the London School Board had not introduced the electric light in place of gas which added to the deterioration of the air. In Holy Trinity Schools, Eastbourne, the head-master testified to the great improvement in the air and in the work done in winter afternoons since the change.

Dr. TEW, Dr. CARR and Mr. STOTT spoke of the difficulties encountered in rural districts through the extent of their area and the paucity of sanitary inspectors and School Board visitors. Dr. Tew said that a request for closure, the attendance having fallen off to half, was frequently the first intimation he had of an epidemic of measles, while the others, though they found notification by the teachers to work very well, felt the signing of certificates on the evidence of the teachers or correspondents was not altogether satisfactory.

Dr. JOSEPH GROVES (Isle of Wight) referred to a further difficulty incident to the closure of schools in rural districts bordering on urban which resulted in the permanent loss of the children, who migrated to schools in the towns which remained open.

Dr. S. DAVIES of Plumstead and others having continued the discussion,

Dr. R. DUDFIELD replied and the resolutions he had submitted to the meeting were referred to the consideration of the Council.

LIVERPOOL MEDICAL INSTITUTION.

The Structure and Functions of Nerve Cells.—Pulmonary Tuberculosis.—Exhibition of Specimens.

A MEETING of the Pathological and Microscopical Section of this society was held on April 21st, Dr. ROBERT S. ARCHER being in the chair.

Dr. GRÜNBAUM gave a demonstration of the Spectra of

Hæmoglobin and its chief derivatives, with special reference to the properties of Carbon-monoxide Hæmoglobin.

Dr. WARRINGTON read a communication on the relation existing between the Structure and Functions of Nerve Cells. He showed that certain cells of the anterior cornua undergo a distinct structural change after the withdrawal of the afferent impulses which normally impinge upon them through the posterior roots. He also illustrated the changes which occur in nerve cells after division of their axis cylinders. He discussed the possibility of a *restitutio ad integrum* in certain cases, pointing out that whereas, if examined soon after a lesion, most of the corresponding cells show distinct changes, if a long interval is allowed to elapse the group of cells is found normal or, at any rate, only a few cells are atrophied. The communication was well illustrated by numerous specimens and by excellent drawings and micro-photographic lantern transparencies. — Dr. A. W. CAMPBELL congratulated Dr. Warrington on the capital piece of work he had concluded and said that notwithstanding all the work which had been done on the subject by the very best workers, never, in his opinion, had the connexion between the posterior root fibres and the anterior cornual cells been so beautifully demonstrated as in the specimens exhibited that evening. He thought the method employed should be extended to tracing out other connexions between spinal tracts.—The paper was also discussed by Dr. ARCHER, Mr. DAMER HARRISSON, and Dr. IMLACH.

The SECRETARY (Mr. Larkin) presented, on behalf of Dr. BUCHANAN, who was absent on account of illness, a paper entitled "Observations on Pure and Mixed Infections in Pulmonary Tuberculosis in Relation to Prognosis." The paper was accompanied by a careful analysis of 21 cases and was profusely illustrated by microscopic specimens. The paper was accepted and ordered to be published in the Transactions and a vote of sympathy with Dr. Buchanan was unanimously passed.

In addition to the numerous specimens illustrating the above communications the following were shown:—

Dr. BARENDT (for Dr. PERMEWAN): (1) A Pedunculated Fibro-myxoma removed by Subhyoid Pharyngotomy from the upper end of the Œsophagus of a woman, aged forty-six years; and (2) Large Portions of Greatly Enlarged Inferior Turbinate Bones, which had produced complete nasal obstruction, for the relief of which they had been removed.

Dr. BRADSHAW and Mr. THELWALL THOMAS showed a piece of Small Intestine which two days before death had been the seat of suture for a perforation. The patient was suffering from typhoid fever which had run a severe course of from seven to eight weeks, but the temperature had become almost normal. The operation was performed thirty-six hours after the symptoms of perforation appeared. Death took place apparently from exhaustion; no leakage had occurred.—Dr. ARCHER remarked that he had seen several cases of perforation in enteric fever and that four days seemed to be the limit of time that patients lived after its occurrence. As this patient died on the fourth day the operation did not seem to have either shortened or prolonged life. He understood that some 19 cases of this operation had been placed on record. Of these 4 had recovered, but 3 of these were probably not enteric at all.

Mr. C. THURSTAN HOLLAND showed Radiographs of, and Bones from, a Foot amputated by Mr. Robert Jones for an ulcer occupying the whole sole in a man, aged twenty-four years. There were no signs of nervous disease. The ulcer had existed five years and no dead bone had ever come away, but whilst the tarsus was complete the metatarsals and phalanges were only represented by small misshapen fragments of bone.

Mr. R. W. MURRAY showed (1) a Hydrocephalic Brain in which he had attempted to establish a communication between the ventricles and the subdural space; and (2) a case of Imperforate Anus and Congenital Stricture of the Left Ureter. The ureter above the stricture was so much dilated that it was mistaken for the bowel and opened.

Mr. LARKIN showed: 1. An Intra-articular Tumour of the Left Knee which he had recently removed from a man, aged thirty-five years. It commenced after an injury to the knee and gave rise to symptoms resembling those of a loose body. It was attached in front to the internal alar ligament and projected thence backwards between the bones. It measured 2½ in. long, 1½ in. broad, and ¾ in. thick. 2. A water-colour sketch of a peculiar variety of Imperforate Anus, in which a canal passed forward from the anal dimple along the perineum and scrotum to the penis, where it opened by a pinhole aperture discharging meconium. The urethra was normal. 3. A Persistent Vitello-intestinal Duct opening at the umbilicus and through which an intussusception had occurred.

Mr. NEWBOLT showed (1) an Adeno-sarcoma of the Breast; (2) Carcinoma of the Penis; (3) Cystic Tumour of the Jaw; and (4) a Varicose Vein 24 in. long.

Dr. IMLACH exhibited some models which he had constructed of the Spinal Cord showing the various ascending and descending tracts and their relation to the cerebral centres. He saw, he thought, that the use of such models instead of diagrams would materially simplify the study of nervous cases and enable the practitioner to compare the facts of degeneration which had been ascertained by Waller and his school with the tracts of sclerosis due to disease.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Pathological Changes in Nerve Cells.—Diagnosis of Pathological Conditions of the Endometrium.—Pathology of Fissure and Ulcer of the Anus.—Exhibition of Specimens.

A MEETING of this society was held on April 13th, Dr. BROOKE, Vice-President, being in the chair.

Dr. WARRINGTON (Liverpool) read a paper on the Pathological Changes in Nerve Cells and gave an account of some investigations which he had been conducting. He showed that marked changes occurred in the anterior cornual cells of the spinal cord after cutting off the afferent impulses which impinge upon them. The affected cells were chiefly found in the postero-external group and in that segment of the cord the afferent and efferent roots of which are specially concerned with innervation of the foot. He also mentioned and illustrated the recent changes which occur in a nerve cell after division of the axon belonging to it and showed in the case of the spinal cord that after section of an anterior root almost every cell on the side of the lesion of the affected segment gave evidence of distinct change in its structure. The paper was illustrated by a large number of drawings, microscopic sections, and lantern slides.

Dr. ARNOLD LEA read a paper on the Diagnosis of Pathological Conditions of the Endometrium, illustrated by microscopic sections and lantern slides, with special reference to the value of the microscope in the diagnosis and treatment of these affections, and pointed out the limits of its usefulness. The diagnosis of previously existing intra-uterine pregnancy can generally be made with certainty from the examination of curetted fragments. Chorionic villi may be recognised many months after the death of the ovum; decidual cells are not absolutely diagnostic, as similar cells are found in some forms of chronic endometritis, membranous dysmenorrhœa, and in the cast of extra-uterine gestation. The large glandular spaces, remains of the decidua vera, are of great value if present. In chronic glandular endometritis the mucous membrane is swollen, smooth, and softened; the glands are multiplied, enlarged, and very tortuous, the proliferated epithelium may fill the lumen and in the deeper parts solid epithelial buds may be recognised, an important fact, as this is held by some as evidence of malignancy. The stroma shows round-celled infiltration. In old cases atrophy of all the constituents of the endometrium occurs. The so-called "villous polypoid or hæmorrhagic endometritis" is rather a diffuse benign adenoma, inflammatory changes being often absent; the growths are simply glandular, very vascular and occasionally single and pedunculated. Sections of fibro-adenoma were also shown. The use of the microscope in differentiating simple inflammatory, benign, and malignant, growths is of great value; carcinoma is easily recognised, but malignant adenoma may closely simulate benign growths, the chief points of distinction being that (1) many alveoli may be completely filled with epithelial cells; (2) the glandular spaces are very numerous, much branched, and are often arranged in parallel columns; (3) the amount removed by the curette is more abundant; and (4) the growth infiltrates the muscular coat, so that in examining curetted fragments unstriped muscular fibre may often be recognised. In some few doubtful cases microscopic evidence may need to be supplemented by clinical signs before a diagnosis can be made.

Mr. J. E. PLATT made a communication on the Pathology of Fissure and Ulcer of the Anus. After referring to a few

points in the anatomy of the lower end of the rectum, more particularly the form of the anal valves and the free distribution of branches of the inferior hæmorrhoidal nerves to the muco-cutaneous junction, he stated that two distinct affections having a different pathology are described together in text-books as fissure and ulcer of the anus. He gave the following account of these conditions: 1. In a large proportion of the cases the lesion is situated at the junction of skin and mucous membrane and generally takes the form of a vertical fissure, most frequently situated at the dorsal part of the anus. It is produced by undue stretching or excoriation of the part and amongst its causes are the passage of hard fæces, severe diarrhœa, want of cleanliness, eczema, syphilis, laceration during child-birth, and congenital stenosis of the anal outlet. The affection is extremely painful owing to the very free nerve-supply of the muco-cutaneous junction. Not infrequently one or more nerve-filaments are exposed in the base of the fissure. The pathology of the affection is that which is usually described as applicable to all cases of fissure and ulcer of the anus. From constant irritation reflex spasm of the sphincter muscles is set up and thus healing is prevented. 2. The second affection is situated, or at all events begins, at the upper part of the anal canal and is due to a tearing down of one of the anal valves. As a result of this a raw surface is produced, healing is prevented by the frequent opening of the wound during the passage of fæces and an ulcer, round, triangular or V-shaped, results. The torn-down valve becomes œdematous and indurated, thus giving rise to the "sentinel pile" so often met with in these cases. This view of the pathology of fissure was first advanced by Mr. Ball of Dublin. It undoubtedly holds good for one class of cases, but it is by no means applicable to all. Reference was also made to certain differences in the symptoms and the treatment of the two conditions.

The following card specimens were exhibited:—

Dr. HARRIS: (1) Aortic Aneurysm; and (2) Thyroid, &c., from Exophthalmic Goitre.

Mr. HIGGINSON: Two cases of Extra-capsular Fracture of the Femur.

Dr. LEA: (1) Uteri removed for Multiple Fibroids; and (2) Uterus and Appendages removed for Gonorrhœal Inflammation.

Dr. LEECH: Ulcerative Entero-colitis.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Peritonsillitis.—Cephalic Tetanus.

THE ordinary monthly meeting of this society was held on March 30th, the President, Dr. ARNOLD EVANS, being in the chair.

Dr. KURICH gave a Microscopical Demonstration.

Dr. GLADSTONE showed: (1) A case of Myxœdema treated with thyroid gland; and (2) a Specimen of Meckel's Diverticulum.

Dr. CAMPBELL exhibited the Kidneys from a case of Cerebral Hæmorrhage in a boy aged fourteen years. The illness commenced suddenly with an attack of nausea followed by vomiting. The patient then had a fit and three hours from the commencement was comatose with Cheyne-Stokes respiration. The reflexes were brisk and the optic discs were blurred. There was no paralysis. The patient died from respiratory failure after six hours' illness. On post-mortem examination there was extensive hæmorrhage into the brain cavities, but not into the cerebral substance. The pericardium was adherent and the heart was hypertrophied. The kidneys were much enlarged and showed the changes of congenital cystic disease, together with those of chronic parenchymatous nephritis.—Professor TREVELYAN and Dr. WOOD discussed the case and Dr. CAMPBELL replied.

Dr. BRONNER read notes on Peritonsillitis. He pointed out that the tonsil may or may not be enlarged and that there is often present disease of the surrounding cavities, e.g., carious teeth. Œdema of the tissues about the tonsil indicates the presence of pus which usually points above. The pus should be evacuated by puncture about the middle of a line drawn from the base of the uvula to the upper wisdom tooth. Pain in the ear is often a prominent symptom and there is often tenderness over the tip of the mastoid process. In the after-treatment enlarged tonsils should be removed or the diseased lacuna slit up. Any disease of the accessory cavities should be treated.—Dr. HALL drew attention to hæmorrhage and to septicæmia as complications of tonsillitis. The hæmorrhage might occur independently of any incision.—Dr. MAJOR, Dr. WOOD, and Mr. BERESFORD offered further remarks and Dr. BRONNER replied.

Dr. BASIL HALL read notes on a case of Cephalic Tetanus. The symptoms appeared on the fifth day, after a wound in the malar region. The patient was treated from the beginning with chloral hydrate and on the fourteenth and subsequent days injections of antitoxic serum were given. He was discharged cured on the thirty-fourth day.—Professor TREVELYAN drew attention to the presence of paralytic symptoms as the distinction between cephalic and ordinary tetanus. He thought that if the antitoxin treatment were to be successful the serum used must be of high potency.—Dr. WOOD offered further remarks and Dr. HALL, in replying, doubted if the antitoxin had much to do with the patient's recovery.

Diagnosis.

A special meeting of this society was held on April 1st, the President, Dr. ARNOLD EVANS, being in the chair.

Dr. PYE-SMITH gave an address on Diagnosis. Alluding to the extreme importance of diagnosis in the practice of medicine Dr. Pye-Smith pointed out that this importance has only been recognised comparatively recently and that the older physicians were content to regard symptoms such as dropsy and apoplexy as diseases. The introduction of physical examination, combined with the study of morbid anatomy, at the beginning of the present century led to the comparison of the physical conditions as determined at the bedside with those found in the body after death, and thus a firm basis was established on which the relations between physical signs and diseased conditions could be determined. Dr. Pye-Smith insisted that the physicians should not be satisfied till a diagnosis in any case had been made and written down, the diagnosis to be made deliberately after due examination and not on mere superficial considerations. In complicated cases it is sometimes necessary to neglect some details while grasping the salient points and this could only be done by practice and insight. It is often necessary to fix on some important objective symptom and not to be too much influenced by history and subjective symptoms, which are often very misleading. It may be necessary to make a diagnosis gradually, the different steps being only attained after the lapse of time. Assuming a diagnosis to have been made, it may be that the treatment proves ineffective or the prognosis is shown to be inaccurate. It is then best to go over the whole case afresh, when some symptom or sign not existing or not detected at the previous examination may become evident, thus throwing a new light on the whole case. A diagnosis, especially in writing death certificates, must not be pushed beyond what the facts warrant in the absence of a post-mortem examination. Dr. Pye-Smith alluded to the consideration of diagnosis in insurance reports and pointed out that death from "childbirth" often might mean phthisis; or from "jaundice" or "dropsy" intemperance. Judgment in coming to a diagnosis depends largely on a knowledge of pathology and it must be assumed broadly that the common things commonly occur. The use of surgical interference to make a diagnosis was deprecated until the other methods at the command of the physician have been exhausted.

A vote of thanks, moved by Dr. EVANS, seconded by Mr. MAYO ROBSON, and supported by Dr. ALEXANDER, was carried.—After the address a dinner was held, at which Dr. PYE-SMITH and about fifty members of the society were present.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Intestinal Resection.

A MEETING of this section was held on April 1st, Mr HENRY GRAY CROLY being in the chair.

Mr. JOHN LENTAIGNE detailed three cases of Acute Intestinal Obstruction from Malignant Disease which he had

treated by the formation of an intestinal fistula, at a point above the obstruction, so placed as to be least likely to interfere with a subsequent operation for radical cure of the disease. As the seat of disease in each of the three cases was the sigmoid flexure the fistula was made in the cæcum. In the first case the bowels resumed their normal function eleven days after the completion of the intestinal fistula; the latter then gradually closed of itself. Nine months later the patient came back to the hospital. The fistula had then reopened and the bowels were acting freely through it. Large masses of cancer could be felt through the abdominal wall. This patient died thirteen months after the operation. In the second case an operation for radical cure by resection of the cancerous mass, with end-to-end anastomosis after the method recommended by Professor Kocher, was performed three months after the fistula had been completed. The patient had enjoyed excellent health ever since and as two years had elapsed since the resection it was not unlikely that a complete cure had been effected. In the third case the patient had delayed very much longer, not returning until eight months later. She was anxious to have something done and an exploratory laparotomy was performed. It was found that the disease had spread far and wide and was absolutely inoperable; the abdomen was closed and the patient left the hospital shortly after, the bowels acting freely through the fistula. She was no better for the last operation, but neither was she any the worse. Celloidin was of great use as a dressing in effectually preventing contamination by discharges from the fistula. The cæcal fistula was quite as efficient as an artificial anus and much more satisfactory inasmuch as it closed of itself when the obstruction below it was removed.

Mr. GORDON read a paper on a case of Hæmorrhagic Infarction of the Small Intestine which he had treated by resection. The leading symptoms were: (1) sudden onset, marked by severe abdominal pain; (2) vomiting; (3) prostration bordering on collapse; and (4) a tumour formed by a distended coil of gut, easily palpated in the right iliac region. There was no general abdominal distension. Operation was performed twenty-four hours after the onset of pain. Much bloody fluid was found in the abdomen and the coil of distended bowel was black. Two feet of small intestine were resected, together with an area of mesentery. The ends of the gut were united over a bone bobbin. An intestinal fistula formed ten days later, but had completely closed at the end of three weeks from the date of operation. This was in August 1897, and up to the present there had been no evidence of abdominal trouble.—Mr. WHEELER said it was fortunate that bobbins would probably be required no longer since the discovery of Maunsell's method. He had lost two cases in which he had used Murphy's button, to which he thought the result was due. The best result of excision of the large intestine he had ever seen was obtained by the late Dr. Kidd, and he, having excised about six inches of bowel, sutured the bowel over a scoop cut out of a piece of carrot.—Mr. HARRISON SCOTT, Mr. R. GLASGOW PATTESON, and Mr. HENRY GRAY CROLY also discussed the cases.

SECTION OF MEDICINE.

Cerebral Abscess.—Typhoid Fever.

A MEETING of this section was held on April 15th, Sir GEORGE DUFFEY, the President, being in the chair.

Mr. J. J. BURGESS read a paper on a case of Cerebral Abscess.—Dr. E. H. BENNETT thought the specimen a rare one of chronic abscess of the brain, existing and giving sufficient characteristic symptoms for over two years. Probably a blood-clot in the arachnoid was the primary lesion and suppuration took place in it. He thought that operative interference would have had a bad result in the case.—Dr. FALKINER asked Dr. Bennett why he thought that operative interference would have produced a more rapidly fatal result. He himself would have been in favour of surgical interference.

Dr. FINNY read notes on a case of Laryngeal Ulceration in the Advanced Stage of Typhoid Fever.

Dr. H. C. DRURY read a paper entitled "Some Remarks on Typhoid Fever." He expressed the opinion that the occasional use of mild purgatives at any stage of the disease, where indicated, was not only harmless but beneficial. He also discussed the question of the time to give solid food and said that in average cases a small quantity of fine farinaceous food might be given on the fourth day. He thought, also, that too much routine was followed by insisting on the use of the bed-pan in all cases. So many patients found its use difficult or intolerable that it was more likely to do harm than a night-chair, the use of which was always easier, and he had never seen it followed by any bad result. He quoted statistics from Cork-street Fever Hospital, where all these practices were followed, to show that he was justified in stating that they were in no wise harmful but rather beneficial.—Dr. LITTLEDALE said that with the Widal reaction there were two kinds of motion—molecular motion, which occurs in most typhoid fever cases for half an hour, and true motion, which, as a rule, is not seen in typhoid fever cases. As regards clumping, in cases of typhoid fever after a clump is formed a bacillus will never leave a clump, whereas in other non-typhoid fever cases two or three bacilli will leave the clump and go across the field. He thought that the Widal reaction sometimes left one in doubt. In ordinary cases he was disposed to think that they diluted too much.—Mr. BURGESS agreed with Dr. Drury regarding the treatment of typhoid fever with purgatives. He had tried purgatives for many years and never found any bad results.—Dr. J. W. MOORE agreed entirely with the treatment by purgatives. Calomel was the best aperient in the earlier stages, from two to five grains in the first week of the fever.—Dr. W. G. SMITH said that he was in favour of aperients in constipation, as the latter tended to precipitate perforation. He gave castor oil and calomel by the mouth and enemata when necessary.

Reviews and Notices of Books.

Ambroise Paré and his Times. By STEPHEN PAGET. Illustrated. New York and London: G. P. Putnam's Sons and the Knickerbocker Press. 1898. Pp. 304. Price 10*s.* 6*d.*

IT is easy to understand Mr. Stephen Paget's enthusiasm for the great French surgeon of whose picturesque life and times he has given an excellent account in these pages There are few more attractive personalities than that of Ambrose Paré; his life was full of adventure and romance and he reveals in his own story of his life a character delightfully compounded of simplicity, shrewdness, and humour. As a surgeon he was the type of the practical man, not caring greatly about theory in which he was little, if at all, ahead of his time although far above all his contemporaries in practice. His extreme attention to details and his remarkable fertility of resource in devising methods of treatment were probably the great secrets of his success. They are illustrated at every turn in his own writings from which his present biographer has wisely drawn largely, thus allowing him in great part to be his own biographer. Paré's life (1510–90) almost covers the sixteenth century. The history of France during that century is one of the most picturesque and romantic periods of all history. Paré during his life of eighty years saw seven successive occupants of the French throne, from Louis XII. to Henri IV., and was surgeon-in-ordinary to four of them. The history of their reigns is one of almost incessant warfare, at first against an alien enemy and later nearer home in the long internecine struggle between Catholics and Huguenots. There was no lack of work for the army surgeon in those days and rather more than his share of it fell on Ambroise Paré's capable shoulders. His earliest experience of war was at the attack of Turin in 1537, an account of which forms the first chapter of his famous "Journeys in Diverse Places." It was in this expedition that he was horrified by the barbarous practice then in vogue of treating gunshot-wounds by pouring in boiling oil, and he substituted for this the more humane method of applying "a digestive made of the yelks of eggs, oil of roses and turpentine." This and all his succeeding "Journeys"

are excellent reading—full of good stories, but more especially attractive from the naïve manner in which they are told and still more naïve marginal notes of the author. In those notes he stops every now and then to encourage himself with such remarks as "Témoignage de la dexterité de l'autheur," "Addresse de l'autheur," or "Charité de l'autheur." His quite delightful vanity may be readily forgiven him; without it we might never have had these entertaining stories. He wrote the book in answer to one Etienne Gourmelen, who had asserted that "Paré's revived use of the ligature was inferior to the old-established use of the cautery in amputation wounds." He tells the story of all his campaigns to prove that his knowledge was gained in hard practical experience and that compared to it the book knowledge and theory of his adversary was mere prating pedantry. He never tires of reminding poor Gourmelen of this at every opportunity, always in good temper, however, and often with no little humour.

Paré published several other books—works on Surgery, Anatomy, Gunshot Wounds, the Plague, and Obstetrics. Mr. Paget urges his readers to study Paré at first hand in his own writings. We can warmly recommend this volume as an introduction and guide to anyone following the advice. The author has gathered together a large number of detailed facts concerning his hero's life and illustrating his character, and these should whet the reader's appetite for a closer acquaintance with his works. The interest of the volume is enhanced by the large number of illustrations which it contains; these include portraits of Paré himself, of several French sovereigns and other contemporary celebrities, views of old Paris, blocks of surgical instruments taken from Paré's works, and a remarkable block showing a method of reducing dislocation of the humerus.

Practical Toxicology for Physicians and Students. By Professor Dr. RUDOLF KOBERT. Translated and edited by L. H. FRIEDBURG, Ph.D. New York: William R. Jenkins. 1897.

KOBERT'S "Compendium of Practical Toxicology" is properly recognised as a standard work, and an English translation which appears as a first American edition will be welcomed. Among the chief features in Dr. Kobert's work are the excellent tables, which in themselves give at a glance the characteristics of poisons, chemical and clinical, and the course to adopt when there is a possibility after the poison has been recognised of the saving of the life of the individual. The book, though not a large one, is very comprehensive. The translator, in his lectures and demonstrations at the American Veterinary College, New York, as well as at the Flower Hospital Medical College, has adopted Kobert's Compendium as a standard work of reference. The tables in particular prove valuable and from a student's point of view convey "all they cared to know." We are glad that Dr. Friedburg was not tempted by this pronouncement to give a translation simply of these tables or of abstracts of them. This course would have been manifestly unfair to the author. As it is, the work, translated in its entirety, is one that will prove valuable to toxicologists for reference, whether they be students or men engaged in everyday practice. The book is an excellent example of the power of concentrating facts within easy compass without sacrificing their importance. The work is divided into three sections: (1) general toxicology, (2) special toxicology, and (3) an appendix. The first section relates to the definitions of poison, to the etiology, diagnosis, and prognosis of poisoning. Antidotes are here also referred to and an interesting chapter is added on the pathological demonstration of poisoning. This is followed by an admirable *résumé* of the methods employed for the chemical and physiological detection of poisons. The section on special toxicology relates to substances which cause "grave anatomical changes" of the organs such as corrosives, to blood poisons such as phallin and substances like the poisons of the cerebro-spinal system which may prove fatal without causing any specific anatomical indications. The appendix is a very valuable contribution, consisting of a review of the toxicologically interesting products of metabolism. This of course includes animal and vegetable esculents and the poisons occurring occasionally in sausages, meat, and cheese. The book is full of "Americanisms," of which the heading in one instance—namely, Table of Intoxications by the Most Important Tetanics—is a fair sample. The nomenclature adopted is again that of the American Association for the Advancement of Science, 1891. Although these may be a source of irritation to the English reader in England it does not detract from the merits of the book, which are considerable. The book is indeed a valuable addition to the literature of toxicology.

A Text-book of Practical Therapeutics. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, &c. Sixth edition. London: Henry Kimpton. 1897. Pp. 758. Price 21*s.*

THE fact that this work has passed through five editions in seven years, and that a sixth is now called for, is sufficient evidence that not only has a want been supplied but that the author has been successful in his endeavours to carry out his intention of producing a work on therapeutics which should teach a distinct practical application of remedial agents in the treatment of disease and their employment upon a rational basis.

The book is divided into four parts. Part I. is concerned with general therapeutical considerations, modes of administering drugs, dosage, strength and reliability of drugs, classification of drugs, &c.

Part II., which occupies the main part of the work, is simply headed "Drugs," and contains a full description of the various mechanical agents included under that term, together with their therapeutic measures. This portion is worthy of the highest praise. After a technical description of the drug, its source and preparation, follows its physiological action on the various systems of the body; then the modes of its elimination; next any peculiar properties, such as an antiseptic action or toxic changes from prolonged use, &c. Then we find the symptoms of poisoning and the measures to be adopted should such an occurrence present itself. The therapeutics are very plainly and fully considered and conclude with "untoward effects" (if any). Then follow the methods of administration, the doses being given according to the two systems in vogue (apothecaries' and metric), and finally are the "contraindications" for the use of each drug.

In Part III. are described remedial measures other than drugs and a description of the methods employed in preparing foods for the sick.

Part IV. commences with a consideration of the various diseases purely from a therapeutic point of view. Here also will be found a large amount of useful information. In conclusion various tables are given—namely, "doses of medicines," "tables of relative weights and measures in the metric and apothecaries' systems"; index of drugs and remedial measures and index of diseases and remedies.

We can thoroughly recommend this book to practitioners and students.

Surgical Pathology and Principles. By J. JACKSON CLARKE, M.B. Lond., F.R.C.S. Eng. London: Longmans, Green, and Co. 1897. Price 10*s.* 6*d.*

THOSE students who have had the benefit of Mr. Jackson Clarke's oral instruction will be glad of this embodiment of

it in permanent form. He has condensed into a comparatively small compass a large amount of fact in connexion with surgical pathology, surgery, and allied subjects. It is presented plainly, if summarily, and, as might be expected from the author's knowledge and experience in teaching, prominence is chiefly given to those matters which are of the greatest importance. It is, moreover, sufficiently accurate and up to date. Such a book will doubtless be useful to the student who is preparing for examinations and has therefore its justification. The writer has, however, in our opinion attempted too much; his professed aim has been to present not only the facts of surgical pathology but the principles of their application to surgery, and he has gone beyond this and introduced no small amount of symptomatology and even details of treatment. Thus in the short section on diseases of the eye little room has been left for their pathology in the true sense of that term. Under the heading of tumours of the brain a short indication of the nature of the commoner tumours is given, followed by a here unnecessary epitome of their symptoms which includes an incomplete definition of Jacksonian epilepsy but no account either of its pathology or of the pathology of any other symptom. Under the heading of leukæmia, which has, by the way, very doubtful affinities with Hodgkin's disease, the description of the blood changes is entirely inadequate. In a work of this kind bacteriology should either be omitted or more fully dealt with. Koch's postulates require to be explained to a student, not merely baldly stated, and such difficult problems as immunity are not to be passed over with so little ceremony as is here the case. The book, in fact, good as it is in many respects, would have been vastly better if the author had limited himself more strictly to true pathology; if he had explained more even at the cost of stating less. The numerous illustrations, though not wanting in clearness, are sometimes crude and occasionally inartistic. The etymology of many words derived from the dead languages is well explained, but we must point out that empyema is incorrectly spelt "empysema." The defects which we have felt it our duty to mention are nevertheless outweighed by the large amount of useful and well-presented surgical fact which Mr. Jackson Clarke has succeeded in condensing into small compass for the use of the student.

Vade Mecum of Ophthalmological Therapeutics. By Dr. E. LANDOLT and Dr. P. GYGAX, translated by Dr. E. NEYMAN. London and Philadelphia: J. B. Lippincott Company. 1898. Pp. 138. Price 3*s.* 6*d.*

THIS handy little volume will be found very serviceable by practitioners who may require, without having the opportunity of referring to the larger ophthalmic works, to improvise the means of treatment of any of the ordinary diseases of the eye. It is entirely devoted to therapeutics; there is no hint of diagnosis or any description of the course of the different affections to which the eye is liable. It is presumed throughout that the surgeon recognises the disorder and only wishes to be reminded of the means at his disposal for its relief or cure. The subjects are treated of in alphabetical order, and whilst on the one hand the several drugs and their doses and effects are given, on the other hand the various diseases are mentioned, with the drugs which have been found to be serviceable in their treatment and upon which experience has shown that reliance can be placed. The doses are given both in the French metric and in the English apothecaries' weights. An example or two will best show how the subjects are treated. Turning to cyclitis we find: "Rest, atropine (23 a), poultices (255), diaphoresis (305), purgatives, smoked glasses. For the pain: morphine (231 c), strengthening treatment, iron (164), and iodine (147) preparations. In case of synechiæ: iridectomy as soon as inflammation has subsided." The numbers refer to other articles. We find accordingly under 23 a: "Neutral sulphate of atropine 0/05 = ½ grain. Distilled water 10/00 = 2½ 5." Three other formulæ for atropine lotions are appended. After these have been given the following remarks are made: "To get the *greatest possible effect* introduce the pure salt into the conjunctival sac, taking care to close the lacrymal ducts by pressure. As a rule let the patient keep the eyes closed for five minutes after having instilled the mydriatic. In case of poisoning by atropine, (*a*) absorption *per os:* stomach-pump or hypodermic injections of a solution of hydrochlorate of apomorphine 2 : 1000 up to 30 centigrammes (5 grains); (*b*) absorption *through the tissues* (injections): hypodermic injections of a solution of hydrochlorate of pilocarpin 5 : 100, repeated as often as necessary up to 60 centigrammes. In *both* cases *internally:* brandy, strong coffee, carbonate of ammonia (10 b)."

The number of entries is no less than 326 and as far as we have consulted the work the remedies seem to be thoroughly reliable. Had we space we should have liked to reproduce the article on Keratitis, which is exceedingly well done.

Prilosis or "Sprue"; its Nature and Treatment, with Observations on Various Forms of Diarrhœa acquired in the Tropics. By GEORGE THIN, M.D. St. And. Second edition. London: J. & A. Churchill. 1897.

OUR knowledge of tropical diseases of the alimentary canal is still so imperfect that all students of the subject will welcome the appearance of a new and enlarged edition of Dr. Thin's well-known monograph on psilosis. The diagnosis and treatment of this malady are already placed on a fairly firm basis, but as to its etiology and true pathology we are still almost in the dark. Dr. Thin's researches in the field have been important and are well set forth in the present volume. In the earlier chapters the symptoms, geographical distribution, and diagnosis of the disease are considered. The literature of the subject and the different varieties of psilosis are next reviewed. The author gives sufficient reason for separating true psilosis from ordinary tropical diarrhœa, relying especially on the tongue symptoms in early stages of the disease. The pathological changes which have been observed are fully reported, including the two cases which were minutely investigated for the author by Dr. Wethered, particulars of which have been already published. In the chapter on etiology such bacteriological examinations as have been made are described, and we can only regret their incompleteness and inconclusiveness. In the matter of treatment Dr. Thin is in accord with other authorities on the subject, rigid diet being the essential factor. Not the least important part of the book will be found in the appendix, in which some 30 selected cases are fully described. It is from a study of these cases that the author's conclusions may best be justified. Some valuable coloured plates of the tongue in psilosis complete the book which constitutes an important contribution to the literature of the subject.

On Partial Stationary Cataracts. By HUGO WINTERSTEINER, M.D., First Assistant to the First Ophthalmic Infirmary at the University of Vienna. English edition. Edited by Professor H. MAGNUS. With 20 coloured Plates and text. London: Williams and Norgate. 1898. Price 17*s.*

ALTHOUGH in the numerous pictorial representations of lenticular opacities many forms of stationary cataract have been published, we are not aware that any drawings have been issued dealing exclusively with this form of disease. The author states that all the figures have been reproduced in quintuple linear size, and that he has used for the purpose of examination Magnus's plane mirror with a strong convex lens behind it or transmitted light and Hartman's spherical lens for lateral illumination.

The forms of cataract he has represented are anterior polar cortical cataract, anterior stellate polar cortical cataract, punctated cataract, punctate and stellate perinuclear cataract, central cataract, posterior stellate cortical cataract, cortical æquatorial cataract, traumatic cataract, anterior capsular polar cataract, pyramidal cataract, and secondary cataract after operation for extraction, of which several drawings are given. The whole series are highly finished and are on a scale which permits details to be clearly seen. They are moreover very instructive, not only showing the position and the general appearance offered by each form but also the difference in the aspect presented according to whether the defect is examined by reflected or by transmitted light. The drawings are accompanied by a booklet of explanatory letterpress giving a short account of the history of each case. The notes are perfectly intelligible, but they might have been subjected to the perusal of an Englishman to remove the very obvious indications of translation from the German which they present. The work will prove useful both to general practitioners and to ophthalmic surgeons.

Southall's Organic Materia Medica. Fifth and enlarged edition. By JOHN BARCLAY, B.Sc. Lond., sometime Lecturer on Materia Medica and Pharmacy in Mason College, Birmingham. London: J. & A. Churchill. 1898. Pp. 306. Price 6*s*.

THIS volume is simply what it professes to be, a manual of materia medica, but there is no intention to teach the student either pharmacology or therapeutics, the aim being merely to give him just such information as a person engaged in the handling of drugs might with advantage possess. By druggists and dispensers, therefore, the book will be found most useful, for the descriptions of the drugs and their modes of preparation are well given, and a full index makes it a handy volume of reference. To the medical student, however, for purposes of examination it would be of little value.

The chemical notes are well up to date, while the use of small type in the form of notes dealing with matters of minor importance, such as substitutions, adulterations, allied drugs, &c., has been adopted, it being intended that the reader may thus, to some extent, be guided as to the relative value of the different items of information supplied.

Sewer Gas and its Influence upon Health. By ALFRED H. ROECHLING, C.E. London: Biggs and Co. Price 5*s*. 1898.

MR. ROECHLING has done a good service by collecting together all the evidence in literature and practice relating to the important subject of the connexion existing between sewer air and disease. The poisonous nature of sewer air is still far from completely understood. That it has insidious properties is well known, but its subtle character is not explained by chemical analysis or even by its bacteriology, for, as has been shown by Messrs. Laws and Andrewes in a report to the London County Council, sewer air is practically sterile at least as regards the presence of specific pathogenic organisms. Mr. Roechling has presented these interesting results at some length, while proper emphasis is laid upon the classic investigation of Dr. Alessi. As will be remembered, Dr. Alessi showed that the inspiration of putrid gases predisposes animals to the pathogenic action of even attenuated typhoid bacilli and of bacteria coli. As Mr. Roechling observes these conclusions serve to confirm that which some authors had epidemiologically foreseen and which social hygiene had practically and painfully confirmed. The book contains instance upon instance of outbreaks of typhoid fever being traced to sewer air and immunity from typhoid fever being the case where plans of sewerage and drainage are as perfect as modern construction can make them. Mr. Roechling's work is undoubtedly a valuable contribution on a subject the importance of which cannot be exaggerated. The literature on the relation of sewer air to disease is scattered somewhat broadly, which makes work of reference hard and tedious and unsatisfactory. The present collection of evidence and material is a task which Mr. Roechling has accomplished well and the thanks of all those interested in sanitary advance are due to him.

LIBRARY TABLE.

Sieroterapia. (*The Serum Treatment of Disease.*) By Dr. EMILIO REBUSCHINI. Milan: Ulrico Hoepli. 1898. Pp. 421. Price 3 lire (2*s*. 6*d*.).—This little book, which is one of the extensive series known as the "Manuali Hoepli," gives a useful digest and summary of the various methods of serum treatment which have been employed, as well as of the results which have up to the present time been attained. Original memoirs relating to this subject sometimes become difficult of access for the majority of readers, and the publication of a condensation of them in the present compact and convenient form will commend itself to all who possess even a slight knowledge of Italian. Serum treatment has been applied to upwards of twenty diseases or morbid conditions, diphtheria being, of course, the most important one. Next in order come tetanus, tuberculosis, various streptococcic infections (e.g., erysipelas, puerperal septicæmia, complications of scarlet fever), snake-bite, &c. Dr. Sanarelli's discovery of the bacillus of yellow fever and his immunisation of animals with cultures of it form the subjects of an interesting chapter.

Cookery for Invalids and Others. By LIZZIE HERITAGE. London: John Hogg. 1897. Pp. 184. Price 2*s*. 6*d*.—The list of dishes is copious and well selected, so that no difficulty will be found in providing ample variety to tempt fastidious appetites. The author has not introduced any article which is either troublesome to procure or too expensive for ordinary households and she has made her directions for cooking and serving plain enough to be easily followed. Some will perhaps regret the entire exclusion of cheese, as there are many invalids who can take it in small quantities without inconvenience; either grated or softened by heating with a little milk it is a great improvement to macaroni.

Zur Austilgung der Syphilis. (*The Extinction of Syphilis.*) By Dr. ERNST KROMAYER. Berlin: Verlag von Gebrüder Borntraeger. 1898. Pp. 105. Price, bound, 3 marks 50 pfennige (3*s*. 6*d*.).—The object of this somewhat curious book is to advocate considerable changes in the methods at present adopted by continental nations for the repression of venereal diseases. Dr. Kromayer, who is a *privat-docent* at the University of Halle, argues that it is a delusion to suppose that similar preventive measures are applicable to both gonorrhœa and syphilis, for the majority of prostitutes are never without gonorrhœa, the hospital treatment to which they are subjected does not cure it, medical examination cannot guarantee that a woman does not suffer from it, and any certificate of freedom from it is "a fraud on her patrons" (*ein Betrug des Publikums*), whom she not infrequently infects immediately after having been examined. The medical examination (he says) ought entirely to disregard both gonorrhœa and soft chancre, but syphilis, on the other hand, ought to be dealt with in the most thorough fashion, and he proposes a scheme for the purpose, arranged under nine headings, the principal of which are as follows: everyone who contracts a venereal complaint shall immediately have it diagnosed by a medical man; everyone who is cognisant of another person having a venereal complaint shall advise that person to apply to a medical man and failing compliance shall himself (or herself)

report the case; anyone may claim to be examined without fee by specially appointed medical men, and in the event of syphilis being found shall be entitled to gratuitous treatment. Compulsory examination and treatment are also provided for.

Plays, Pleasant and Unpleasant. By BERNARD SHAW. London: Grant Richards. In two vols. Price 5*s.* each. 1898.—If any of our readers should wonder why we have taken to reviewing plays he should remember that the drama and the priesthood—or rather we should say the Church, using the term in its widest sense—were formerly very intimately connected; a play in ancient Greece, for instance, was a really religious function. Everyone knows, too, that the callings of medicine and the priesthood were frequently discharged by the same persons. Obviously, then, the connexion between the drama and medicine is clear. The play with which we are more concerned in the present collection is one placed by Mr. Shaw in the "unpleasant" section, and rightly, too, we think—not because it scoffs at sundry medical theories or because Mr. Shaw's presentment of a medical man is a caricature, but on account of its subject, namely, ill-assorted marriages. However, they are matters only too common and their examination is, like a post-mortem examination, unpleasant in some ways but interesting, and if properly undertaken of value in pointing the way to avoid them, or lessen the pathological conditions found, for the future. Dr. P—— has discovered a disease, and this is how he and it are introduced:—

Sylvia. We found that out at home when our great sorrow came.

Charteris. What was that?

Sylvia. I mean when we learned that poor papa had P——'s disease.

Charteris. P——'s disease! Why, what's the matter with P——?

Sylvia. Oh, not a disease that he suffers from, but one that he discovered.

Charteris. The liver business?

Sylvia. Yes; that's what made P——'s reputation, you know. Papa used to get bad occasionally. ..... The doctor never knew what was wrong with him until Dr. P—— discovered a dreadful little microbe in his liver. ..... P—— discovered them first and now he declares that everybody should be inoculated against them as well as vaccinated. But it was too late to inoculate poor papa. ..... Poor old boy! they cut off his liquor, and he's not allowed to eat meat.

In Act 3 P—— is observed while reading a newspaper suddenly to turn pale and stagger. On being questioned he says he has fatal news. "'My disease ..... the work of my life. Look here ..... if this is true it was all a mistake; there is no such disease.'" P—— is naturally much hurt. "'It's all the fault of the wickedly sentimental laws of this country. I was not able to make experiments enough — only three dogs and a monkey. Think of that, with all Europe full of my professional rivals. ..... And now comes this cursed Italian who has ruined me. He has a Government grant to buy animals with, besides having the run of the largest hospital in Italy.'" P—— and Craven have an argument a little further on about the relative cruelty of the war in the Soudan and vivisection. Craven, the man whom P—— had doomed, argues that that was fair fighting and that he risked his own life. P—— retorts that machine-guns were used against naked spearmen, and he adds, with regard to the question of life, "and I have risked mine, as all doctors do oftener than any soldier." To which Craven replied: "That's true; I didn't think of that. I beg your pardon, P——; I'll never say another word against your profession." It is sometimes a little difficult to know when Mr. Shaw is serious, but there can be no doubt about the righteousness of his indignation with slum-owners and sundry other classes in our modern civilisation. All the "Unpleasant" plays are worth reading and so are the first three of the "Pleasant." As Mr. Bernard Shaw has unfortunately selected a name which is similar to the name of a medical man practising in London we have thought it better to use only the initial.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) LIQUID CONFECTION OF SENNA; (2) CREAM DENTIFRICE.

(W. H. LOWE AND CO., 8, STAFFORD-STREET, OLD BOND-STREET, W.)

THE advantages of a liquid confection of senna are obvious. In the preparation of the confection submitted to us the liquid extract is employed instead of the powdered senna leaves, as by this recourse the griping principle of the leaves is eliminated. The preparation, though viscous, is not inconveniently sticky and solid. It is highly aromatic and pleasant to the taste. The cream dentifrice is enclosed in a collapsable tube, and in addition to the presence of approved antacids contains also the extract of quillaia, which has a very pleasant detergent effect upon the teeth and gums. The dentifrice further contains an agreeable antiseptic and essential oils.

SPANISH WINES AND BRANDY.

P. DE OTADUY AND CO., 20, HIGH HOLBORN, W.C.)

We have examined the various specimens of wine sent to us by the above wine-growers with satisfactory results. The character of each specimen may be judged from the following analytical results:—Tudela claret (vintage 1893): alcohol, by weight 8·64 per cent., by volume 10·73 per cent., equal to proof spirit 18·81 per cent.; extractives, 2·08 per cent.; mineral matter, 0·23 per cent.; sugar, 1·04 per cent.; tartaric acid, 0·39 per cent.; and acetic acid, 0·17 per cent. This is a wine of light character and is in sound condition. There is no doubt of its purity. Superior Rioja claret: alcohol, by weight 9·36 per cent., by volume 11·61 per cent., equal to proof spirit 20·35 per cent.; extractives, 2·16 per cent.; mineral matter, 0·26 per cent.; sugar, 1·26 per cent.; tartaric acid, 0·49 per cent.; and acetic acid, 0·16 per cent. This wine is from the vintage of 1892. It possesses slightly more body than the previous wine and its alcoholic strength is slightly higher. It is a sound wine and evidences good bouquet and taste. Royal claret (vintage 1893): alcohol, by weight 10·08 per cent., by volume 12·49 per cent., equal to proof spirit 21·89 per cent.; extractives, 2·23 per cent.; mineral matter, 0·20 per cent.; sugar, 1·70 per cent.; tartaric acid, 0·57 per cent.; and acetic acid, 0·16 per cent. This wine possesses good flavour, but is not so delicate as the previous one. The alcohol is in slightly increased proportion, as are also the sugar and extractives. Sauterne Espagnol (vintage 1891): alcohol, by weight 10·08 per cent., by volume 12·49 per cent., equal to proof spirit 21·89 per cent.; extractives, 1·52 per cent.; mineral matter, 0·18 per cent.; sugar, 0·34 per cent.; tartaric acid, 0·60 per cent.; and acetic acid, 0·24 per cent. This is a white wine of pleasant "dry" character. Its alcoholic strength is precisely the same as that of the previous specimen, but the amount of sugar is quite small. It possesses a peculiar but pleasant flavour and the bouquet is that of a sound wine. Lastly, we have examined the brandy (Toison de Oro), which gives evidence both on taste and analysis of a genuine grape spirit. The results of analysis were as follows: alcohol, by weight 36·28 per cent., by volume 43·26 per cent., equal to proof spirit 75·80 per cent.; extractives, 1·30 per cent.; mineral matter, 0·03 per cent.; acidity equal to acetic acid, 0·054 per cent.; and alcohol derived from volatile ethers, 0·7

per litre. Such a spirit is much to be preferred for medicinal purposes to spirit obtained in a large measure from cereals, since the former contains the ethers of pure wine whence it is distilled. Our examination of these wines afforded no evidence of any sophistication and supports the statement that they are genuine and pure.

VIBRONA CHAMPAGNE.

(FLETCHER, FLETCHER, AND CO., HOLLOWAY, N.)

The analysis of this wine was as follows: alcohol, by weight 10·08 per cent., by volume 12·49 per cent., equal to proof spirit 21·89 per cent.; total solid matter, 1·81 per cent.; mineral matter, 0·13 per cent.; sugar, 0·13 per cent.; fixed acids calculated as tartaric acid, 0·87 per cent.; and volatile acids calculated as acetic acid, 0·0072 per cent. We have not examined a champagne presenting less sugar than is here shown. It is the smallest amount we have ever found in sparkling wines and is practically a negligible quantity. To the palate the wine is exceedingly "dry," just a suspicion only of an added bitter being evident. The wine contains 5 grains of standardised cinchona bark in the form of neutral hydrobromate. This addition in no wise spoils the delicate character of the wine itself, but on the contrary has rather a pleasant effect on the palate. The wine was in perfectly sound condition and possessed, as the analysis also shows, practically no volatile acidity as represented in acetic acid. The sample submitted to us yielded on suitable treatment with solvents the principles of cinchona bark, which occurring in the form of neutral hydrobromate are well tolerated and without the unpleasant effect known as "cinchonism." The wine has a pleasing, delicate, vinous flavour. Its tonic value will be readily conceded from the results of our analysis.

KRONTHAL WATER.

(THE KRONTHAL COMPANY, LIMITED, 66, ST. JAMES'S-STREET, S.W.)

Kronthal Water is derived from the Kronthal springs in the Taunus district, Germany. The waters of the several springs are not identical in composition and character. Thus the degree and kind of "mineralisation" vary. One spring yields an alkaline saline water rich in saline matters, another a similar water but less saline, another an iron water, and another a pure effervescing water which is practically free from common salt. All the waters are now imported into this country in bottles, each being distinguished by a differently coloured label. No salt is added at any step of the bottling process. We have examined samples submitted to us, the first of which was marked with a blue and the second with a red label. The analysis of the sample labelled blue was as follows: total mineral matter 260·40 grains per gallon consisting of 189 grains of sodium chloride, 57·40 grains of calcium carbonate, and 14·00 grains of sodium carbonate. A pint of this water possesses an acid corrective power equal to 14 grains of bicarbonate of soda. The sample of water labelled red has a richer mineral value. The results of analysis were as follows: total mineral matter 327·6 grains per gallon, consisting of 266 grains of sodium chloride, 52·5 grains of calcium carbonate, and 9·1 grains of sodium carbonate. Its acid corrective power is equivalent to 12·5 grains of bicarbonate of soda per pint. Both waters possessed the pleasant soft and delicately saline characters of natural mineral water impregnated with its own natural carbonic acid gas. The waters are of decided merit since they are quite free, as we have found, from any kind of organic impurity and their composition is well adapted to dietetic requirements, especially as diluents on the table. The addition of salt to natural mineral waters containing only a small proportion naturally is a very common recourse, which, however, is unnecessary and superfluous in the present instances. This is a point considerably in favour of waters intended for table use since greater purity is guaranteed by the omission of artificial additions. Our analysis established the purity of these waters.

HOOKER'S MILK WINE.

(THE MILK WINE CO., LIMITED, 9, ARUNDEL-STREET, STRAND, W.C.)

The preparation of this wine is based upon correct physiological principles. In it are contained the peptones derived from the careful digestion of the proteids of milk. According to our analysis the quantity of peptones was equivalent to 9 grains (dry) peptone in one fluid ounce. Further results of analysis were as follows: alcohol, by weight 15·67 per cent., by volume 19·28 per cent., equal to proof spirit 33·79 per cent.; total solid matters, 11·72 per cent.; and mineral matters, 0·78 per cent. In regard to the total solid matter and the amount of mineral matter the wine contains the same proportion as milk. The wine has a sherry-like flavour and possesses "body." It is therefore an agreeable stimulant, modified in the very important respect that it contains a notable amount of well-known nutritive and quickly assimilated substances.

"REFINED SPARKLING GELATINE."

(J. AND G. COX, GORGIE MILLS, EDINBURGH.)

This gelatine yields a clear, excellent jelly when dissolved in hot water and cooled. It is perfectly neutral to the taste and to test-paper. It yields on incineration a white ash which is free from borax and chlorides; the residue, in fact, consists principally of phosphate of lime. The foregoing results afford distinct evidence of the purity of the product. It is therefore well adapted for culinary purposes.

OPMUS BREAD AND BISCUITS.

(JOHN THOMPSON AND SON, SKIRBECK ROLLER MILLS, BOSTON, LINCOLNSHIRE.)

The method of preparation of these foods is particularly directed towards obtaining the highest possible dietetic value afforded by the wheat berry. Accordingly, the proportion of nitrogenous constituents is satisfactory while a maximum proportion of the valuable mineral constituents such as the phosphates is retained. The bread proved to contain 47·73 per cent. of moisture, 6·30 per cent. of albuminoids, and nearly 1 per cent. of mineral matter. The mineral matter contained an abundance of potassium phosphate. In the dried bread the nitrogenous matter would be equivalent to 12·05 per cent. The biscuits presented a similar proximate composition, except, of course, that they contain less moisture and an increased proportion of soluble carbohydrates. The mineral matter amounted to 1·63 per cent. The flavour is very good and the microscope showed the absence of irritating branny particles. The food value of these biscuits is apparent not only on account of the retention of the nourishing constituents of wheat, but because also milk and eggs are used in their preparation.

New Inventions.

THE HOLOPHANE GLOBE.

THE most agreeable as it is the healthiest light is diffused light whether it be from an artificial or natural source. The impact of a direct ray of light upon the eye leads to injurious results in consequence of the constant efforts of the muscles of accommodation of the eye to ward off harmful excess. In spite of the importance of this matter very little regard appears in general to be paid to the kind and character of the light employed for artificial illumination. Commonly a very great excess of light is used and it is concentrated or focussed just upon the area which it is desired to illuminate. Such is invariably the case where writing and reading are concerned. This is true of all classes of illumination, be it electricity, gas, or oil. Even when the eyes are shaded or in the shadows the light reflected upwards is strong and very trying. The Holophane globe is constructed to remove

the ordinary defects of most methods of spreading light. It scatters the light uniformly in any required direction and the absorption during transmission is small. With most globes the absorption of light is enormous, varying from 10 per cent. in the case of clear glass to 74 per cent. in the case of painted opal. The construction and action of the Holophane globe will readily appear from the accompanying diagram. Fig. 1 is a cross section showing the inside ribbing and the manner of diffusing the light. Fig. 2 is a vertical section showing the outside ribbing directing the rays. The illuminated globe has a beautiful and soft appearance. Fig. 3 is a sketch of one particular form, but the principle is applied to all shapes and sizes suitable for electric light, gas, or oil. Although it scatters the rays uniformly in all directions, a very high proportion being transmitted, yet there is nothing that is harsh in its effects upon the eye. There are no sharp shadows. The globe may be looked upon without that sense of discomfort experienced when ordinary opal globes or ground-glass globes are similarly viewed. In regard to efficiency the following may be quoted: A 50-candle power Welsbach light covered with a Holophane globe gives in all directions, from the horizontal to the foot of the light, an average increase of 29 per cent. more light than the bare light, 43 per cent. more light than a clear glass globe, 84 per cent. more light than a ground-glass globe, 169 per cent. more light than an opal glass globe, and 193 per cent. more light than a ground-opal glass globe. According to our experience the Holophane globe gives decidedly the best results with the Welsbach mantle. It affords a distinct economy, since so efficiently yet comfortably is the light distributed as to require a reduced number of burners in a given space. For the electric filament it is not, we venture to think, so well adapted, owing doubtless in this case to the source of light being an incandescent loop instead of a continuous luminous area. For this purpose, however, the spherical globe is the best. With oil lamps the Holophane globe gives excellent results, the illumination being remarkably high, uniform, and subdued in tone. As will be seen, the globe is constructed on well-known optical principles. The globe in reality consists of a series of tiny prisms which gather up and distribute the rays of light in the way they should go, like diffused sunlight, and in accordance with hygienic requirements. The result is a good and uniformly diffused light, healthy, and satisfactory in character. An excellent installation of the Holophane globe may be seen at the show-rooms and offices of the Holophane Company, 91, 93, and 95, Queen Victoria-street, E.C.

FIG. 1.

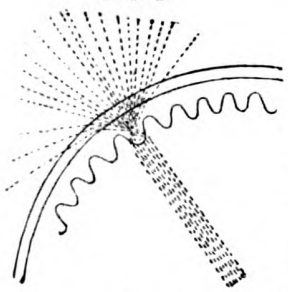


FIG. 2.

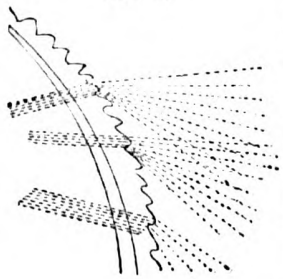
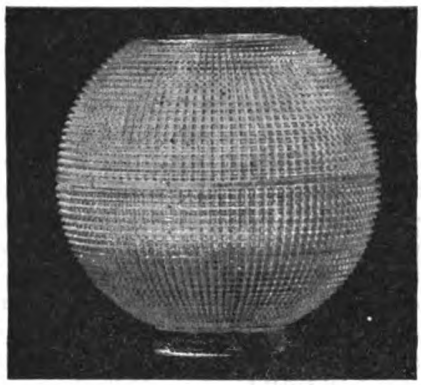
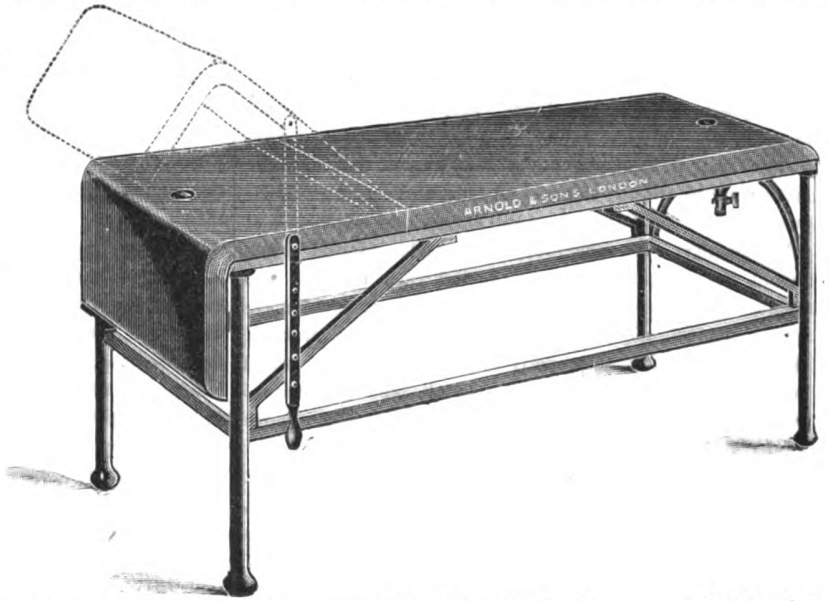


FIG. 3.



A NEW OPERATION TABLE.

LOWERING of the bodily temperature, either from shock or loss of blood or other causes, is often a serious complication in cases of injury and requires to be counteracted by the direct external application of heat, usually in the form of tins or indiarubber bags containing hot water. In the prolonged surgical operations which sometimes have to be undertaken and which are not unfrequently attended by an alarming amount of collapse it is also desirable to ensure a proper degree of warmth as one of the requisites for maintaining the patient's strength. For these reasons it is unquestionably an advantage to have in the operating theatre a convenient reservoir of heat possessing an ample extent of surface, which is constantly in contact with the patient without in any way impeding either examination or operative procedures. With a view to fulfil these various requirements Messrs. Arnold and Sons of West Smithfield have made a new form of operation table, to which they give the name of the Reliance operation table. Its general appearance is shown in the accompanying illustration. It is constructed of iron, enamelled white, and the top, which is also enamelled white, is made double for the purpose of holding hot water. The material of this double top is zinc, and in order to make it capable of carrying any weight with safety it is strengthened internally by a number of arches. This is said to be the first table ever made whereon the patient can be placed in the Trendelenburg position without loss of heat, for the principles of its construction are such that at whatever angle the top may be placed the water remains in the position required.



THE LANCET.

LONDON: SATURDAY, APRIL 30, 1898.

HE is a wise man who is willing to learn even from his enemies, and in the second reading debate on the Vaccination Bill one criticism by an opponent of the measure is worthy the attention both of Mr. CHAPLIN and of the Medical Department of the Local Government Board. Mr. PICKERSGILL in a vigorous and telling speech—curiously different from the utterances of Mr. BAYLEY, the Parliamentary leader of the Anti-Vaccination League and from the oratory of Mr. STEADMAN—prophesied that in a few years glycerinated calf lymph would be discredited, and at the same time he pointed out that the Bill gives no hint of what is meant by the glycerination of calf lymph. If his prophecy is in the very slightest degree to become true it will do so through the neglect to pay sufficient heed to his criticism. With regard to calf lymph glycerine is only a means to an end. The end desired is the practical sterilisation of the lymph excepting as regards the vaccine itself. A mixture of a little glycerine with a little calf lymph by any druggist's apprentice might be advertised and sold as "glycerinated calf lymph," yet it might be any distance removed from "aseptic calf lymph." Dr. MONCKTON COPEMAN and those who have intelligently followed his methods or pursued similar methods have found asepticism by glycerine to be an attainable goal; but who shall say that within the next few years the market may not be flooded by compounds of glycerine and lymph no better than that unfortunate sample the use of which at Rügen some years ago was followed by a troublesome skin eruption, and the well-merited denunciation of which by the late Sir GEORGE BUCHANAN has recently proved a perfect godsend to anti-vaccinationists everywhere. We believe that glycerinated calf lymph has a splendid future of usefulness before it if that future be properly guided and safeguarded, but it is of the utmost importance that no initial laxity shall be allowed to breed mistrust and confusion in the public mind. The Vaccination Bill should take cognisance of this difficulty. All who profess to provide aseptic lymph should be registered or licensed, and their methods and results should be subject to whatever governmental inspection or control may be necessary for the general welfare. We cannot think that properly regulated inspection would be anything less than welcome to all reputable makers who are primarily interested. No doubt another course would be to prohibit the use of any lymph excepting that supplied by Government, but that would raise questions of compensation which Mr. CHAPLIN might not care to face, and it might exercise a deterrent influence as regards original research.

Excepting in one or two points on which he exhibited too uncompromising an attitude Mr. CHAPLIN made a statesmanlike contribution to the debate and showed a very full grasp both of principle and of detail. He seems prepared to agree to the introduction of clauses providing both for the primary vaccination of children entering school, where the operation has not previously been performed, and for the revaccination of children about to leave schoo These additions to the Bill would be of very great value towards the prevention of small-pox. Having indicated his willingness to go so far Mr. CHAPLIN might make up his mind to go even further with regard to two points, one of which would do much to conciliate the medical profession, while the other would do much to conciliate the opponents of compulsion. In THE LANCET of April 16th we stated a case for acceptance of the vaccination work of private practitioners as work done for the State, subject to its fulfilling State requirements. Though no really valid objection has been raised to this proposal it has not yet been accepted by Government. When the adjourned debate is resumed we trust that Mr. CHAPLIN will have seen his way to add this to his scheme. The other point is as to the recognition of declarations of conscientious objection. One very momentous statement which Mr. CHAPLIN made in the course of his speech gives to this question even greater importance than before. But it is necessary to be quite clear here as to what is meant by abolition of penalties. No one would be fined for refusal of vaccination. There would still, however, be fines for refusal alike of vaccination and of the alternative provided for vaccination—namely, the visit to a magistrate or a law court for the purpose of making a declaration of conscientious objection and the subsequent registration of a declaration so made. Under any circumstances, therefore, prosecutions would still require to be provided for. Now, Mr. CHAPLIN announced that in future and altogether independently of the present Bill all prosecutions which may be required under the Vaccination Acts are likely to be conducted by the vaccination officer even in places where boards of guardians are hotly opposed to prosecutions. The officer will prosecute by order of the Local Government Board. In principle we entirely agree with this proposal. It will at once abolish the anomalous conditions at present prevailing by which a man living on one side of a hedge may go scot-free as regards infringement of the law while a man on the other side of the hedge will involve himself in prosecution and penalty for similar infringement. But in practice this proposal may do far more harm than good if it be too rigorously enforced in places where anti-vaccination has been long established. What we suggest is that if prosecutions are to be carried out independently of local authorities a conscience clause should be introduced, and prosecution should take place only where a statutory time for taking advantage of the conscience clause has been allowed to elapse without the necessary declaration having been made. We would not for a moment propose that, a prosecution under such circumstances having once been raised, the defaulting parent should still have this way of escape open to him. Any such extreme facility would be liable to systematic abuse under the guidance of anti-vaccination societies. But if prosecutions are to be instituted all over the country by officials acting independently of local authorities they should

be limited as above indicated, and Mr. CHAPLIN should have all the less hesitation in agreeing to this, looking to the discovery which he has made of the powers existing under the present law. Further, under such a scheme he need no longer have any hesitation in substituting sanitary authorities for Poor-law authorities to carry out all the rest of the local administration of vaccination.

In what we say here we are endeavouring to consider the question as a whole. There would be under the new system the use of aseptic calf lymph; the extension to six or twelve months of the age limit for primary vaccination; domiciliary vaccination; State payment of efficient vaccinations by private practitioners; the recognition of conscientious objection; prosecution independently of local option for neglect to register conscientious objection within a statutory period; the inspection of children beginning school attendance, with the offer of primary vaccination where not previously performed, but again subject to a conscience clause; and revaccination at adolescence, similarly subject to a conscience clause. It seems to us that all this hangs together as a workable scheme, and that the omission of any one part would weaken the whole and make it less likely to be successful in accomplishing the desire alike of the President of the Local Government Board and of the medical profession—namely, that there shall be in this country such approach to a maximum of vaccination and revaccination as may be consistent with a reasonable minimum of friction and opposition.

THE extremely lucid and interesting speech with which the Chancellor of the Exchequer introduced his Budget proposals and the proposals themselves are matters of high interest to all intelligent citizens and not least so to members of our own profession. The mere growth of wealth is a matter of great importance to all classes and especially so to a profession which concerns itself with the physique of the race and is responsible for its health and in some degree for its morals. We are constantly hearing of poverty and competition and the struggle for life, and yet one Chancellor of the Exchequer follows another declaring the ever-increasing scale of the public income, rising to the demand for an ever-increasing expenditure of the public money. The most liberal estimate of the yield of a tax in one year is found to be exceeded by its actual results in the year following; and a surplus of two or three millions has to be disposed of with so slight a clamour for a share of it as to give the Chancellor little help in his delicate task. A generation ago a penny in the income tax used to yield £1,000,000, now it yields £2,150,000. Fortunately men do not necessarily decay when wealth accumulates. It is quite possible to have the opposite result, and we are fain to believe that with all the increase of wealth and even luxury among us there is still no serious deterioration of the national morals or the national health. Drunkenness and the coarser forms of vice, though still far too common, are less so than in former generations. Stimulants are still in demand both for mind and body, but they are of a healthier kind than formerly. Open air, exercise and motion in the open air, travelling, reading, painting, music, all enter into the conception of modern life in a way tha renders it altogether different from the humdrum existence of a few generations back. We are no longer the deepest drinkers of alcohol in Europe. France heads the list now and exceeds us, as do Denmark, Belgium, Switzerland, and Germany. It is to be admitted that our rulers have done much to add to the cost of indulgence in alcohol, and by so much may claim some of the credit of our greater sobriety. But we still drink prodigiously, and in this excess gratify each successive Chancellor by vast contributions to the exchequer representing quantities of alcohol beyond all physiological need of the human body and tending as powerfully to the degradation of morals as to the degeneration of the tissues. In the year which has just closed the exchequer was benefited by an increase of Excise duties over those of the previous year of £840,000, the principal increase being for beer, which amounted to nearly half a million of money.

The Chancellor's present Budget will be remembered in history as the Budget which diminished the tax on tobacco. He had a surplus of £1,786,000, nearly enough to have abolished half the present duty on tea. He cast about for recipients for his favours and he has chosen, first and chiefly, the consumers of tobacco. To this section of the community, excluding nearly all its women and children and a large number of its men, he has given an almost unasked grant of £1,120,000. He has done this with the deliberate hope of not diminishing his own receipts by largely stimulating the public demand for the article which he so favours and which is not one the consumption of which either needs or deserves stimulation. We doubt if this desire will have fulfilment, for the reduction in price on a small quantity will be infinitesimal and will very likely benefit the consumer who buys tobacco by the ounce little more than the doing away with the coal dues benefited the buyers of half sacks of coal. A sermon from us on this action of the Chancellor of the Exchequer would be as ineffective as the one he so pathetically described as preached to the House of Commons by himself on the need for economy, "which produced no more effect than if it had been preached in church." Medical men, whatever their views of tobacco, use it almost as freely as other classes of the community, and although it is a luxury it has arrived at being almost a necessity. In conditions of poverty the "weed" seems to have a charm which exceeds that of actual necessaries—doubtless because it lessens the sense of want. It is pathetic to see the pauper out for the day pick up from the street the refuse end of the cigar that has been thrown down by his more wealthy neighbour. All this may be admitted, and yet some will think that there is enough tobacco consumed already, and that when Sir MICHAEL HICKS-BEACH was casting about for a use for his surplus he might have found a worthier object than the one he has chosen. On the rival merits of tea and chocolate we shall not dogmatise. Both are undoubted boons, and the increased consumption of them would favour the greater sobriety of the country in a way that the increased use of tobacco is scarcely likely to do.

Though we are not inspired with admiration for the chief remission of the Chancellor's Budget we must express our gratitude to him for the small but considerate reductions in

the Income Tax on incomes varying from £400 to £700. We feel that we are being thankful for small mercies, but in the absence of larger ones this is the only exercise for our gratitude. The incomes included in this remission will, we fear, include a large proportion of medical incomes very laboriously and dearly procured, as well as others, and we cannot but regret that the surplus was not used more freely in this way. The turn of the payers of direct taxes must come soon. Meantime it is gratifying to think that they have not been altogether overlooked.

THE governors of the Belgrave Hospital for Children have resolved on an experiment in the administration of their charity which will have the goodwill of all intelligent philanthropists in the metropolis and of the medical profession generally. They have decided to transfer the hospital from Pimlico to a site in Kennington adjoining St. Mark's Church in the Clapham-road. But they have done much more than this—they have determined in the populous locality in which their future operations are to be carried on to try at least to conduct them in accordance with sound principles of charity. His Grace the Duke of WESTMINSTER is the president of the hospital and in a letter to the *Times* of April 23rd he sets forth the views of the governors in a way which ought to secure a sympathetic and substantial response from the public and especially from those in the South of London who can afford to be charitable. A fuller statement of the scheme for the reconstitution of the Belgrave Hospital for Children in South London is before us, of which the principal features may be thus summarised. The general administration of the hospital will be in the hands of the committee of management which will also appoint the medical staff. The Committee will include the physicians and surgeons and three other members of the staff. It is well known that the provision for hospital treatment of the sick poor in the south of London is very inferior to that in other parts and this attempt to redress the grievance deserves every encouragement. According to the Duke of WESTMINSTER'S letter the people of the north side of the Thames have nearly four times as much hospital accommodation for their children as those living on the south side of the river.

But it is principally on account of the determination of the governors to face manfully the question of hospital abuse that we commend this hospital to the support of all liberal men. In the admission of both in-patients and out-patients a serious effort will be made to include only those classes who really need hospital accommodation. A wage-limit scale has been drawn up, but in cases of long illness or of a serious operation it will not be pressed if a recommendation is forthcoming from a medical practitioner that the patient is deserving of charitable treatment. Much stress will be laid in all cases on the recommendation of medical men. Both they and the representatives of charitable institutions will be invited to coöperate with the governors in preventing the abuse of the hospital. Coöperation with medical men—not competition—will be the key-note of administration. And where a medical man has a patient whose case is obscure or difficult and the parents are too poor to pay a consultant's fee, it is proposed that he may send or take his patient to the hospital and there have a consultation with one of the staff. This is a much-needed arrangement in every part of London and the provinces. The patient would by it secure the advantage of a hospital opinion and yet his self-respect and his connexion with his regular medical man would be left intact. It is intended to restrict the number of new out-patients seen in a day, preference being given (1) to those most seriously ill, (2) to those sent by medical practitioners, and (3) to those bringing certificates from governors. Great precautions will be taken to prevent the out-patient department being a medium for the diffusion of infectious disease, a special waiting-room being provided for suspicious cases. In the case of the in-patients, too, special precautions will be taken by means of a "resting ward" and isolation wards to minimise as far as may be the risk of infection spreading. Another feature of the new administration is to provide a training for nursemaids, such as will supply that important class of servants with some knowledge of the proper methods of rearing infants and nursing them when they are ill. Very properly it is intended to reserve some privileges for the Pimlico district in which many of the supporters of the hospital reside. We venture to hope that a hospital so much needed and to be conducted on principles so sound will soon get the £50,000 which the Duke of WESTMINSTER says will be necessary to carry the scheme into effect.

Annotations.

"Ne quid nimis."

SOLDIERS' BOOTS.

MR. G. W. STEEVENS, the Soudan War Correspondent of the *Daily Mail*, gives a lamentable account of our soldiers' footgear. In a recent letter he says: "What might have been avoided, and should have been, was the scandal that the men's boots gave out. ..... When the three battalions and a battery arrived in Berber hundreds of men were all but barefoot; the soles peeled off, and instead of a solid double sole revealed a layer of shoddy packing, sandwiched between two thin layers of leather." It is true, Mr. Steevens goes on to say, that the Soudan climate is particularly destructive of all things stitched and that the soldiers had done a great deal of marching, but, on the other hand, they had only been "up river" about a month, "and no military boot ought to wear out in a month." The footgear of a marching army is unquestionably the most important part of the whole equipment, and yet whenever our troops are engaged on active service there are pretty sure to be complaints more or less bitter regarding its quality and durability. The Egyptian soldiers wear a riveted boot which apparently is able to withstand the climate as well as the long marches across the desert. If this is correct it is strange, to say the least of it, that the experience thus ready to hand was not utilised for the benefit of our infantry when they were ordered to the front. It is poor economy to grudge a little extra expenditure on soldiers' footgear, especially when the men are about to proceed into regions where transport is the chief difficulty. "Boots are always the most pressing need on a campaign," said the great Napoleon in a letter to Prince Eugène de Beauharnais, and in order as far as possible to guard against a deficiency the prescient commander ordered the provision of eight pairs of boots for

each foot soldier. Napoleon's famous rival was likewise deeply anxious that his men should be well shod. "What is the most essential thing for a soldier?" asked a member of the Government of the Duke of Wellington. "A good pair of boots to begin with," replied the hero of Waterloo; "and in the next place a second pair of boots; and thirdly, a spare pair of soles." Alexander's victorious army reached India on sandals and to this day a similar flimsy foot-protector is generally worn in eastern countries, but the ideal boot for a modern soldier should be impervious to moisture, stout and yet pliable, accurately shaped, and constructed of the most durable material. It should also be easily put on and taken off, should prevent the entrance of dust, sand, or mud, and, above all, favour the free play of each pedal articulation, while at the same time affording support to the muscles of the foot and ankle collectively. An ill-fitting, clumsily shaped boot is worse than none at all. Undue pressure or friction at any point quickly leads to corns and lameness. Formerly bunions and in-growing toenails due to pointed boots and shoes were common causes of a halting gait amongst the population generally, but of late years more attention has been given to the anatomical features of the foot, especially in growing children. Deformed feet are, however, still of frequent occurrence in the ranks, each case demanding special treatment; but it should be an invariable axiom with officers commanding companies that boots should be made to fit the feet and not *vice versâ*. The following recipe for making boots both soft and waterproof was recommended by Edmond Parkes, and amongst *laudatores temporis acti*, at all events, it still holds first place: "Take half a pound of shoemakers' dubbing, half a pint of linseed oil, half a pint of solution of india-rubber; melt together with care and rub in firmly." The indiarubber solution is highly inflammable, requiring attention during the melting process. Mr. Steevens's concluding remarks are noteworthy: "It is always the same story—knavery and slackness clogging and strangling the best efforts of the British soldier. To save somebody a few pence on a boot you stand to lose a good rifle and bayonet in a decisive battle and to break a good man's heart into the bargain. Is it worth it? But it is always happening; the history of the army is a string of such disgraces; and each time we arise and bawl 'Somebody ought to be hanged.' So says everybody. And nobody ever is hanged." In answer to a question asked in the House of Commons on April 19th Mr. Powell Williams said that the boots supplied to the army in Egypt were not shoddy but made of the best English hide. Between the inner and the outer sole strips of leather were inserted to give elasticity. The *Times* of April 26th contains a letter from its special correspondent, dated Atbara, April 11th. He says that the most searching inquiry should be made, that the soles came away from the uppers, and this after six weeks' wear. Perhaps Mr. Powell Williams will make inquiries.

A TIMELY PUBLICATION.

THOSE who have read the Final Report of the Royal Commission on Vaccination, together with the appended statement of the two dissentient members of the Commission (Dr. Collins and Mr. Picton), will, it may be hoped, also peruse the very exhaustive and convincing criticism of the latter made by Dr. J. C. McVail in a paper, read before the Epidemiological Society of London, which has just been separately published.[1] It may be recalled that the conclusion arrived at by the "dissentients" was that there was insufficient ground for the compulsory enforcement of vaccination and they recommended the repeal of the compulsory clauses of the Vaccination Acts without, however, interfering with the rest of the machinery which would permit those desirous of being vaccinated to be vaccinated; in other words, that vaccination should be voluntary but that the State should still maintain its establishments and encourage if it did not enforce the performance of vaccination. The route whereby such conclusion is reached traverses the whole of the ground covered by the Commission—historical, statistical, and theoretical, and step by step Dr. McVail follows the two Commissioners' statements, showing where fallacies have crept in and where errors of judgment have been committed. The publication is a timely one in view of the action of the Legislature, for, although ostensibly a "review," the *brochure* enables the reader to glean much information upon the whole subject, and we can heartily commend it as a brilliant exposition and able criticism of the most powerful plea against general vaccination which has been, and which probably can be, advanced.

[1] The Report of the Royal Commission on Vaccination: A Review of the Dissentients' Statement. By John C. McVail, M.D. London: P. S. King and Son. Price 2s.

DEATH OF SIR VIVIAN MAJENDIE.

BY the sudden death of Sir Vivian Majendie at Oxford last Sunday the Government and the country have lost a valuable adviser and expert. No one was more familiar with the distinctive properties of the great number of explosives now in existence than Colonel Majendie and his plucky investigations were invariably carried to an instructive issue without personal harm. We have frequently had occasion in these columns to refer to his work on matters concerning the public safety and quite recently we drew attention to the important conclusions to which he had come on the petroleum lamps accidents question, conclusions which were in entire agreement with those arrived at by THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps, the report of which appeared in this journal on Jan. 4th, 1896. Only last week he gave evidence before the Select Committee and was cross-examined as to the objections he entertained against raising the flash point of illuminating oil. This cross-examination was not concluded, and the Select Committee must deeply regret having lost one who was probably their most valuable witness. The public will remember Colonel Majendie as the Chief Inspector of Explosives to the Home Office, whose business it was to deal with the explosions which occurred on the Underground Railway, at public offices, and elsewhere, and with those dastardly outrages which are now and again committed by mad and miscreant individuals.

THE EARLY DIAGNOSIS OF MEASLES.

HE would be a great benefactor who would discover a sure sign or symptom of measles at an early stage of the disease. The *New York Medical Record* of April 9th has an original article by Dr. Henry Klopik, attending physician of the Good Samaritan Dispensary, New York, on a New Diagnostic Sign of Measles. This physician thinks that he has discovered an unfailing and pathognomonic indication of the disease which is to be seen two or three days before the appearance of the eruption. The epidemic which rages amongst us just now will enable our readers to verify or otherwise the interesting observation of Dr. Klopik. The sign is to be found in the mouth—*limited to the mucous membrane lining the cheeks and lips*—and is thus described by him: "It consists of small, irregular spots of bright red colour; in the centre of each spot is the interesting sign to which I call attention. In strong daylight we see a most minute bluish-white speck. These minute bluish-white specks in the centre of a reddish

spot are absolutely pathognomonic of being measles. I have never met them elsewhere and when once seen they are a certain forerunner of the skin exanthema." The spots are not to be confounded with the red spots seen on the palate and fauces commonly enough in measles. Dr. Klopik says that the observation of these spots by himself and friends has been useful in the way of early separation of cases and limitation of the spread of the disease. But even if his account be confirmed the spots do not occur in most cases till within one, two, or three days of the eruption, when probably the infection has been communicated to others. The eruption is really generally anticipated for several days by well-known symptoms, such as cough, sneezing, red eyes, pyrexia, &c. Still, every minute clinical observation is valuable and tends to the perfection of medical science and service.

THE BLOEMFONTEIN COTTAGE HOSPITAL.

ON April 4th Sir Alfred Milner, the Governor of Cape Colony, opened the Victoria wing of the St. George's Cottage Hospital, Bloemfontein. The original hospital consisted of a general ward of four beds, two private wards, a convalescent room, dispensary, dining-room, sister's and nurses' room, a kitchen, and offices. Last year the sum of £1800 was collected in honour of the Diamond Jubilee—a large sum for a little up-country town. Of this £1200 were handed over to the hospital, £400 were used to pay off a mortgage, and £800 were expended on the new wing, which comprises two nurses' rooms, a general ward of four beds, one private ward, and a linen cupboard. The new wing is a great addition to the hospital and the townspeople of Bloemfontein are to be heartily congratulated.

THE THERAPEUTIC AND TOXICOLOGICAL EFFECTS OF CHINOSOL.

AN investigation which throws light upon the properties of any new antiseptic will be welcomed by the members of the medical profession in, it may be, warning them as to its drawbacks whilst also pointing out its advantages. Chinosol is now largely employed as a powerful and convenient antiseptic and it is said to possess very distinct advantages over other antiseptic compounds previously in use. It is a yellow powder of definite chemical composition, soluble in water, and containing a quinoline group in combination with potassium and the sulphate radical. Its antiseptic, disinfectant, and deodorant properties have been determined with very satisfactory results by Dr. Klein. It is important next to turn to its properties in practice and on this important question Professor Hobday, F.R.C.V.S., of the Royal Veterinary College, has contributed an interesting and instructive paper to the March number of the *Journal of Comparative Pathology and Therapeutics*. His experiments related to dogs, cats, and donkeys. The internal administration of chinosol to human subjects has been tried by Dr. Cipriani, whose results are recorded in THE LANCET of Nov. 27th, 1897. In this communication the treatment of tuberculosis with chinosol administered by the mouth or injected locally was followed by a rapid and apparently permanent improvement. The summary of Professor Hobday's results is as follows: 1. Chinosol acts well as an antiseptic, disinfectant, and deodorant when used in certain proportions. 2. Its action is better marked when used as a lotion than when used as a powder. 3. The powder is not suitable for use on fresh wounds unless diluted in some way or other. 4. For the disinfection of instruments care must be taken not to make the solution too concentrated. With instruments care must be taken, Professor Hobday finds, that the solution should be of definite strength, as otherwise the instruments lose their edge and the handles become discoloured and rough to the touch. 5. The drug possesses toxic properties. 6. If used subcutaneously in too concentrated a form chinosol will produce local irritation and swelling. The strength recommended for subcutaneous injection in human practice is from 1 in 600 to 1 in 200, and certainly in veterinary patients this should not be exceeded. 7. The cat is very susceptible to its action and in this animal much more care is necessary to guard against toxic symptoms than in the case of the dog. In the cat, if subcutaneously injected, the extreme limit of dose should be one-sixteenth of a grain for each pound body weight and in the dog one-eighth of a grain per pound. 8. Chinosol is not rapidly absorbed from the unbroken skin of the dog and can be applied for several days in succession, even in fairly concentrated solutions, to the skin of this animal without producing eruptions or sores. 9. The chief symptoms of poisoning are: sneezing and coughing and increased flow of thick, ropy saliva; subnormal temperature; staggering gait, commencing with loss of motor power in the hind-quarters; great prostration, and ultimately death from failure of the heart's action. 10. The chief post-mortem characteristic is the smell of chinosol on or in some part of the body, whilst another symptom to be looked for is the presence of frothy saliva in the pharynx, œsophagus, or stomach.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.

AT the annual meeting of the Manchester and Salford Hospital for Skin Diseases held on March 4th the report of the committee for 1897 stated that there had been 3149 new patients, as against 3271 in 1896—a decrease of 122, which was attributed to more careful inquiry into the claims of the applicants for charitable relief. It is well that hospital managers should do their share in checking the abuse of hospitals by well-to-do and shameless people. One point brought out is the great extent to which the hospital—in common with other Manchester charities—is "bled," as Dr. Brooke put it, "by the neighbouring towns, which sent large numbers of patients but whose contributions were almost *nil*." It was said that the mayors of several towns had been written to on the point but that not a single reply had been received. Bolton sent 340 patients, Bury 192, Crewe 163, Northwich 139, Warrington 206, Macclesfield 153, Oldham 226, Rochdale 169, and Stockport 417. It is not quite fair that the places named should draw upon the charities of Manchester for the medical relief which they themselves are well able to afford. As is too commonly the case, "the committee regretted, however, that the expenditure still exceeded the receipts" by nearly £500, and a strong appeal was made for more subscriptions.

ABSENCE OF PYRAMIDAL DECUSSATION.

DR. PHILIP ZENNER of Cincinnati relates in a recent number of the *Neurologisches Centralblatt* the case of a patient who was under his care on account of slight left-sided paralysis. He was a man, aged thirty-three years, a waiter, whose condition was such that no reliable history could be obtained of the onset of his illness. It was found out later, however, that there had been a series of apparently Jacksonian fits affecting the left side about a year before his admission to the hospital. When he was admitted there was a slight dragging of the left foot as he walked, the left hand was weaker than the right, there was left-sided facial weakness, especially in the upper part of the face, but no reaction of degeneration. The tongue was protruded to the left and there was apparently some difficulty in deviation of the eye to that side. There was no impairment of sensibility. Percussion of the skull revealed the fact that there was considerable pain on the

left side and the patient complained of headache over the frontal region and in the left temporal region. Intelligence was impaired and any answers were given very slowly. There was what is called "congestion" of the papilla with widening of the arteries and veins, but no distinct optic neuritis. He remained two months in hospital without changing much. He was stupid, often melancholy, and there was a tendency to somnolence. He died about a month later in an asylum and a tumour was found over the central region situated under the dura mater and apparently compressing but not destroying the convolutions. It was a glio-sarcoma and was situated on the left side of the brain. A careful examination of sections of the medulla and the upper region of the spinal cord by Dr. Kramer revealed the curious fact that there was no decussation of the pyramids, thus accounting for the presence of paralytic symptoms on the left side in a case in which the cerebral lesion was on the same side.

DR. W. G. ROCKWOOD AND THE CEYLON MEDICAL SERVICE.

DR. W. G. ROCKWOOD, who recently retired from the post of colonial surgeon and also that of surgeon to the General Hospital, Colombo, has just been appointed consulting surgeon to the same institution, an office newly created by the Government "for long and distinguished services." Dr. Rockwood, who is a pure Tamil, graduated at the University of Madras and entered the Ceylon Medical School in the same year (1866). He took the degree of M.D. at Madras in 1872 and became M.R.C.P. Lond. and M.R.C.S. Eng. in 1885. For the last twenty years he has been surgeon to the General Hospital, Colombo, and Lecturer on Surgery in the Ceylon Medical College. He has, in addition, just been appointed by his Excellency the Governor to be an unofficial member of the Legislative Council of Ceylon to represent the Tamils. The medical profession will, we are sure, join with us in congratulating Dr. Rockwood upon the honour which he has so worthily attained.

THE CONTROL OF MEASLES AND WHOOPING-COUGH BY SCOTCH SANITARY AUTHORITIES AND SCHOOL BOARDS.

A CORRESPONDENCE of considerable importance and significance in the direction of the prevention of disease has recently passed between the clerk to the Montrose Landward School Board and the Scotch Local Government Board, the question at issue being as to whether measles and whooping-cough are to be held to be infectious diseases within the meaning of the Public Health (Scotland) Act, 1897, even although a sanitary authority may not have added these two diseases to those notifiable under the Notification Act. The necessity for deciding this point arose out of the provisions of Section 57 of the Public Health Act, which, *inter alia*, imposes a penalty upon parents and school teachers who knowingly permit a child to attend school who has been suffering from infectious disease or who has been residing in a school where such disease exists, unless the child in question produces a certificate from a medical officer of health or a medical practitioner stating that he or she is free from infection. The certificate in the case of the medical officer of health has to be provided free of charge. The Scotch Local Government Board have, we are glad to see, no doubt as to the interpretation to be placed upon Section 57 and they have laid it down that its provisions are in no wise limited to the definition of infectious disease contained in the Notification Act. They regard both measles and whooping-cough as dangerous infectious diseases and the school teachers are to have regard to the provisions of section 57 when dealing with these diseases. We welcome this decision as a move in the right direction, though we fear that in times of epidemic measles or whooping-cough the medical officer of health will have a somewhat busy time; doubtless, however, his emoluments will be correspondingly increased. The gradual growth of public opinion in favour of controlling those infectious diseases which hitherto have been allowed to run riot as their natures prompted them is one which will have to be encouraged gently and discreetly by the public health service. Reform lies rather in the direction of educating the public to the necessity for caution than, in the first instance at least, in resorting to injudicious prosecution. If we are to reduce the mortality from such diseases as measles and whooping-cough the exercise of tact on the part of the medical officer of health is of the utmost importance, and it is only by this means that we can gradually educate the public for the more stringent measures which may ultimately have to be taken.

ACUTE PANCREATITIS.

ACUTE pancreatitis is not a very common disease and sudden deaths occurring from this cause always have a pathological interest. The *Hong-Kong Weekly Press* of March 26th contains an account of an inquest held upon the body of Alfred Feltham, the wardmaster of the Government Civil Hospital, who was found dead in his quarters at the hospital on March 17th. Dr. Atkinson, the principal medical officer, in his evidence said that he was summoned in the afternoon to see Mr. Feltham. He found him lying dead on the sofa. At the post-mortem examination made on the following day, at which he was present, the cause of death appeared uncertain and the stomach and contents were handed over to the Government analyst. Mr. Frank Browne, the Government analyst, deposed to examining the contents of the deceased's stomach: it contained 19 gr. of chloral and ¼ gr. of morphia. He had last seen deceased alive at midday on the 17th. Dr. J. A. Lowson, who made the post-mortem examination, deposed to finding acute inflammation of the stomach and pancreas; in the head of the latter there was a large hæmorrhagic extravasation. The condition found could not have been caused by either chloral or morphia and in all probability the deceased could not have taken more than 30 gr. of chloral for the absorbing powers of the stomach must have been considerably impaired. The cause of death was syncope in acute gastritis and pancreatitis possibly accelerated by a medicinal dose of chloral. The presiding magistrate gave his finding in accordance with this evidence.

THE REPEAL OF THE CONTAGIOUS DISEASES ORDINANCE IN SINGAPORE.

IN a paper addressed to the Secretary of State for the Colonies Mr. William Adamson, chairman of the Straits Settlements Association, shows that venereal disease has greatly increased in Singapore since the repeal of the Contagious Diseases Ordinance and he declares it to be the belief of the association that the Ordinance ought to be again put in operation without delay. In the colony the main provisions of the Ordinance were repealed in 1888, leaving only to the Government the right of registration and the inspection of houses of ill-fame, but in 1894 (Women and Girls Protection Ordinance Amendment Bill) this right was withdrawn and since then there has been no inspection or control exercised beyond what is provided for by the common law. The repeal of this Ordinance was in obedience to the course resolved upon in England and under the peremptory orders of the Colonial Office, but it was done against the protests of the Colonial Government, of the non-official members of council, of the naval and military officers, and of the civil and military medical staff. Some results of the repeal are made evident by the fact that during

the five years 1884–88 inclusive, when the Ordinance was in operation, out of an average of 615 English soldiers in the Tanglin Barracks in Singapore the admissions to hospital for primary syphilis, secondary syphilis, and gonorrhœa were 144 per mille, whereas during the last five years, 1892–96 inclusive, which have elapsed since the protective legislation was abolished out of an average of 682 men in barracks the average admissions to hospital for the same diseases were 434 per mille. The admissions to hospital per mille for these diseases during each of the years comprised in the above period were as follows: 123 in 1884, 81 in 1885, 69 in 1886, 161 in 1887, 287 in 1888, 330 in 1892, 265 in 1893, 348 in 1894, 617 in 1895, and 567 in 1896. There is a considerable amount of evidence to the effect that the prostitutes, of whom there are more than 3000 in Singapore, are practically in a state of slavery to the mistresses and that the hardships of their position were mitigated by the enforcement of the Ordinance.

THE LATE SIR RICHARD QUAIN AND THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

As stated in our report of the proceedings of the last Comitia of the Royal College of Physicians of London, the College was enriched by a gift bestowed by the late Sir Richard Quain a few weeks before his death—an act which testifies to the attachment he bore to the College. The gift referred to consists of four pieces of plate, one a handsome silver bowl inset with medals gained by him during his collegiate and university career. The most striking piece is a beautiful candelabra fitted for the electric light which was a gift to Sir Richard Quain from a grateful patient, as also was a silver salver. Another silver salver bears an inscription stating that it was presented to him by the Pathological Society for services rendered to it as honorary secretary. At the time of his death Sir Richard Quain was, we believe, the last of the original members of this Society which celebrated its jubilee in 1896.

ICTERUS GRAVIS.

WE publish this week two most unusual cases. One, a case of acute atrophy of the liver related by Dr. William O'Neill, presents several points of interest apart from the rarity of the disease. Great intensity of pain is not usually experienced in acute atrophy of the liver and the duration — five days — is very short. Dr. O'Neill's comments on his case are well worthy of perusal. He maintains that this condition is a general disease in which all the organs of the body suffer more or less and in all probability micro-organisms of a malignant character are the exciting cause of the malady. This is the view taken by most modern writers. The second case is recorded by Dr. E. O. Daly. He heads his article, "A Case of Icterus Gravis." As is well known, cases of jaundice assuming a malignant course do occur either in endemic or epidemic form. Dr. Hunter, writing in Professor Clifford Allbutt's "System of Medicine" (vol. iv., p. 114), draws attention to the same point, instancing the extensive epidemic outbreak of jaundice which occurred in Saxony and Dresden in the autumn of 1889 when no fewer than 518 persons were attacked. He considers that the evidence of acute yellow atrophy being a rare form of malignant jaundice of obscure infective nature outweighs that in favour of any other theories which have been advanced. Dr. Daly's case was a very acute one, proving fatal in three days. Unfortunately no post-mortem examination was allowed, so that the exact condition of the liver and kidneys could not be determined. The only diagnosis which could be arrived at was icterus gravis and Dr. Daly's arguments in this respect are perfectly sound. We should feel inclined from our perusal of the case as reported to support this diagnosis and to refer its pathogeny to a micro-organism. It is evident that there was a virulent organic poison, probably formed within the intestinal tract, the first symptom being vomiting. There was no diminution in the liver dulness; neither leucin nor tyrosin was found in the urine and subsequently there was complete suppression of urine; all these points, as Dr. Daly remarks, point away from acute yellow atrophy of the liver, so this case differs very materially from the one under the care of Dr. O'Neill. A comparison between the two cases is most valuable and it is fortunate that it was possible to publish them together.

STREET NOISES.

THE municipality of Brighton is making a most laudable effort, and one which we earnestly hope will succeed, to deal with the curse of unnecessary street noises. A proposal was submitted to the town council on April 21st providing for a penalty of £5 being inflicted upon anyone who in offering goods for sale in any public thoroughfare should make "any loud or continuous outcry or noise or importune any person so as to be or to cause a nuisance or annoyance to any of the inhabitants." A similar penalty was proposed to be recoverable from any persons who after being requested to desist from playing any musical or noisy instrument, or singing or shouting in any street within 100 yards of where any persons may be assembled in any place of public worship or public hall or hospital or similar place. This last proposal is, to our thinking, not strong enough. Persons making these abominable noises should be requested to go away and fined if they do not whether there are any persons assembled for public worship or not. Still, however, the action of the Brighton authorities is a long step in the right direction, and we see that the proposal was carried by 35 votes to 11. It will, however, require the sanction of the Local Government Board before becoming operative. The unfortunate people who have to live in London, except the favoured dwellers in Montagu-square, are at the mercy of any lazy loafer who likes to buy a few newspapers or drag an organ about. The London County Council have had the matter "under consideration" for some time and they might at least try to stop the nuisances which we have indicated. There is no possible excuse for the newspaper "runners," for plenty of street newspaper hawkers sell their goods without yelling and make a livelihood thereby.

MEMBRANOUS STOMATITIS.

THE frequency of true diphtheria and other inflammations attended by formation of false membrane in the throat is in marked contrast with the rarity of such affections in the mouth. In the *Journal of the American Medical Association*, March 19th, 1898, Dr. L. Jurist has published a case of membranous stomatitis which, though it clinically resembled diphtheria, was caused by the streptococcus pyogenes. A woman, aged twenty years, had an attack of vomiting and diarrhœa which yielded to treatment. Shortly afterwards the tongue began to swell; it increased to such an extent as to cause alarm lest she should be choked. The tongue was enormously swollen and protruded in a thick mass from the mouth; the appearance of the patient was anxious and distressing. The floor of the mouth and the under surface of the tongue were covered by a thick greyish membrane. There was a repulsive odour from the breath, the pulse was rapid and feeble, and the temperature was 101° F. For two weeks the general condition remained the same. The membrane spread to the inner surfaces of the lips and cheeks. There were frequent slight hæmorrhages which became freer if portions of the membranes were forcibly detached. The submaxillary lymphatic glands were enlarged, and a well-marked œdema involved the entire face and neck, extending from ear to ear. As the patient improved an examination of the throat became possible. Two oval, distinctly outlined patches were

seen on the hard palate but none on the soft palate or tonsils. After the failure of other remedies the application of nitrate of silver combined with the administration of chlorate of potash proved successful. Twice there was copious bleeding from ulceration of the tongue which was beneficial, being followed by subsidence of the inflammation. Bacteriological examination showed streptococci in conspicuous numbers but no diphtheria bacilli. A case of true primary diphtheria of the mouth has been reported by M. Thiercelin. A woman complained of pain on opening the mouth and had anorexia and a little fever. The lower surface of the tongue, which was not swollen, and the floor of the mouth were covered with a whitish-grey membrane. There were membranes on the cheeks, gums, and lower lip. The disease did not extend beyond the pillars of the fauces. The submaxillary lymphatic glands were swollen, mastication was impossible, and intense fœtor and salivation were present. Diphtheria bacilli were found in abundance in the membrane. M. Sevestre and M. Gaston have reported a series of cases of membranous stomatitis which constitute a special form denominated by them "stomatitis impetigi-nosa." It attacked debilitated children, especially those recovering from measles or whooping-cough. A whitish adherent membrane similar to diphtheritic exudation formed. The tongue was rarely attacked. In nearly all cases the disease was associated with impetigo of the face. The staphylococcus pyogenes aureus was found in every case.

THE VALUE OF THE RECEPTION-HOUSE OF ST. GEORGE'S, SOUTHWARK.

THE patron saint of England has for many years undergone undeserved neglect at the hands of the country who adopted him as her protector. But this year his day was more generally observed than for many years past and two incidents in which his name figures have been prominently brought to our notice. We give an account in another column of the opening of a new wing forming part of the cottage hospital dedicated to St. George at Bloemfontein, and only the other day the vestry of St. George's, Southwark, had to congratulate their medical officer on an outbreak of typhus fever being averted. In THE LANCET of Feb. 5th, 1898, we gave an account of the reception-house recently erected in that parish for housing those persons who are evicted for disinfection purposes, and the value of this building was exemplified at the meeting of the vestry held on April 19th, at which it was reported that a case of typhus fever imported from Kensington had occurred in a four-roomed house containing four families. These families were removed to the reception-house and their own house was thoroughly cleansed and disinfected. So far no fresh case of typhus fever has been notified. We may incidentally mention that Dr. Waldo did not present any statistical report, for the report had not been before the public health committee and he was not "allowed" to present it to the vestry until the committee had seen it. This somewhat curious method of procedure, however, makes no difference to the value of the reception-house, and we hope that other parishes in London will follow the example of St. George's, Southwark, and provide like buildings.

COCAINE POISONING.

CASES are from time to time reported of deaths from cocaine poisoning. Many of these have occurred in medical men who have treated themselves with the drug for purposes of relieving pain and have by accident or design injected an overdose. An instance of this kind occurred a few years back. The body of a young medical man was found at a railway station. In his hand was a hypodermic syringe containing morphia which he had evidently been about to inject as an antidote. He had been accustomed for some time to inject cocaine for the relief of neuralgia. On April 18th, 1898, Dr. G. Danford Thomas held an inquest at Paddington on the body of the wife of a medical man who had died after drinking a solution of cocaine. Eight weeks previously she had swallowed a quantity of laudanum from a phial which she found in her husband's bag, assigning no reason for doing so but telling him immediately after the act. Antidotes were applied and she recovered. On the evening of April 13th she remarked to her husband: "I am feeling ill," and she produced a small bottle from her pocket containing a solution of cocaine which she had abstracted from the bag whence she had obtained the laudanum previously. Both bottles were duly labelled "Poison." She said she had taken cocaine and asked that a medical man might be fetched, but all treatment was unavailing. All experience shows that a good deal of care is requisite in administering cocaine as it has again and again happened that small amounts of the alkaloid have given rise to the most threatening symptoms. Two-thirds of a grain injected subcutaneously caused the death of a woman, aged seventy-one years, in five hours, and a man died almost immediately after taking 22 grains by the mouth. Persons, however, habituated to its use can take increasingly larger doses. Among the most striking manifestations of its threatening characteristics are abnormal exaltations of the feelings, loquacity accompanied by mental incoherence, severe sweating, fall of temperature, shallow and irregular respiration, dilatation of the pupils, disturbance of vision, nausea, feeble pulse, and ultimately collapse. In persons suffering from these symptoms stimulants should be given. The inhalation of chloroform has been tried to relieve the spasms. Nitrite of amyl has also been suggested. Some medical men make it a practice to give a preliminary hypodermic dose of from $\frac{1}{8}$ to $\frac{1}{4}$ grain of morphia, according to the age of the patient. The physiological antagonism between the drugs is pronounced, so that while morphine is not an absolute antidote it is at least most valuable in counteracting the toxicity of cocaine.

OCULIST SEALS.

ANOTHER seal of a Roman oculist has been discovered recently in France and is published in the *Journal of the French Society of Antiquaries* by M. Héron de Villefosse. Unfortunately the owner's name is illegible, but the inscription preserved presents us with the titles of certainly three, and perhaps four, well-known classical collyria. The text is as follows: "Diapsor: Crocodes: E—— L—— Nardinum." The first of these remedies, diapsoricum, from Διὰ ψωρικόs, and therefore a substance whose basis was copper, was, we know from the seals, used in cases of feebleness of vision (caligo) and as a cure for scabrities and sycosis, for which see Celsus, VI., vi., 31, and Dioscorides, V., 118, col. 781. The second ingredient, crocodes, was applied for what was termed "aspritudo"—that is to say, palpebral granulations (trachoma), and is so alluded to in several seals and among the medical classics; by Aetius, I., iii., 43 col., 318 H; Marcellus, VIII., col. 280; and Celsus, VI., 6, 27. It is also quoted as a cure for diathesis (διάθεσις), which in reference to ocular disease merely indicated a morbid condition of the eyes. Of course it was Κροκος, saffron. Nard on the seals is always prescribed as a remedy for "lippitudo," incipient ophthalmia, or ophthalmia itself, see Actuarius V., 11, col. 282. The letter E, followed by a lacuna, may be the first letter of Euodes, or Euvodes, but this is merely a surmise. However, that is the only hitherto known of the collyria commencing with E referred to upon oculists' seals. A most interesting memorial of a Roman military medical officer attached to the celebrated VII. Claudian Piafidelis Legion has also been found at

Turn Severin. It is a lapidary inscription which, "with all reserve," may be approximately translated thus: "To the divine shades Marcus Valerius Longinus (son of Marcus), physician of the VII. Claudian Legion, adorned with the Senatorial ornaments of the illustrious order of the Hadrian municipality of Drubetis, lived 23 years."

THE PREVALENCE OF GERMAN MEASLES.

IT is well to remember that there is a good deal of this disease abroad. Sometimes it is taken for a second attack of measles. We have seen lately the rapid succession of the two complaints within six weeks' time. In such instances the disease is more likely to be narrowly examined and a mistake in diagnosis to be avoided. In other cases the diagnosis is not quite so easy. At one time the existence of scarlet fever is apt to be assumed and the patient possibly is sent to a hospital as so affected. In doubtful cases a little time and care will be well spent before deciding on the non-existence of true measles or of scarlet fever. After all, the differentiation can generally be made, though we have in exceptional cases to wait for the evidence of the more decided desquamation of scarlet fever. The absence of severe coryza and of high temperature, plus the different nature of the rash and the enlarged glands behind [the sterno-mastoid, will generally guide the physician aright as between German and ordinary measles, as the absence of serious sore-throat and pyrexia will help him to exclude scarlet fever. The incubation stage seems longer than that of measles and of course much longer than that of scarlet fever. According to the report of the committee of the Clinical Society of London the interval between the exposure to infection and the appearance of the rash is generally nearly three weeks.

THE LIVERPOOL CORPORATION AND THEIR WATER CUSTOMERS.

AN interesting appeal case was heard at the Liverpool County Quarter Sessions last week with regard to the Liverpool water-supply. The Liverpool corporation supply water not only to the city but to certain districts around and under a section of the Corporation Act of 1866 they are bound to supply water at constant service at such a pressure as to reach the top storey of any house situated within the district supplied by them unless the service is interrupted by drought or by frost. Some time ago an inhabitant of Prescot, which is in the district supplied by the corporation, commenced an action at the Prescot police-court to compel the corporation to carry out their statutory duties. The case was taken to the Divisional Court in London and was decided in favour of the complainant. After this decision the members of the Conservative Club of Prescot were encouraged to bring an action to compel the Liverpool corporation to give their premises a constant supply of water which had previously been withheld. From the report before us it appears that the club was supplied from a high-level tank and until nearly the end of last year water was only obtained at the club between six o'clock in the morning and six o'clock in the evening. At a previous period the water was supplied by gravitation from the reservoirs and the pressure was only sufficient to supply the first and second floors of the club during the day. The deficient water-supply caused considerable inconvenience, because the bar, lavatory, and baths had not a constant supply. In the year 1896 two cisterns had been placed in the upper storey for the storage of water. These cisterns were not supplied during the night. The members of the club had suffered from this state of things for a considerable time but the decision in the case which has just been referred to determined them to try to obtain a legal remedy for the neglect of the Liverpool authorities to carry out their statutory obligations. Complaints were made to the corporation and the town clerk promised that steps would be taken to give a sufficient supply of water and the corporation pumped water to the high-level tank during the night as well as during the day, so that a certain amount of water was supplied to the club cistern during the night. During the daytime, however, when water was taken in any quantity in the lower part of the town the amount of water obtainable at the club was insufficient for domestic use. In support of this statement the secretary, the manager, and the chairman of the club gave evidence and the presiding magistrate, after hearing witnesses for the defence, said that the bench were satisfied that the supply of water was insufficient. On behalf of the Liverpool corporation it was pleaded in the course of the trial that, in the first place, the conviction was not good because the water rent had not been paid at the date from which the fine was imposed. In the second place, it was pleaded that the Liverpool corporation could not with their present works and apparatus supply water at sufficient pressure and that they could not increase their works without Parliamentary authority. It was urged, moreover, that if the contentions of the club were correct the corporation would be compelled to erect new works from time to time to supply high buildings if such were erected. On the application of the counsel for the Liverpool corporation the magistrates agreed to state a case for the higher courts. The matter, therefore, which is of some importance, has not been finally settled, and we await the result with interest.

TRAUMATIC RUPTURE OF THE INTESTINES.

THE number of cases of traumatic rupture of the intestine unassociated with wound of the abdominal parietes which have been submitted to operation with a successful result is very small. The difficulties which surround the formation of a diagnosis are many and varied. As, however, the patients invariably die when the rupture is not sutured and the abdomen properly cleansed it is of the utmost importance that the profession should recognise the possibility of a rupture having resulted from an injury and take measures to obviate the fatal result which must otherwise follow. We hope to give our readers fuller details of three cases in a future number of THE LANCET, merely stating now their bare outlines. It is interesting to note that the three cases were all subjected to operation at one of our hospitals, St. Thomas's, where the first successful intestinal suture in London for similar injury was performed by Mr. John Croft. About two months ago Mr. Makins was called to see a man who had been run over a few hours before. At the operation an oblique tear of the ascending colon was found. This was sutured, the peritoneum was cleansed, and the man made a good recovery. The second case was that of a man, aged twenty-seven years, who had been run over when intoxicated and had been refused admission to another hospital. This patient was operated on by Mr. Battle twenty-one hours after the injury. A tear in the small intestine twelve inches from the ileo-cæcal valve was sutured and the peritoneum was cleansed, but with some difficulty. The patient's condition was very serious. We are pleased, however, to learn that there is a good prospect of recovery. The operation was performed on April 5th. Only last Sunday, April 24th, Mr. Pitts was called to see a man who had received a kick in the abdomen from a horse. He operated and sutured an opening which was found high up in the small intestine. The patient has progressed extremely well. There can be no doubt that early operation is indicated in these cases, for the sooner the opening in the bowel is closed the less

extensive will be the infection of the peritoneum and the less will be the risk of septic peritonitis which is so much to be dreaded.

THE HEALTH OF MR. GLADSTONE.

WE are sorry to learn on good authority that Mr. Gladstone is manifestly weaker, though this is not due so much to any obvious progress of disease as from a general failure of power. He retains, however, a fair amount of strength, while the appetite is satisfactory, and the pulse, though variable, is at times good. We are very glad to state that though the illustrious patient is not free from intermittent flashes of pain, these do not now appear to be of a very severe character.

IRISH OPPOSITION TO THE LONDON UNIVERSITY BILL.

OPPOSITION to the London University Bill is brewing from a somewhat unexpected quarter. The *Daily Nation* (Dublin) on Tuesday last devoted its first leading article to a passionate appeal to Irish representatives to unite in strenuously opposing the passage of the University of London Commission Bill "until and unless adequate measures are forthcoming that the Government will take steps to remedy the gross inequality of treatment between the two kingdoms." It is averred that the measure in question is to be pressed forward by the Government as soon as the Irish Local Government Bill has passed through Committee; and that if passed it "will give to England an additional university almost precisely similar in character to that for which Catholic Ireland has appealed in vain." Now we do not complain of Ireland's desire to have a Roman Catholic teaching university established in a country where so much of the higher education is carried on by Roman Catholics, but surely it is rather absurd to speak of the reconstitution of the University of London as a measure which runs parallel to the foundation of a Roman Catholic university for Ireland. We fear that our Irish friends are not well posted in the history of the movement to secure a teaching university for London, of which the present Bill is the outcome; and we trust that they will think twice before quoting this reform in the facilities for higher education in the metropolis as another "injustice to Ireland." Indeed, if the views expressed by the *Daily Nation* are accepted then the fact of the passage of this Bill should prove a powerful argument in support of their particular demand.

SIR WILLIAM BROADBENT is announced to take the chair at the annual meeting of the Medical Mission (Auxiliary to the Church Missionary Society), which will be held at Exeter Hall on Thursday next, May 5th, at 7.30 P.M. Among the speakers will be Mr. A. Neve, medical missionary in Kashmir; Dr. Herbert Lankester, physician to the Church Missionary Society; and the Rev. J. C. Hoare, M.A., missionary in China. There are a few reserved seats, tickets 1s. each, but other tickets are free on application to the secretary, Medical Committee, Church Missionary House, Salisbury-square, E.C.

THE annual dinner of the Indian Medical Service will take place at the Café Monico on Thursday, June 9th, at 7.45 P.M. Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., M.D., will preside. It is particularly requested that officers intending to be present will intimate their intention at the earliest possible date to the honorary secretary, Mr. P. J. Freyer, 46, Harley-street, W.

SOME of the friends and colleagues of Dr. W. S. Playfair have arranged to give him a complimentary dinner on his resignation of the offices he held at King's College and King's College Hospital. The date is fixed for June 4th and Lord Lister will preside. Dr. John Phillips is acting as secretary.

THE British Institute of Preventive Medicine has now formally notified a change of address. After May 1st, 1898, communications should be made to Grosvenor-road, London, S.W., instead of to 101, Great Russell-street, London, W.C.

REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

I.—MILK.

FEW subjects have been more considered by Royal Commissions and other committees than that of bovine tuberculosis. In 1888 the subject had already attracted so much attention that it was added to the work of the Departmental Committee appointed to inquire into pleuro-pneumonia. The contagious nature of the disease was not nearly so clearly recognised at that time as it is to-day and although the recommendations of the committee were strong no decided action followed them, as there was not sufficient evidence to prove that such action would be acceptable to stock-owners. During the next year or two, owing to the stringency of some medical officers of health in condemning for the purpose of food animals which after slaughter showed traces of the disease, the butchers, on whom the loss from these seizures fell, agitated for the appointment of a Royal Commission to consider the question. This Royal Commission was appointed in 1890 to inquire into the effect of food derived from tuberculous animals on human health, and the report, delayed in consequence of the necessity of carrying out experiments to gain accurate information on the point, was presented in 1895. The conclusion of that report, shortly, was that an appreciable part of the tuberculosis which affects man is obtained through his food, chiefly from milk containing tuberculous matter. At the same time the Commissioners stated that "provided every part that is the seat of tuberculous matter be avoided and destroyed ..... a great deal of meat from animals affected with tuberculosis may be eaten without risk to the consumer." Very valuable as that report was it did not touch on the administrative procedures available for reducing the amount of tuberculous material in the food supplied by animals to man, and as that was the point with regard to which the butchers were most interested the matter was not allowed to rest. During the time that the Royal Commission had been sitting knowledge of the disease had been greatly extended. The stringent measures with regard to the seizure of tuberculous carcasses in countries such as Germany, France, and Belgium had been greatly relaxed, and through the discovery of the value of tuberculin as a means for diagnosing the disease in cattle it was thought that an important agent for eliminating the disease lay ready to hand. The time was therefore ripe for the reconsideration of the subject and in July, 1896, the present Commission which has just reported was appointed to inquire into the administrative procedures for controlling danger to man through the use as food of the meat and milk of tuberculous animals. All the seven members of the Commission sign the report, but a memorandum on the subject of compensation to owners of condemned carcasses is added by three of them, including the chairman, Sir Herbert Maxwell.

We think that the conclusions at which the Commissioners have arrived will commend themselves to the medical profession and the general public. The members have evidently availed themselves of the powers allowed to Royal Commissions to gain first hand information on the subject of their inquiry by visiting Belgium, Germany and Denmark, where the administrative measures have been worked out much more fully than has been the case in this country. In addition to the 55 witnesses whom they summoned before them, consisting principally of medical officers of health, sanitary inspectors, butchers, and dairy farmers, they visited

slaughter-houses, cow-sheds, and dairies in various parts of Great Britain and Ireland.

As was to be expected the Commissioners consider that the danger from tuberculous meat, seeing that the meat substance itself is so rarely the seat of the disease, is slight, while that from milk, for the reason that it is consumed chiefly in the raw state by infants who are peculiarly susceptible to tuberculosis of the bowels, is serious. We therefore propose to consider first the bearing of the report on the milk aspect of the question. The Commissioners are in entire agreement with the finding of the previous Royal Commission that the condition required for ensuring to the milk of tuberculous cows the ability to produce tuberculosis in the consumer is tuberculous disease of the udder. A cow with marked tuberculous disease of other organs does not, so long as the udder remains unaffected, cause the milk to be dangerous; but a tuberculous infiltration of the udder fortunately is not an early manifestation of the disease in the cow—on the contrary, it is usually secondary to disease in other organs and occurs late in the course of the disease. In the slaughter-houses of Copenhagen it has been found to occur in from 1 to 2 per cent. of tuberculous cows. Still, owing to the practice prevailing among cow-keepers of mixing the milk of all the cows, one animal with disease of the udder is a source of danger to the whole milk-supply, and that such a danger is not one to be neglected is demonstrated by the interesting investigation made on the subject by Dr. Hope, the medical officer of health of Liverpool. He found that of 144 samples of milk taken from dairymen within the city and of 24 arriving from rural districts at the railway stations, 8 samples, or 2·8 per cent., of the former and 7 samples, or no less than 29·1 per cent., of the latter produced tuberculosis after inoculation in guinea-pigs.

We regard, therefore, the recommendation "that notification of every disease in the udder shall be made compulsory under penalty on the owners of all cows" as the best and most wide-reaching of all the recommendations. Legislation hitherto has failed to touch tuberculosis in the cow, as this disease was not included among the contagious diseases of animals to which the Dairies, Cowsheds, and Milkshops Order applies, nor has it been found practicable to deal with it under the Infectious Disease (Prevention) Act, 1890. But in order to prevent the sale of milk from a cow presenting clinical symptoms of the disease, a condition in which an infection of the udder may be regarded as imminent, the Commissioners recommend the extension of notification also to cows thus affected, with power to the local authority to prohibit the sale of the milk as well in the one case as in the other and even to slaughter the animals.

The prevalence of tuberculosis among cows to a far greater extent than among bullocks and heifers is directly traceable to the ease with which the contagion may spread from one animal to another in badly ventilated cowsheds. The medical officer of health has in many cases offended the agricultural community by his insistence on the necessity of adequate cubic space in cowsheds and the Commission state it as their opinion that from 600 to 800 cubic feet for each adult beast should be a minimum in populous districts. Many will regret that they do not apply the same minimum to cowsheds in rural districts, where it is notorious that the housing accommodation is often bad in the extreme.

After reading this report the farmer will have no excuse for not setting his house in order and making an attempt to eliminate the disease. The description the Commissioners give of the success of the Danish experiments in subduing the disease by inoculating whole herds with tuberculin is most encouraging. They were given the opportunity, under the guidance of Professor Bang, whose name will be inseparably associated with the first scientific attempt to get rid of the disease, of visiting two out of the 5300 herds which have been dealt with by the Danish method. That method is, briefly, to replace a herd that may have been markedly affected by a healthy one in the course of a few years by separating the sound from the reacting animals, feeding the calves born from the first day of life on boiled milk, submitting the healthy animals once or twice a year to a fresh test, placing such as react on the other side of of a partition, and purchasing only animals which have stood the tuberculin test. Tuberculin gives trustworthy results, Professor Bang believes, in over 90 per cent. of the animals tested, but in the great majority of those which react the test reveals only latent tuberculosis. Hence it is not necessary to exclude the milk of reacting animals from human consumption unless visible signs of the disease are at the same time present, although, being tainted animals, it is advisable to sell them off gradually for the meat market. In the case of Denmark the supply of tuberculin and the services of a veterinary surgeon have been given gratuitously to the farmers by the State, and so impressed are the Commissioners with the success of the arrangement that they recommend that funds be placed at the disposal of the Board of Agriculture to carry out in this country, on the same lines as in Denmark, a similar comprehensive scheme for the elimination of the disease.

Fault will be found by some that there is no recommendation in the report that animals which react to the tuberculin test should be marked. In some parts of the country a certain amount of feeling has been aroused by the action of farmers who, after having discovered by means of the test which of their animals were affected, have at once drafted them off for sale, generally at a place some distance from their farm, without a declaration that the animals had reacted. The point raises a nice question in commercial morality, but the fact that there is no mention of the desirability of marking such animals in the Report must be taken, we suppose, to mean that the Commissioners are so impressed with the value of tuberculin that they do not wish to place any obstacles in the way of its general introduction. Later, when it is seen how far the agricultural community are prepared to take advantage of the test, some regulations with regard to the use of tuberculin will have to be framed.

In a second article we propose to discuss the report in regard to the recommendations of the Commissioners on the subject of tuberculous meat.

MEDICINE AND THE ALLIED SCIENCES AT THE PARIS EXHIBITION OF 1900.

MEDICINE and the allied sciences will occupy an important place at the forthcoming international exhibition to be held in Paris in 1900. By the courtesy of the secretary of the committee of organisation, M. Mazure, and of the Dean of the Faculty of Medicine, our Paris correspondent has been supplied with information which although dealing with what are at present merely projected arrangements yet possesses a great deal of interest. To begin with, a general survey of the arrangements made for foreign exhibitors shows that they will not, as heretofore, have special sections allotted to them—sections which, in fact, formed a number of small separate exhibitions, naturally enough of the most various sizes. This system certainly had the advantage of leaving the special commissioners for the section from each country a free hand in the organisation of their own exhibits and at the same time of giving visitors some idea of the geographical and statistical importance of the various productions and industries peculiar to each nation. But at the same time it was open to the objection of breaking up the exhibition into groups of the most varying size. At the exhibition of 1900 the foundation of a group will not be nationality but the nature of the object on exhibition. According to present arrangements there will be no special national sections but the various countries will exhibit side by side those objects which are illustrative of the same industry. Comparison therefore will be rendered far more easy and the visitor who has a special interest in any one subject will find all the elements necessary for a complete answer to his inquiries displayed before his eyes in a very compact and complete manner. On the other hand, it is possible that the new system will have the effect of giving to each section the appearance of a *salle de concours*, where the public will run the risk of receiving a superficial and inexact impression with regard to the importance of the same industry in the different countries represented; for it is evident that distance, cost of transport, &c., will play a considerable part in the extent of these installations, Australia, for example, on account of being so much further off, being less able than Belgium to have itself well represented in each group.

Having made these general observations we may proceed to examine the various divisions of the different sections of medicine and the allied sciences. These are, as a matter of

fact, very well shown upon the plan drawn up by the committee of organisation, but the plan exhibits various inconveniences which are inevitable in any classification, and those critics who find fault with the arrangements would probably have done the same on other grounds if the plan had been different. By far the larger part of the exhibition allotted to medicine is catalogued under two groups—namely, the third and the sixteenth. The third group is that including instruments and various things common to literature, science, and art. In this group Class 16 is given up entirely to medicine and surgery. The President of the committee is Dr. Paul Berger, Professor of Clinical Surgery at the Faculty of Medicine and surgeon to the Hôpital de la Pitié. This portion of the exhibition will contain material for practical medical and surgical work, as the following enumeration shows:—Appliances, apparatus, and instruments for anatomical, histological, and pathological work; anatomical specimens both normal and pathological; histological and bacteriological preparations; apparatus for sterilising instruments and dressings; instruments for the examination of medical cases both general and special; instruments and apparatus for the examination of surgical cases, general, local, and special; dressings; artificial limbs and similar appliances; orthopædic apparatus; instruments and the like for the surgical treatment of hernia; medical gymnastic apparatus; materials, instruments, and apparatus for special therapeutics; dental instruments; various forms of apparatus for the infirm, the sick and the insane; outfits and cases of instruments and drugs for military and naval surgeons; materials for the use of the wounded on the field of battle; apparatus for restoring the apparently drowned or asphyxiated; and instruments and apparatus used in veterinary surgery.

It must be noticed that the exhibits concerned with military medicine both by sea and land are also to be found under another class—namely, Class 121, Group XVIII., that devoted to hygiene and sanitation—and that veterinary instruments also will be found a second time in Class 35, Group VII. (Agriculture), also a great many instruments and the like will be found again in Class 98, Group XV., which is allotted to the caoutchouc and gutta-percha industry, and in Class 27, Group VII., which includes the various applications of electricity. In Group XVI., allotted to social economy, hygiene, and *assistance publique*, it will be found that the medical profession is almost entirely concerned with two of the subjects.

Class 111, namely Hygiene, will occupy a part of the enormous gallery of machinery, alongside that allotted to agriculture probably. The president of the Committee of Organisation is Professor Brouardel, dean of the Faculty of Medicine of Paris. Here are the provisional divisions according to the official programme. (1) Science of hygiene: historical exhibition of the progress of hygiene; the application of the discoveries of Pasteur to the prophylaxis of infectious diseases; laboratory work, both chemical and bacteriological, in its application to hygiene; researches on the transmissibility of infectious maladies; methods and apparatus for disinfection; methods for the collection and conveyance of drinking water with a view to preventing contamination. (2) The hygiene of the person and of the dwelling house; measures of precaution against transmissible maladies; immunity; "vaccination" as a preventive of small-pox and hydrophobia; application of the rules of hygiene in the choice of materials for building; warming, ventilating, lighting, &c.; water supply; apparatus for baths and hydrotherapeusis; sewage disposal. (3) Hygiene with regard to public buildings and associated dwellings (*établissements collectifs*): schools, factories, workshops, hospitals asylums, public halls, theatres, and the like. (4) Hygiene in rural communities: conditions indispensable for the health of rural habitations; municipal sanitary regulations; rural police (*police de la voirie*); storing, transport, and utilisation of various manures; the protection of waters intended for drinking. (5) Hygiene and sanitation of towns: street commissioners (*voirie*); cleansing the public streets and gutters and sweeping; building regulations (such as the number and height of the storeys, size and ventilation of inhabited rooms, and size of courts and alleys); emptying of cesspools; water-supply for a town, apparatus for filtering and sterilising; sewage disposal, disinfection of sewage, irrigation grounds; utilising of waste and offal; sanitary municipal arrangements; health office; methods of collective defence against infectious maladies; transport of those suffering from contagious diseases; isolation, disinfection of the belongings and the houses of the infected; inspection of substances used for food; inspection of abattoirs and private slaughter-houses; municipal laboratories; cemeteries, and apparatus for cremation. (6) Protection of frontiers against epidemic diseases: (*a*) by land—medical inspection at the frontier, infirmaries, and disinfection at frontier railway stations; (*b*) by sea—sanitation of seaports, sanitary organisation, former lazarets, sanitary inspection stations, medical staff, and disinfection on board ship. (7) Food products and objects in common use: control of food products, examination for adulterations, various processes for the preservation of foods; inspection of mineral waters both natural and artificial; objects in common use and the progress of hygiene with regard to such. (8) Mineral water stations and sanatoria: analysis of mineral waters, methods of collection and safeguarding the springs, various methods of medication by mineral waters and apparatus destined to apply them, such as bathing pools, apartments for inhalation, sprays, &c. (9) Sanatoria, thermal stations, general disposition of such places, aspect, covered-in promenades: thermal establishments, huts, baths, douches; preventive and antiseptic measures, especially in those places frequented by tuberculous patients; bottling and preservation of mineral waters. (10) Sanitary and legal statistics: death- and birth-rates; epidemic mortality; sanitary legislation.

In Class 112, that allotted to the *assistance publique* and organised under the presidency of Senator Theophile Roussel, which will be housed in the space allotted in 1889 to the section of the liberal arts, will be found many sections of interest to the medical profession. (2) Protection and help during infancy; general organisation for protection and help during infancy: protection and help for the infant before birth by extending the same to the mother, such as asylums, workrooms, maternity societies, private and public lying-in hospitals, convalescent homes; protection and help for the child after birth; *crèches*, institutions for children in early life, for foundlings, deserted children, orphans, and those morally abandoned; help for sick and weakly children, dispensaries, hospitals, infirmaries, and the like. (3) Help for adults: for those able to work, clubs, labour exchanges, bureaux, night shelters, mendicity societies; for the sick: help at home, gratuitous medical attendance and medicine, hospitals including regulations, organisation, medical and surgical service, special service for contagious diseases; for the aged: asylums and country farms, infirmaries. (4) Help for the insane: public and private asylums, infirmaries, *maisons de santé*; help by means of field colonies; special institutions for epileptic and feeble-minded children; educational methods. (8) Staffs of charitable establishments; training schools for nurses both male and female.

To these, the principal groups, must be added sundry other sections dealing with medical matters which will be found under other heads of classification. Thus, for instance, the teaching and material for it given by the Faculty of Medicine comes under Group I. (Education), Class 3 (Higher Education and Scientific Institutions). There, too, will be found the following sections which concern us: (1) Legislation, organisation, and general statistics of higher education; various institutions and establishments for the same; locality, plans and models, fittings, furniture, and other material for education; supply and renewal of the professorial staff; régime, schemes of study, methods, &c.; results. (2) The great scientific bodies; learned societies; work and publications; scientific missions.

With regard to the medical library and the medical press, their place is not yet definitely decided. There is a class—namely, Class 13, Group III.—where the books and journals will be exhibited. But M. Mazure, in answer to our correspondent's inquiries on this subject, seemed to think that these publications would be of too special a nature to be exhibited with the general press and would perhaps be found under Class 3 (Higher Education) or more probably in Class 111 (Hygiene).

Pharmacy takes up Class 86, Group IV. (Chemical Industries). A place is reserved there under the title of "Raw Pharmaceutical Material, Simple and Compound Drugs." Medicinal and pharmaceutical plants will be in Class 41 (Agricultural Products other than those intended for Food), Group VII. (Agriculture).

Finally, in Class 54 (Machinery, Implements, and Products of Crops) will be found plants, roots, barks, leaves, fruits obtained without cultivation, used by herbalists, druggists, dyers, and others.

In addition to the exhibition proper the science of medicine will be represented by a very large congress. As

in 1889 all the learned societies in France will organise a congress for the reception of their foreign *confrères*. A special building is in course of erection at present on the right bank of the Seine, close to the Alma Bridge, and in this building the congress meetings will be held. There will be a large hall which will serve not only for lectures and the like but also for international musical and dramatic entertainments. The organisation of the various meetings is in the hands of a special department which has already set to work. M. Gariel, the professor of Physic at the Faculty of Medicine, is the head of this department. There will be altogether from 200 to 230 different congresses, of which some thirty will have to do with medical science pure and simple. The most important will be, as has been the case at every exhibition, the congresses of the Therapeutical Society, of Forensic Medicine, of Surgery, of Urology (a new departure) and of Hydrology. All these congresses are divided into twelve sections and Section VI. is devoted to the medical sciences. Probably, too, they will be represented in certain other sections, such as Section IV. (Physical Science and its Applications), Section V. (Natural Sciences, Anatomy, Physiology, Anthropology), and Section X. (Social Science, Social Economy, Hygiene, *Assistance publique*, and the like).

Besides these, the International Congress of Medicine, will take place at Paris in 1900. To M. Lannelongue, M. Chauffard and others was intrusted at Moscow, when it was decided that the next Congress should be held at Paris, the task of organising it, and they have already begun to prepare. The question has arisen whether the various medical congresses of separate societies of which we have already spoken will be incorporated with the grand International Congress, of which they might form sections already organised and arranged, thanks to the initiative taken by the various presidents and bureaux. This plan would certainly simplify the organisation of the International Congress and, in addition, visitors who came to study one particular branch would find everything about it ranged under one and the same meeting.

Negotiations are still going on but unless some decision is soon arrived at the International Congress will be held and organised independently of the sectional congresses, although many of its sections will simply double the parts of the others. The reason of this is presumably that the organisers of the International Congress wish to nominate for themselves the presidents of sections and are not willing to accept those gentlemen who are already presidents of the various society congresses. The International Congress will probably be held at the beginning of August, 1900, and the smaller congresses during the month of July, so as to avoid the necessity of foreign medical men making two journeys.

The French Medical Press Association has decided to organise a committee for the reception of foreign medical men, so that they will have a place where they will be able to obtain all information concerning Paris, the Exhibition, and the Congress.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE nineteenth meeting of the Royal Commissioners was held in the Council Chamber of Westminster Town Hall on April 25th. With the exception of Sir George Barclay Bruce all the Commissioners were present during the whole of the sitting.

The examination of the City Remembrancer was concluded and Sir Arthur Arnold gave evidence on behalf of the London County Council. The evidence of the City Remembrancer had reference chiefly to the sinking fund which is invested by the Chamberlain of the City of London and with the exception of details concerning the investments little information was added to the evidence previously given. Sir Arthur Arnold was examined on a "private and confidential" printed statement which was put in on his behalf for the information of the Commissioners. This statement, it appeared in the course of the examination, was not written by the witness and he did not seem acquainted with the details which it contained, but he said it was corrected by him. Towards the end of the sitting the Chairman asked who composed the "little book," but Sir Arthur Arnold did not satisfy the Chairman's curiosity on this point.

The CITY REMEMBRANCER, in answer to the CHAIRMAN, said that the Water Companies' Sinking Fund was invested in the name of William James Richmond Cotton, Chamberlain of London. A table which he handed in gave the names of the companies in whose securities the money was invested, the date at which the dividends had been paid, the price at which the stock was purchased, the date of purchase in each case, the cost at which the stocks were bought, including stamps and brokerage and the "price per cent." at which the securities were bought. The companies in which the sinking fund is invested are the East London Waterworks Company, the Lambeth Waterworks Company, and the Southwark and Vauxhall Water Company. The first purchase of stock was made on April 13th, 1891, and the last on April 6th, 1898. The total amount of the money received and invested is £22,424 17*s.* and the total nominal amount of stock purchased is £12,015. The purchases of the stock are not made under seal of the Corporation but in the name of William James Richmond Cotton, Chamberlain of London. The question arose as to who would be responsible in case of the bankruptcy of the Chamberlain, and the counsel for the water companies suggested that the title "Chamberlain of London" was a description of the purchaser and said that a company would be obliged to transfer the stock on the signature of the holder and that, in fact, the description "Chamberlain of London," from a legal point of view, did not mean more than "esquire" as a description of the occupation of an individual holder of the stock.

The CITY REMEMBRANCER expressed the opinion that the official auditor of the water companies' accounts had not sufficient authority and he understood that he had experienced some difficulty in carrying out the work assigned to him. He said, however, in answer to the CHAIRMAN, that he had not received any written complaint from the auditor and the CHAIRMAN then stated that the Commissioners would wish to have an opportunity of examining the auditor himself.

With regard to the investment of the sinking fund in the water companies' stocks the witness pointed out that it was necessary that the Chamberlain should invest the money in the stocks of the companies from which the money for the sinking fund was received. The objection to investing the money in this way was that the purchaser who was obliged to buy a certain stock was, as it is called in the City, "making a market against himself." The original idea of the sinking fund was that it should be used for the purchase of stock and that the stock so purchased should be cancelled, but this arrangement had to be altered. On behalf of the water companies it had been urged that it would not be fair for the sinking fund provided by one company to be used for buying up the shares of another company and that the money ought to be used in the purchase of the stock of the company from which the money had been obtained, and this contention had received parliamentary sanction.

Mr. BAGGALLAY, Q.C., examined the witness on behalf of the water companies with regard to the purchase of their undertakings, and the CITY REMEMBRANCER said that if the purchase were made it should be done under a special tribunal. He did not think, however, that a purchase could be effected under any other terms than those of the Land Clauses Act and he was opposed to the purchase.

The London County Council was not represented by counsel, but in the course of the sitting Mr. CRIPPS, Parliamentary Agent for the London County Council, interrupted the proceedings more than once and was called to order by the Chairman, who said that he did not think his intervention was necessary.

Mr. BAGGALLAY, Q.C., asked the City Remembrancer some questions as to the old London Bridge Waterworks, but the CHAIRMAN thought this examination unnecessary.

Sir ARTHUR ARNOLD, in answer to the CHAIRMAN, said he had been an alderman of the London County Council and was formerly the chairman of that body. In the year 1895 he was appointed by the London County Council to see the chairmen of the different metropolitan water companies with regard to the purchase of their undertakings. As the result of the interviews he had with the chairmen he said that the impression he obtained and still retained was that there was no unwillingness on the part of some of the companies to sell their undertakings on fair terms. In answer to the CHAIRMAN the witness said that he was not authorised to

offer any terms of purchase and that he had no authority to negotiate with regard to price and no authority to agree as to any basis for the assessment of price. The interviews which he had with the chairmen of the water companies were, he considered, private and he would not violate the confidence reposed in him.

Mr. PEMBER, who represented four of the water companies, assured the Chairman on their behalf that the witness was quite at liberty, as far as they were concerned, to answer any questions which he might wish. Counsel on behalf of the remaining companies immediately gave the same permission, but the witness declined to take advantage of it.

The CHAIRMAN remarked that a negotiation in which the agent was not empowered as to what he should ask or what he should concede was a peculiar one. What was the negotiation about? Was anything said about price? If he did not condescend to consider the question of price or the terms on which arbitration should take place he could not understand why he was sent. The witness replied that he discussed various matters with the chairmen but that he was unwilling to report any part of their conversations.

The CHAIRMAN proceeded to question the witness with regard to the composition of the London County Council. Witness said that it consisted of all sorts and conditions of men and that it was of an almost ideal character. The Chairman said one of the witnesses who had given evidence before the Commissioners had said that the London County Council was conducted on party lines, that the elections were managed by party agents, and that the members of the Council had a party organisation with leaders and whips. The witness took a general exception to these allegations, but he did not deny the specific statements which had been made and which were put to him in detail by the Chairman.

With regard to the amount paid for wages the witness said that the London County Council had over 7500 employés and that many of the members were of the opinion that the Council should endeavour to get the character of being "a good employer of labour," by which he meant that the highest current rate of wages should be paid to all the people employed. Labour members were occasionally against an increase of wages.

The witness was asked whether he thought it would be necessary that any control should be exercised over the London County Council should that body become the water authority for London. The witness, in reply, said that he thought it would not be necessary, but that for his own part he would like it, "to make assurance doubly sure." He thought that the advantages which would accrue to the people in case of purchase were chiefly that they would be able to raise money more easily than the present water companies and that there would be "unity of management." He thought the arbitration for purchase should be "full, free, fair, and open." He objected to arbitration under the Land Clauses Act because of "technical rules" which, he said, came into force under them.

In answer to Mr. CRIPPS, Q.C., the witness said that he had had very little experience of the working of the Land Clauses Act and Mr. Cripps remarked that he himself had had a good deal of such experience and that the "technical rules" mentioned by the witness did not exist.

THE ROYAL ACADEMY, 1898.

THE one-hundred-and-thirtieth exhibition of the Royal Academy of Arts will be open on Monday next to the public, who will find on the walls of Burlington House a collection of pictures quite up to the usual standard, many of which they will feel that they have seen before, so faithfully have the artists reproduced, both in subject and treatment, the kind of work which is associated with their names. Mr. T. S. Cooper's various pictures of clean cattle in clean meadows, Mr. Marcus Stone's "A Welcome Footstep," Mr. Peter Graham's two canvases representing Scotch moors and shaggy cattle, Mr. B. W. Leader's "Where Peaceful Waters Glide," Mr. H. B. W. Davis's "Under the Greenwood Tree," and Mr. F. Goodall's Egyptian scenes are all exactly like previous pictures by these artists; and other less established favourites have this year elected to follow closely in the wake of their previous successes—facts which give to the walls of the Academy an extraordinary air of familiarity.

The chief features of the exhibition are Mr. Sargent's splendid portraits of Mr. Asher Wertheimer, Mrs. Wertheimer, and Lord Watson. They are vivid and life-like to a degree, and even the veteran M. Carolus Duran's portraits, two of which are hanging in the sixth gallery, must give place to them in their quality of uncompromising truth. But next to Mr. Sargent's portraits M. Carolus Duran's portrait of the Countess of Warwick is the best picture in the Academy.

Of the Academicians, the President's great picture "The Skirt Dance" is a gorgeous classical composition; Mr. Herkomer has a bad portrait of Mr. Herbert Spencer and a very large picture of the Crimean veterans cheering the Queen during the Jubilee procession; Mr. A. C. Gow has two pictures in his usual finished precise manner, a manner which makes the canvases around look blurred, hot and confused; Mr. G. D. Leslie has a picture of Arlington Row, Gloucestershire, which would lead us to believe that distance at Arlington does not alter the view, for the further the buildings recede from the eye the more distinct do they become; Mr. G. H. Boughton's "Road to Camelot" is a very pretty piece of fancy; Mr. Orchardson's "Trouble" is exactly like his well-known pictures in the Tate Gallery, and, like them, is admirably painted; and Sir William Richmond does not exhibit.

The best pictures in the exhibition outside the portraits are contributed by Mr. Frank Bramley, Mr. George Clausen, Mr. Stanhope Forbes, Mr. David Murray, and particularly Mr. H. H. La Thangue with an excellent picture entitled "A Sussex Cyder Press" and Mr. E. A. Abbey with his "King Lear" among the Associates; and among the outside contributors by Mr. T. C. Gotch, Mr. Chevallier Tayler and Mr. F. Brangwyn with his clever "Story." Mr. Albert Goodwin's "Under the Roof of the World" is a gorgeous piece of phantasy and Mr. Melton Fisher with his "In Realms of Fancy" thoroughly deserves his place on the line. On the whole we think that the drawing is above the average, but this may be accounted for by the fact that artists have set themselves fewer anatomical problems than usual owing to the number of nude studies being much less than in former years. Mr. H. Draper's "Lament for Icarus" is one instance of good anatomy, and as a triumph over anatomical difficulties Mr. W. Goscombe John's statue, "The Elf," deserves special praise from us. Among the water-colours two little landscapes by Mr. Leopold Rivers are well worth notice and in the sculpture room Mr. and Mrs. Nelson Dawson show some of their charming metal and enamel work.

The Academy this year contains but two medical portraits—Mr. Anderson Critchett, by Mr. Frederick Goodall, and Mr. T. Pickering Pick, by Mr. P. R. Morris. The former is a good picture, the latter strikes us as an inadequate portrait of a handsome man. The sitter, perhaps, may be responsible for the execrable necktie, but the artist has put a pudginess into Mr. Pick's face which has no real existence.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Epidemic Measles in the Borough of Lancaster, by Dr. THEODORE THOMSON.[1]—This report relates to the occurrence, between September, 1896, and July, 1897, of a severe epidemic of measles in Lancaster, a borough with a population estimated at about 38,000. During this period no fewer than 1185 cases of measles became known to the sanitary authority, while in the same period 51 deaths from the disease were recorded. By the provisions of a local Act measles has since 1888 been compulsorily notifiable in Lancaster. The account given by Dr. Thomson of the administrative measures adopted in dealing with the outbreak thus becomes of particular interest, the more so as Dr. Thomson has during recent years made a special study of the means available to sanitary authorities in repression of this disease. The question first arises, how many of the cases occurring during the epidemic were notified by the medical practitioner, and how many, on the other hand, were notified solely by the householder? Local authorities

[1] London: Eyre and Spottiswoode, E st Harding-street, E.C. Edinburgh: John Menzies and Co. Dublin: Hodges, Figgis, and Co. 1898. Price 3d.

very seldom demand from the latter fulfilment of his statutory duty of notifying, and this circumstance is often used to throw doubt upon the utility of making compulsory the notification of any disease, such as measles, in which frequently no medical aid whatever is sought. It is instructive, therefore, to find that in this Lancaster epidemic information of the occurrence of cases appears to have been fairly complete. No fewer than 461 cases were notified by parents only, as against 672 by medical attendants only and 49 both by parents and medical men. Householders had, in fact, notified as many as 43 per cent. of the total. Dr. Thomson gives a numerical analysis of measles notifications in Lancaster between 1889 and 1896. The figures, he points out, indicate that in some of these years householders have not always shown the same readiness in notifying measles. In years of conspicuous measles prevalence common report, as well as public notice from the sanitary authority, brings the necessity of notifying more frequently before them. In years when the prevalence is small, on the other hand, the householder becomes less mindful of his duty: thus only 9 out of a total of 46 cases in 1894 were heard of otherwise than through the medical attendants. But, as Dr. Thomson observes, the value of measles notification is bound to differ according to the circumstances under which notification has taken place. It is precisely in the inter-epidemic periods that its value is greater, for then timely and complete information may enable sporadic cases to be dealt with so as to materially lessen the chance of their giving rise to an epidemic. It would seem that towards the end of 1896 there were in Lancaster a number of scattered cases as to which, whether they were known to the sanitary authority or not, little effective action was taken. The later course of the epidemic tends to suggest that its rapid extension in January and February, 1897, was aided by schools. Closure in February of the public elementary schools seems to have produced a marked decrease in the amount of measles in the district. A recrudescence occurred a fortnight after April 22nd, when these schools were reopened. The majority of private schools and Sunday schools, on the other hand, were not closed, although the corporation are empowered by local Act to order temporary closure of such schools. Dr. Thomson notes that the chief incidence of the disease on children attending private schools occurred at a time when the epidemic was otherwise on the wane, and points out that neglect to deal with these schools and with Sunday schools must needs have diminished the value of closing the public elementary day schools. Other measures adopted with a view to preventing the spread of measles appear to have been open to objection at several points. Visits were paid to invaded houses by the sanitary inspector, but this officer, who was unaided in the performance of his duty, was unable to do more than make a single visit in each instance and hence the advice which he gave with regard to isolation of the sick was probably in many cases soon disregarded. The medical officer of health, who is also in general practice, was similarly without assistance during the epidemic. Notwithstanding the advantages which might have been gained in the early weeks of the outbreak by isolating cases in hospital the Lancaster Fever Hospital was not utilised for measles patients at any time during the epidemic. The school attendance officer and school teachers were systematically informed of measles occurring in families of which members attended school, but here again no information was afforded to teachers in Sunday-schools. No disinfection of rooms or articles was practised during the epidemic. In short, this report bears out the view which, thanks in the main to Dr. Thomson's previous work, has now come to be generally adopted. If a sanitary authority desires to have control of measles its administrative measures must be thorough at all points, both in epidemic and inter-epidemic periods. With Dr. Thomson's report to guide them it may be hoped that the corporation will in future make still better use of their exceptional facilities for the repression of epidemic measles.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7202 births and 3905 deaths were registered during the week ending April 23rd. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 21·5 to 19·5 per 1000, further fell last week to 18·1. In London the rate was 17·9 per 1000, while it averaged 18·3 in the thirty-two provincial towns. The lowest rates in these towns were 8·4 in Croydon, 10·9 in Portsmouth, 13·6 in Brighton, and 13·8 in Swansea; the highest rates were 20·5 in Bradford and in Leeds, 21·0 in Salford, 23·8 in Newcastle-upon-Tyne, and 24·6 in Sunderland. The 3905 deaths included 472 which were referred to the principal zymotic diseases, against 516 and 488 in the two preceding weeks; of these, 211 resulted from measles, 121 from whooping-cough, 48 from diphtheria, 32 from diarrhœa, 31 from "fever" (principally enteric), 28 from scarlet fever, and 1 from small-pox. No death from any of these diseases was recorded last week in Huddersfield; in the other towns they caused the lowest death-rates in Hull, Croydon, Portsmouth, and Brighton; and the highest rates in Newcastle-upon-Tyne, Salford, Leicester, and Sheffield. The greatest mortality from measles occurred in London, Bristol, Leicester, Leeds, Sheffield, and Halifax; and from whooping-cough in Salford, Oldham, Sheffield, and Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 48 deaths from diphtheria included 31 in London, 3 in Cardiff, and 3 in Liverpool. One death from small-pox was registered in Sunderland, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2377, 2421, and 2384 at the end of the three preceding weeks, had further declined to 2334 on Saturday last, the 23rd inst.; 241 new cases were admitted during the week, against 239, 234, and 217 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 372 and 305 in the two preceding weeks, further fell last week to 283, and were 96 below the corrected average. The causes of 39, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Nottingham, Manchester, Leeds, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Norwich, Leicester, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 24·2 to 22·5 per 1000, further fell to 22·0 during the week ending April 23rd, but exceeded by 3·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Leith and 19·7 in Edinburgh to 26·5 in Dundee and 28·9 in Perth. The 663 deaths in these towns included 26 which were referred to measles, 25 to whooping-cough, 20 to diarrhœa, 6 to scarlet fever, 6 to diphtheria, and 5 to "fever" (principally enteric). In all, 88 deaths resulted from these principal zymotic diseases, against 105 and 79 in the two preceding weeks. These 88 deaths were equal to an annual rate of 2·9 per 1000, which was 0·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 23, 24, and 14 in the three preceding weeks, rose again to 26 last week, of which 22 occurred in Glasgow and 4 in Edinburgh. The deaths referred to whooping-cough, which had been 44 and 27 in the two preceding weeks, further declined to 25 last week, of which 16 were recorded in Glasgow and 3 in Aberdeen. The 6 fatal cases of scarlet fever showed a decline of 5 from the number in the preceding week, and included 3 in Glasgow. The deaths from diphtheria, which had been 9 and 4 in the two preceding weeks, rose again to 6 last week, of which 3 occurred in Glasgow and 2 in Aberdeen. Of the 5 fatal cases of "fever" 3 were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 157 and 164 in the two preceding weeks, declined to 152 last week, and were 13 below the number in the corresponding week of last year. The causes of 37, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·3 and 27·1 per 1000 in the two preceding weeks, declined again to

23·3 during the week ending April 23rd. During the past four weeks the death-rate in the city has averaged 27·5 per 1000, the rate during the same period being 19·6 in London and 20·8 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed a decline of 26 from the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against 9 and 10 in the two preceding weeks; of these, 5 resulted from scarlet fever, 3 from diarrhœa, 2 from whooping-cough, 2 from "fever," 1 from diphtheria, and not one either from small-pox or measles. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 2·8 in London and 1·8 in Edinburgh. The 5 fatal cases of scarlet fever considerably exceeded the number recorded in any recent week. The deaths referred to different forms of "fever," which had been 3 in each of the two preceding weeks, declined to 2 last week. The 2 fatal cases of whooping-cough were within one of the number in the preceding week, and the mortality from diphtheria also showed a decline. The 156 deaths in Dublin last week included 22 of infants under one year of age, and 41 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons were considerably below the number recorded in the preceding week. One inquest case and 1 death from violence were registered; and 60, or more than a third, of the deaths occurred in public institutions. The causes of 6, or nearly 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

THE under-mentioned Deputy-Inspectors-General of Hospitals and Fleets have been promoted to the rank of Inspector-General of Hospitals and Fleets: Thomas Henry Knott and George Maclean. The under-mentioned Staff-Surgeons have been promoted to the rank of Fleet-Surgeon: Charles James and George Robert Deighton Charlton.

The following appointments are announced:—Surgeons: William Hackett to the *Cambridge* and Percival M. May to the *Victory*, additional.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel William B. Miller to be Brigade-Surgeon-Lieutenant-Colonel, vice L. A. Irving, retired. Surgeon-Lieutenant-Colonel George D. Bourke to be Brigade-Surgeon-Lieutenant-Colonel, vice A. A. Macrobin, retired.

Surgeon-Lieutenant Phillips proceeds to Windsor for duty with the Royal Horse Guards during the absence of Surgeon-Captain Rayner, who proceeds for service under the Foreign Office as Medical Officer to the Commission for Delimitation of the Anglo-Portuguese Frontier in South-East Africa. Surgeon-Major Carleton is transferred to Dublin for duty. The following officers have embarked on board the steamer *Niger* for Sierra Leone: Surgeon-Major Sutton and Surgeon-Captain Cockerill. Surgeon-Lieutenant-Colonel Fenn, C.I.E., proceeds to Dover for duty.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the retirement from the service of the under-mentioned officers: Brigade-Surgeon-Lieutenant-Colonel Sir Alfred Swaine Lethbridge, M.D. Aberd., K.C.S.I., Bengal Establishment (dated April 1st, 1898), and Surgeon-Lieutenant-Colonel Dhanjisha Navroji Parakh, Bombay Establishment (dated March 14th, 1898).

THE GREY OIL TREATMENT OF SYPHILIS.

Dr. Touren of the French navy has an interesting article in the *Archives de Médecine Navale* for April, 1898, on the treatment of syphilis by intra-muscular injections. At the Moscow Congress Dr. Gaucher of Paris enunciated three propositions: (1) mercurial injections in the treatment of syphilis should be the exception and not the rule; (2) when injections are employed the soluble salts of mercury are preferable to the insoluble; and (3) if an insoluble salt has to be used the "grey oil" is the least objectionable. After five months' experience in charge of the Saint-Mandrier venereal wards Dr. Touren is in a position to disagree with the first two propositions, but with the third he is in accord. In civil life, he says, the administration of mercury by the mouth may be best, but in a military or a naval hospital this is certainly not the case. In the first place there are not only some patients who keep their sores open or create fresh ones wilfully but also others, more numerous still, who make away with their medicine. Secondly, it is universally acknowledged that in warm climates the digestive tract is peculiarly liable to derangement and should therefore be treated with circumspection. Intra-muscular injections enable the physician to administer mercury safely, expeditiously, and without any danger of digestive complications, while at the same time they ensure the ingestion of the drug as prescribed. There is therefore no valid objection to the universal employment of this method of treatment. In support of his second proposition Dr. Gaucher asserted that the administration of insoluble salts was a pharmacological heresy: *corpora non agunt nisi soluta;* but Dr. Touren found that although the symptoms quickly disappeared when a solution of mercury perchloride was injected they invariably returned with equal rapidity. In his opinion a clinical heresy was a far worse evil than a pharmacological heresy, so he preferred to adhere to the drug which gave him the best results. In Dr. Touren's hands the "grey oil" answered all requirements. The injection was painless, the patient could walk about immediately afterwards, salivation rarely showed itself and quickly yielded to an application or two of iodine, diarrhœa only occurred once, and, lastly, the mercury was absorbed with regularity and very slowly, the latter fact possibly accounting for the permanency of the cure. The formula adopted was as follows: purified mercury, 20 grammes; lanoline, 5 grammes; and vaseline, 35 grammes. The third of a Pravaz syringeful was injected at intervals of fifteen or twenty days and as a rule three or four injections sufficed to ensure the disappearance of all transmissible symptoms. When first he took charge of the wards Dr. Touren used the yellow oxide of mercury in a few cases, but the resulting pain was so severe and the absorption of the drug so irregular that he promptly gave it up. He did not venture to employ calomel because Balzer says it causes great agony when injected.

SIR EDWIN COLLEN'S VINDICATION OF THE MEDICAL SERVICES IN THE LATE INDIAN FRONTIER WAR.

IN the debate at Calcutta on the Indian Budget on March 28th last Sir Edwin Collen, the Military Member of Council, in the course of his speech on the military expenditure and the conduct of the late frontier war, alluded, among other matters, to the charges which had been made against the medical department. Sir Edwin Collen said that anyone who is a student of military history knows perfectly well that no campaign is ever conducted without an immense number of criticisms, both reasonable and unreasonable; and perhaps it is peculiarly a vice of the present day that credence is given to every kind of story which is, or appears to be, injurious to those who have the management of affairs. "Now, I suppose there is no department which has done more admirable work in the late campaign than the medical department, not only in the campaign itself but also in the treatment of the sick and wounded in the great hospitals that were formed. A large general hospital was opened at a station in the North of India. A newspaper at home published a report affirming that all the arrangements were as bad as they could be, that there was an insufficient staff, that the patients slept on the ground, and that the equipment was defective; that, for example, there were several serious cases of abscess of the liver and only three feeding cups. Now what are the facts? There was an ample staff: 16 medical officers and 18 assistant surgeons, and some nursing sisters; no patients ever slept on the ground; there were excellent barracks as well as tents; there was an ample supply of every kind of hospital equipment. There was not a single case of abscess of the liver, and there were forty feeding cups instead of three; while there was not a single death during the whole of the time the hospital was open. I merely make this statement to show how absolutely ill-founded many of the reports are."

SURGEON-LIEUTENANT-COLONEL LAWRIE ON PLAGUE IN THE NIZAM'S DOMINIONS.

Surgeon-Lieutenant-Colonel Lawrie has, according to the *Times of India*, issued a report on the plague and inoculation. His conclusions, based on personal researches, are that the infection is excessively and in a most complex

manner widespread, and that the area round Ganjoti and Umerghi constitutes by far the most important focus of infection in the Nizam's dominions. 550 deaths from plague have been reported since the epidemic first appeared. The plague is, he thinks, just the kind of disease in which poison might be looked for in discharges or exudations from buboes, either on the surface or the interior of the body. The suppurating buboes directly infect clothes, beds, bedding, and floors of houses. The bacillus of plague indicates the presence of the virus or infection of the disease. He found the plague bacillus in dust and scrapings from floors. In more than fifty per cent. of houses which have been regarded as uninfected rats inoculated with the dust from the floors immediately developed symptoms of plague and died. In milk inoculated with dust containing the plague bacillus a growth and multiplication took place. From one to two bacilli a field could be counted after one day's inoculation. The plague virus, in his opinion, does not spread through air or even through water unless it is excessively filthy, but most probably is putrid animal poison which falls to the ground and is taken into the human system mainly by inoculation.

SIR WILLIAM LOCKHART.

Before leaving India Sir William Lockhart, who has since arrived in England, issued a farewell order to the Tirah field force, in which he very truly and tersely stated that "never on any frontier expedition have the difficulties been more formidable, the punishment of the tribes more exemplary, or the submission more complete." As our readers are aware the border tribes, who are an eminently fighting, predatory race—Ishmaelites, their hand against every man—have borne no hatred or vindictive spirit, but having accepted their defeat and made their submission they were only too ready to become friends and even anxious to enter the military service of their late enemy. The tribes evidently admired the manly decision and straightforwardness of Sir William Lockhart, and he and Colonel Warburton, who was recalled from retirement to conduct the political negotiations in the Khyber, are to be warmly congratulated on the successful issue of a most difficult and laborious undertaking. Notwithstanding all that has been said we question whether any troops in the world could have done better on such an expedition, and certainly no Government could have been better served than was the Indian Government by the European and native armies and by the medical officers who accompanied them throughout the whole of the military operations.

THE LATE THUNDERSTORM AT DARJEELING.

In the terrific storm which occurred at Darjeeling on March 29th last the house of Surgeon-Major Moore at Jalapahar was struck by lightning and the occupants wery for a time rendered unconscious and some of them seriousle injured. Surgeon-Major Moore had a burn near one of his eyes and Mrs. Moore was partially paralysed for a time. Both are to be congratulated on their escape from more serious consequences. It fared worse, however, with a chuprassie who was rendered unconscious for some time and it is feared that the sight of one eye is lost. The dogs present in the house at the time were also struck and rendered insensible. The house itself has apparently received no damage.

CONTAGIOUS DISEASES IN THE STRAITS.

A letter has been received by the Straits Settlements Association from the Colonial Office, stating that Mr. Chamberlain is not prepared to sanction the re-enactment of the Contagious Diseases Ordinances in that colony, but he is conferring with the governor as to whether other measures can be taken to check the spread of venereal diseases.

ROYAL INSTITUTION. — On Friday evening, April 22nd, Mr. W. H. M. Christie, the Astronomer Royal, who made a journey to India for the purpose of observing the eclipse of the sun last January, gave a sketch of the work accomplished by Professor Turner and himself. It was originally intended that the Astronomer Royal's party should be stationed at Karad, a place near the sea-coast south of Bombay and Poona, but owing to the prevalence of plague the Indian Government transferred the party to Sahdol, a place lying far to the eastward, where the duration of totality was only 1 min. 45 sec. The lecture was copiously illustrated by views shown on the screen, the most remarkable of them being photographs of the solar corona as seen round the disc of the moon at totality.

Correspondence.

"Audi alteram partem."

ANTHRAX OR MALIGNANT PUSTULE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 1st, 1898, I was pleased to observe the report of two interesting cases of the above disease which occurred at St. Thomas's Hospital, under the care of Mr. H. Betham Robinson. What makes the matter more interesting is the fact that the disease is by no means an uncommon one in this colony. At times it is not only very prevalent, but very fatal, especially to those who contract the disease during the summer months of the year, when the thermometer ranges from 80° to 100° F. in the shade. I can readily confirm Mr. Robinson's opinion that early excision, in summer especially, is the only *sine quâ non* to a speedy cure and successful recovery. During my lengthy experience in the colony my services have been frequently called in to attend such cases, arising chiefly from inoculation from handling sheepskins and wool and hides of stock which have died of this malignant disease. The disease, too, in summer especially, is frequently produced by flies conveying the virulent virus from dead animals by inoculation through some pimple, cut, or abrasion of the skin. The face and neck, however, are the parts most commonly affected; next the hands and forearms. I have attended several cases occurring in the excessive heat of summer in which the patients have died within 12 or 14 hours after having contracted the poison or from the time they were first inoculated. The disease is characterised by symptoms of acute blood poisoning, usually in summer ending in early death. The poison may arise through the pulmonary or alimentary mucous membrane, but it is generally absorbed by inoculation through an abrasion, pimple, scratch, or cut of the skin through the handling of sheepskins, wool, or hides of dead animals. Animals which die from the disease should be buried or burnt and no person should be allowed to skin or make use of the wool or hides of the dead animal. In cases attacking the face and neck remedies seem to have little or no effect in arresting the progress of the disease, which spreads like wildfire. This discolouration and disfigurement from acute œdema increases most rapidly. It is undoubtedly in early stages when excision of the parts affected affords the best chance of a successful recovery. Not so, however, during the cool months of winter, for as a rule I have found topical applications, especially the ordinary "black wash," a most admirable and effectual remedy in such cases, assisted, of course, by tonics, especially quinine and a liberal diet. The disease first shows itself in the shape of a black pimple or dark-purple-looking slough or sore on the face, neck, or arm, varying from a simple pimple to the size of a shilling, covered with a darkish-coloured slough, accompanied by slight fever, lassitude, sickness, headache, and a dead, benumbed feeling at the sore. The dark-looking purple swelling or slough is a typical indication of the appearance of an anthrax pustule. The base of the pimple or pustule is somewhat swollen, red or purple, diffused, hard, and indurated. Before applying the "black wash" I generally freely scarify the sore and subcutaneous tissue, and within a week or ten days the symptoms abate with a complete disappearance of the disease. Such has been my experience in the treatment of a large number of cases which have occurred to my knowledge in this colony extending over thirty years. Those on the face and neck in summer are by far the most virulent and fatal and less evidently under the control of remedial agents unless seen and recognised at a very early stage and before the disease has made any progress. In one case, that of a man, aged forty years, who had been inoculated on the hand and arm from skinning sheep which had died from the disease, death took place within twenty hours. The patient came to me when the swelling had reached the shoulder. I suggested amputation but he declined, and within a few hours after he died from slight delirium and cardiac failure. He was a hawker or dealer in sheepskin but a most industrious, respected colonist. The second case was that of a woman, aged forty-two years, the wife of a shepherd; she had been inoculated on a scratch or pimple on the right cheek through

skinning a dead sheep. She died within twelve hours from the period of incubation in the middle of summer. The third patient was a man, aged fifty years, a herdsman, who had received inoculation on the neck under the lobe of the ear through handling a dead bullock—turning the carcass over in order to examine the brand. The matter at first was treated with contempt by the patient, but it proved fatal within fourteen hours from the time of inoculation during the excessive heat of summer. These were the only three cases which proved fatal; all the others made a successful recovery under tonic treatment, a liberal diet, black wash application, and free scarification of the sore. In the three deaths which occurred, from inoculation on the face and neck especially, the swelling and discolouration were something enormous, so much so that after death it was impossible to recognise the features, which more resembled a large block of charcoal than those of a human being. It is just as well that the history of these cases should appear side by side in your valuable journal with those which came under the observation of Mr. Robinson at St. Thomas's Hospital, if for no other reason than as a warning that the earlier the treatment the greater the probability of a satisfactory and successful recovery in such serious and most malignant cases.

I am, Sirs, yours faithfully,
ANDREW ROSS, M.D., M.P.

Molong, New South Wales, March 1st, 1898.

"COLLAPSE FOLLOWING LAPAROTOMY."

To the Editors of THE LANCET.

SIRS,—Would you kindly permit me to correct a misprint in my letter published in THE LANCET on April 23rd? I wrote that I injected "℥ ii. brandy" into the vein, not "3 oz." as printed.

I am, Sirs, yours faithfully,
CHARLES BOLTON, B.Sc., M.D., B.S. Lond.,
Senior Resident Medical Officer.

Evelina Hospital for Sick Children, Southwark Bridge-road, S.E., April 23rd, 1898.

*** We regret the error.—ED. L.

AN OBSERVATION REGARDING REVACCINATION.

To the Editors of THE LANCET.

SIRS,—Having read with interest the annotation entitled "The Need for Revaccination" in your last issue I should like to publish the following observation regarding revaccination. During the epidemic of small-pox at Gloucester, being called upon to revaccinate 60 young women the inmates of an "Anglican Home" at Malvern, I revaccinated 30 on the scars left by previous vaccination and the remainder on the normal skin, and found that the cases revaccinated on the old scars took more perfectly than those done on the normal skin. I also observed that in some of the latter cases, in addition to the reaction arising at the seat of the new abrasions, there was in several cases a sympathetic inflammatory action in one or more of the old scars. Calf lymph was used and there was not a failure in the 60 cases.

I am, Sirs, yours faithfully,
J. HOGGAN EWART, M.D. Edin.

Folkestone, April 25th, 1898.

"WHY CORONERS' INQUESTS ARE HELD."

To the Editors of THE LANCET.

SIRS,—Your annotation on "Why Coroners' Inquests are Held" leads me to call attention to the fact that the Registrar-General in his suggestions as to the filling up of certificates of the finding of the jury which are sent to the Registrar lays down the following principle: "The purposes to which inquests are intended to be subservient are partly legal, partly scientific and medical, and verdicts should therefore be such as to answer these several requirements." The question which arises is whether gentlemen who are Her Majesty's coroners are justified in neglecting the instructions of one of Her Majesty's departments of State. It appears to me that they are not.

I am, Sirs, yours faithfully,
LOVELL DRAGE.

Hatfield, April 23rd, 1898.

"AN UNKNOWN LARVAL PARASITE."

To the Editors of THE LANCET.

SIRS,—The following extract from the Medical Appendix by Dr. K. Ker Cross in Sir Harry Johnston's book on British Central Africa may interest your recent correspondents:—"*Ifwinjire*, not mentioned in any book; it is from the word *injira*, to enter. It is due to maggots in the tissues; native children suffer greatly; I have seen the whole side of a child riddled with holes. These maggots are common in dogs and antelopes." I am, Sirs, yours faithfully,
F. HYDE MABERLY, M.D. Dub.

Hardley-crescent, Earl's-court, S.W., April 24th, 1898.

THE ROYAL MASONIC BENEVOLENT INSTITUTION.

To the Editors of THE LANCET.

SIRS,—On looking through the list of candidates of the Royal Masonic Benevolent Institution for Widows of Freemasons I find that there are four belonging to our profession. I would throw out a suggestion to your readers who are Freemasons that in the future all medical votes should be given to candidates who are connected with the profession, thus ensuring their election and saving the wasting of votes by giving them away indiscriminately.

I am, Sirs, yours faithfully,
T. CAWLEY EAGER.

Woking, April 23rd, 1898.

"NEW DRUGS AND PREPARATIONS."

To the Editors of THE LANCET.

SIRS—May I be allowed to supplement Dr. Hooper's letter in THE LANCET of April 16th? While recognising that a chemist has no right to dictate to medical men what preparations they should use he must necessarily take a deep interest in making the knowledge of drugs as scientific and exact as possible and must therefore look with regret on the growing tendency to prescribe preparations of a more or less secret character. But if it really is necessary for the benefit of the public that such remedies should be prescribed it is surely not too much to ask that the maker's name and address should invariably be given. For example, Jones's liq. ergotæ or Robinson's syrupus sennæ may be well known in some provincial town, but it does not follow that their fame has reached the metropolis; or, again, elixir cascaræ "A. & H." may be clearly understood by every London chemist to refer to Allen and Hanburys' preparation, but it is quite probable that many a chemist in, say, Dublin or Glasgow might be considerably puzzled by such a prescription. As a matter of fact I have frequently, after sending for some such article to every likely wholesale house and well-known firm, found it necessary to write the prescriber for information as to maker's name and address; meanwhile, the patient has been kept waiting quite unnecessarily for two or three days and unjustly blames the unfortunate chemist, who is not only out of pocket by the transaction, but is blamed undeservedly for not keeping a better stock of drugs.

I am, Sirs, yours faithfully,
T. H. POWELL.

Denmark-hill, S.E., April 19th, 1898.

THE USE OF GLYCERINATED CALF LYMPH.

To the Editors of THE LANCET.

SIRS,—I thought that a quarter of a century ago the controlling power of a concurrent vaccination had been established beyond cavil. A late experience confirmed my acceptance of that teaching. I had to attend a little girl suffering from confluent small-pox and learned from her mother that both this and her other child, aged ten months, had been vaccinated unsuccessfully in early infancy—twice and once respectively. The family attendant had not insisted on more, for the mother had previously had small-pox and he too readily concluded that the children had inherited immunity. I vaccinated the infant, expressing my fear that it might already have caught the infection. This vaccination proved successful and the vesicles ran a perfectly normal course, though accompanied by a copious and exactly

synchronous eruption presenting all the characters of modified small-pox. The elder child died, but the infant recovered without a bad symptom. Mr. Collinson's letter in THE LANCET of April 9th impressed me deeply and painfully, but on reflection his cases seem to me to bear another interpretation and one of serious importance at the present juncture.

When the Stockwell Fever Hospital was first opened during the epidemic of 1870–71 for the reception of small-pox patients I acted as assistant medical officer for six months. Many hundreds were admitted during that period, but the only cases that showed evidence of recent vaccination were a series of four or five which all presented excellent cicatrices and had all been vaccinated by the same practitioner with lymph taken from revaccinations. They were the subject of a short paper in THE LANCET by the medical superintendent, the late Dr. J. B. Barbour, who took occasion to point out the worthlessness of this lymph, though the visible results of its inoculation counterfeited the genuine article. Mr. Collinson's cases seem on a par with the above and read in this light would constitute a grave indictment of the glycerinated calf lymph. A careful perusal of his startling list convinces me that all these vaccinations and revaccinations were impotent though "successful," and, indeed, his last quoted case, which he regards as anomalous, may, I think, be taken as the key to the series.

I am, Sirs, yours faithfully,

April 20th, 1898. WILLIAM MCLAURIN.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE REFORM OF THE ARMY MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—I am directed to inform you that the enclosed letter has been sent by the President of the Royal College of Surgeons in Ireland to the Secretary of State for War.

I am, Sirs, yours faithfully,

ROBERT H. WOODS, F.R.C.S. Irel.,
Secretary of Council, Royal College of Surgeons in Ireland.

Dublin, April 26th, 1898.

[ENCLOSURE.]

Royal College of Surgeons in Ireland, Dublin, April 19th, 1898.

MY LORD MARQUIS,—In reference to the Army Medical Department and the reforms in it which are about to be carried out a rumour is current that it is intended to give no higher rank and title than that of colonel. I am unable, of course, to say what justification there may be for such a report, but as President of the Royal College of Surgeons in Ireland it is my duty to state that such a decision would create much disappointment. My College has loyally acceded to your lordship's request that I should nominate two civil surgeons to do duty in the present emergency. It was led to this by the sympathy which your lordship has expressed and by your manifest desire to remove the causes of discontent. But I am bound to say that I fear the dead-lock will continue if the ordinary accepted titles are not conferred upon the higher ranks of the service. It is almost unnecessary to repeat that the medical officers have never thought of commanding in the field, and that any suggestion of that sort is quite groundless. I beg your lordship to believe that in thus addressing you I only wish to help in speedily removing the difficulties which exist and which prevent the filling of vacancies in the Army Medical Department.

I have the honour to be, your Lordship's obedient servant.

W. THOMSON, President R.C.S. Irel.

To the Right Hon. the Marquis of Lansdowne, K.G.,
Secretary of State for War.

THE QUEEN REGENT OF SPAIN.

To the Editors of THE LANCET.

SIRS,—In the full and excellent account of the Ninth International Congress of Hygiene and Demography, published in THE LANCET of April 23rd, the paragraph relating to the reception of the members of the Congress at the Royal Palace at Madrid is of special interest just now. May I venture, therefore, to supplement your correspondent's notes by stating that the Queen Regent, whose wonderful courage and powers of head and heart are exciting the admiration of everyone, spoke most sympathetically and kindly of our sick and wounded soldiers and of the interest she took in the Queen's visit to them at Netley? Her Majesty also spoke of the work done by the nursing sisters in connexion with the plague in India and of the distress she felt in reading of the casualties amongst them. Indeed, it would be impossible to convey in words the infinite sympathy and tenderness with which she referred to our troubles in India and to everything connected with our sick and wounded invalids. I am, Sirs, yours faithfully,

W. G. MACPHERSON,
April 25th, 1898. Surgeon-Major, A.M.S.

THE DIPLOMA OF THE APOTHECARIES' SOCIETY.

To the Editors of THE LANCET.

SIRS,—With your permission I should like to make a few remarks respecting the late prosecution of a L.S.A. Lond. by the General Medical Council for describing himself as a physician and surgeon. I presume that the proceedings were taken under Sec. 40 of the Medical Act, 1858, for *wilfully and falsely pretending to be recognised by law as a physician and surgeon.* In 1888 the following letter was published in the leading medical journals:—

Society of Apothecaries, London,
Blackfriars, E.C., Sept. 27th, 1888.

MY DEAR SIR,—The title of Surgeon has long been in use, implying medical practitioner, but the L.S.A. is a licentiate in surgery as well as in medicine. It cannot be said that he is not a surgeon. It seems to me he may call himself what he likes—physician if he pleases.

Yours faithfully,

F. P. Moles, Esq. T. PEREGRINE, M.D., Secretary.

After such a statement, publicly made and never challenged, I cannot see that a L.S.A. who describes himself as a physician and surgeon can be said to *wilfully and falsely* misdescribe himself. I have in perfect good faith described myself as a surgeon for several years and I contend that we are recognised by law as such. Sec. 2 of the Medical Practitioners Act, 1876, says: "All legally qualified medical practitioners, with qualifications in medicine and surgery registered under 'the Medical Act,' shall be capable of being elected surgeons to county infirmaries or hospitals in Ireland."

The regulations for the admission of surgeons to the Army say with respect to the candidate: "He must possess two diplomas or licences, recognised by the General Medical Council—one to practise Medicine, and the other Surgery, and must be registered under the Medical Act in force in the United Kingdom at the time of his appointment. A candidate, however, who holds a single diploma from the Society of Apothecaries, obtained under the conditions of the Act of 1886, will be deemed to possess the double qualification required."

If these instances are not recognitions by law as surgeons, I should much like to know what constitutes legal recognition. It would be interesting to learn why the General Medical Council selected a practitioner in an obscure village for prosecution before a bench of magistrates none of whom have probably any special legal knowledge. If the Council in its newly awakened zeal is so anxious to prosecute the men who supply it with its funds, why does it not ride a tilt with some well-known and experienced practitioner? Dr. Major Greenwood, honorary secretary of the Brussels Medical Graduates' Association, barrister-at-law, has thrown down the gauntlet.[1] It must be confessed that the effect of these prosecutions on the public is anything but reassuring, leading them to believe that the L.S.A. is a sort of bogus diploma and its holder a false pretender and a cheat, who is to be hunted down by the General Medical Council, dragged into a police-court and fined, when he attempts to convey to the public a knowledge of the fact that he is a practitioner in medicine and surgery. Meanwhile any ignorant quack without a vestige of medical education may practise with impunity and the Council folds its hands and averts its eyes. I am, Sirs, yours faithfully,

April 18th, 1898. L.S.A. LOND., 1889.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Marked Decline of Mortality from Plague in Bombay.—Dissolution of the Plague Committee.—The Discoverer of Plague in Bombay.—Incidents in Plague Work.

THE past fortnight has seen a remarkably rapid decline in the death-rate for Bombay. Whereas it had reached 135 per 1000 it is now 95 per 1000. This decline is coincident with, but not necessarily dependent upon, the change of policy with regard to plague measures. There is now an almost entire absence of repressive measures, so that for all practical purposes the epidemic is taking its own course. This course, however, is an apparently natural one and does not appear to have been determined or even modified by

[1] Vide Brit. Med. Jour., April 9th, 1898, p. 990.

human agency. It has its parallel in last year's outbreak and it is also represented in both the primary outbreak and the recrudescence of the disease which have occurred in Poona. We may say that the epidemic will die a natural death, but we cannot so positively assert that the disease will suffer extinction.

The Bombay Plague Committee will be dissolved at the end of the month (April) and measures for dealing with the epidemic will be placed under a new organisation. Since the active work of the committee ceased and the native communities have been left to deal with the plague cases occurring in their several districts it is interesting to note that exactly the same proportion of unaccounted-for deaths occur now as formerly. About one-third of the excess mortality still continues to consist of unnotified plague cases. Even now 50 plague cases a day are unreported. It was imagined that under native management cases would not be secreted and that information of a larger proportion of cases would be forthcoming. The result has shown that the native population will not give information about their sick any more freely to their own leaders than they did in the days of military and other search parties.

When the history of the plague in Bombay comes to be written the name of Dr. Viegas must be duly acknowledged as its discoverer. This was a distinct omission in Mr. Birdwood's otherwise valuable lecture. Notwithstanding considerable opposition he forced the attention of the authorities to the calamity threatening Bombay, and by freely offering his cases for the criticism of his friends and opponents he was thus the means by which plague was officially recognised before the increased mortality drew general attention to the gravity of the situation. Sufficient credit has not been given to him for his professional acumen in discovering plague among his patients or for the energy with which he brought the danger home to the municipal authorities.

In view of the influx of people to Bombay with the present more hopeful view of the pestilence and to avoid overcrowding or the occupation of infected houses or of houses unfit for human habitation camp accommodation for about 17,000 people has been made available.

Plague has broken out at Kurrachee, but the cases at present are few in number and strenuous efforts are being made to prevent its spread.

The active measures adopted in other places than Bombay have led to disturbance and the lives of medical men and other officials have been placed in great danger. Surgeon-Captain Elphick was saved by his helmet from what would probably have been a fatal blow aimed at him during a disturbance at Jwalapur consequent on measures taken for removing a patient to hospital. Even in Bombay stone-throwing still continues to be practised occasionally at Europeans when moving about alone.

With the decline of the epidemic the type of the disease seems to be modified. The rate of mortality is lessening. Many comparatively mild cases are reported and amongst others two or three of the nurses engaged at the plague hospitals. A day's fever, with enlargement of one or more of the lymphatic glands, followed by debility for a week or longer, are the chief symptoms. Amongst the inoculated several instances of this modified form of the disease have been reported.

April 8th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Annual Congress of the Sanitary Institute.

As already stated in THE LANCET, the annual Congress of the Sanitary Institute is to be held in Birmingham next September. Already a local committee has been formed to make the necessary arrangements to receive the members in a manner worthy of this large centre. The Lord Mayor—Councillor Beale—has been appointed chairman, the executive committee and sub-committees have been formed, and a number of guarantors have given pledges sufficient to cover the expenses in case of need. Alderman Cook—the chairman of the Health Committee of the Town Council—is vice-chairman and the Lady Mayoress, who takes a great interest in the proceedings, has been appointed president of the conference on domestic hygiene. Sir Joseph Fayrer has accepted the post of President of the Congress. Other distinguished medical men and sanitarians have promised to be present and a meeting of much importance and interest is expected.

Habitual Inebriates.

At a meeting of the city magistrates held on April 21st a circular letter from the Lord Mayor of Manchester was read inviting support to the tenour of the following resolution recently passed by the Manchester Bench:—

That in the opinion of the justices of the city of Manchester here assembled it is of urgent importance that further provision be made by law for the restraint of habitual drunkards with a view to their reformation The justices, therefore, trust that the Government will in the forthcoming session of Parliament produce and pass the long-delayed Bill for this purpose, to which those concerned in the administration of justice look as the only hope of dealing properly with those criminal inebriates on whom the ordinary sentences have no effect.

Representations upon the same subject were read from the British Medical Association and the magistrates of Leeds. Some criticism followed upon details and the resolution was ultimately carried. A copy was ordered to be sent to the Home Secretary and to the Members of Parliament for the city. Some result of a beneficial kind is expected from the House of Commons' debate upon the question—certainly not before it is needed to deal with this much-vexed and difficult question.

April 26th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Medical Guild.

THE report of the Medical Guild for 1897 shows that it is gradually becoming a powerful instrument for the abatement of various evil influences affecting the profession, whether they come as attacks from without or arise from misguided action on the part of the weaker brethren. The following subjects, among others, have been considered during the past year: Quack practice in various forms, medical aid associations, midwives, provident dispensaries, club and allied practices, consultations with "cheap doctors" (but as to this last it must be confessed that no conclusion was arrived at), a tariff of fees, unprofessional advertising, hospital reform, &c. With regard to one vexed question the following resolution was passed at the meeting on Nov. 5th last: "That the Council of the Medical Guild places on record its strong dissatisfaction with the present practice which obtains in the majority of the hospitals of Manchester and Salford of charging patients for services rendered, as, in its opinion, hospitals supported by voluntary contributions and which are charitable institutions ought not to exact such fees." The final clause of this resolution may perhaps remind one of what is called ungallantly a woman's reason, but it raises the question which underlies this practice—Are hospitals supported by voluntary contributions in the future to be charities? or are they to be places of business, where payment is made for services rendered? Are they to be institutions for the medical relief of the genuine poor? or are they to be in direct competition with the much suffering and, perhaps wisely, much complaining general practitioner? The guild can claim some success in restricting "the exploitation of the profession by medical aid societies promoted by interested laymen," and the council passed a resolution at one of the meetings strongly deprecating "the action of any medical man who, by giving such aid as permits of the intervention of any third party between medical practitioners and their patients, deals a severe blow at the best interests of the profession as a whole." This "intervention of any third party" is an impertinence which if submitted to is degrading to the medical profession and so destructive of the self-respect of each individual member of it thus interfered with that one cannot wonder, seeing how often it has been tolerated, at the light esteem in which the profession is held by those who so manipulate it for their own purposes. In accordance with English custom the members of the guild have had, not a dinner, but the ancient meal of supper together. It was a great success and "it is in accord with the principles of the guild to promote cordiality and good fellowship amongst the members." It is much to be wished for that the career of the guild should be prosperous, that its numbers and strength should rapidly increase, as it would become a most effective

agent for checking and thwarting the attacks, open and insidious, which our profession has continually to meet.

The Jubilee of Modern Spiritualism.

Demonstrations were held in St. James's Hall, Manchester, at the beginning of April to celebrate the jubilee of modern spiritualism, and were attended by a large number of the supporters of the Spiritualists' National Federation in Manchester and other parts of the country. Mrs. E. H. Britten of Manchester, described as "a notable apostle of spiritualism," opened a four days' jubilee bazaar and international fancy fair the object of which was to raise £2000—a very material agent—towards a propaganda fund "to promote the spread of spiritual knowledge and enable those who sit in the Valley of Shadow, in fear of death and the hereafter, to realise that man is a spirit, naturally immortal, progressive, and responsible; that there are no dead—all live, and under favourable conditions can communicate with their friends and loved ones, and help, guide, comfort, and bless them." On the platform there was a reproduction of the frame house at Hydesville, New York, where on March 31st, 1848, it is stated "that the spirits by 'raps' responded to questions and established a method of intercourse which has been adopted in all parts of the world." It is remarkable that the spirits in America—that ingenious and labour-saving land—should invent so clumsy a mode of sending messages from another world. Mrs. Britten declared, "after nearly forty years' experience ..... that it was the first scientific religion that the world had ever known and came from the source of all light—God our Heavenly Father—and from none other." She told how Victor Hugo had said to her again and again: "There is no more death; that which is called so is a splendid success," a remark characteristically French. During the afternoon a great tea-meeting was held, at which, it is said, about 2000 people attended, and this was followed by a mass meeting in the evening at which about 3000 people were present. The chairman, a Mr. Wallis, said that while fifty years since there were no spiritualists, in their sense of the word, to-day there were millions all over the world. Many addresses were given by apparently enthusiastic believers, and according to one gentleman much has been done by the movement, for it "had had to educate the Church and men of science and the general population as well." Possibly the general population is sadly ignorant of what has been done for it. But "most of all," as he said, "they had had to educate their own party and to develop their spiritualists out of the spiritualism that the angels brought to them from the spirit world." This was a task, and it is wonderful how Mr. Moore and his friends did it even with the help of the angels. Many of these people are no doubt sincere and belong to the so-called educated classes, but education does not necessarily confer wisdom or judgment in the sifting and weighing of evidence. It would be impolite to speak of "cranks," and yet there is an old saying "there's nothing so queer as folk."

Convalescent Pavilions at Ladywell Sanatorium.

A resolution was unanimously adopted at the meeting of the Salford Borough Council on April 6th in favour of erecting two convalescent pavilions on the land at Ladywell, one for scarlet fever patients with provision for 48 beds and the other for typhoid convalescents with 32 beds. The estimated cost of the new buildings will be £11,800.

April 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

St. Andrews University and Dundee College.

THE omens in connexion with the long-standing dispute between these two bodies at last appear to be favourable. At the recent meeting of the University General Council a much more reasonable and pacific tone prevailed and there is reason to believe that a practical scheme of agreement will soon be in operation. It is understood that the University Court has arranged to spend a considerable annual sum on the medical school at Dundee and that as soon as funds are available further chairs will be established there.

Glasgow University.

The classes for the summer session were opened on April 19th. The class of practical pathology is to be conducted by Professor Coats, who to the general gratification has returned from his Australian trip in restored health. The new Professor of Forensic Medicine has commenced his duties and he will also undertake the teaching of public health. Though no official action has been taken in connexion with the establishment of a chair in this last-mentioned subject the proposal has by no means lapsed and in the meantime laboratory work will be conducted under Professor Glaister's direction. The university court has reappointed Dr. Charles Workman to be an extra examiner in the subject of pathology for degrees in medicine and surgery. The court has adopted the report of the Universities Joint Committee in favour of action being taken to prevent any medical graduate using the name or title of his degree after his name has been removed from the Medical Register.

Glasgow Philosophical Society.

The meeting of this society held on April 20th, Dr. Ebenezer Duncan being in the chair, was occupied by a paper on the Bubonic Plague by Dr. Alexander Ferguson of the Western Infirmary Pathological Institute. Dr. Ferguson traced the history of the disease from outbreaks which occurred in Lybia, Syria, and Egypt in the third century B.C. and expressed the opinion that the present outbreak in Bombay was probably due to conveyance of the disease from Hong-Kong. The bacteriology of the disease was then discussed and a description given of the insanitary condition of the native quarters in Bombay; reference was also made to the various methods of serum treatment. The lecture was illustrated by lantern slides and microscopic demonstrations. At the same meeting Mr. Addison of the Deaf and Dumb Institute, Langside, read a paper on Deaf Mute Education, in which he advocated the establishment of a college for providing deaf mutes with opportunities for secondary and higher education and quoted in support the success of such an institution in America. Dr. Ebenezer Duncan also advocated Mr. Addison's suggestion.

Handsome Bequests to Glasgow Charities.

By the will of the late Mr. Adam Teacher a sum of £50,000 is left in trust to be divided among the infirmaries and other charities of the city. In addition, on the expiry of certain life interests, the further sum of £30,000 is to be divided between the Royal, Western, and Victoria Infirmaries.

Medical Appointments.

The Govan District Lunacy Board have, on the nomination of Dr. Watson, the superintendent, appointed Mr. Francis Odell Simpson, pathologist and senior assistant of the West Riding Asylum, Wakefield, to be senior assistant medical officer in the Hawkhead Asylum. Mr. Hugh Galt, M.B., B.Sc. Glasg., D.P.H. Camb., has been appointed Professor of Forensic Medicine and Lecturer on Public Health in St. Mungo's College, Glasgow, in succession to Professor Glaister, resigned.

April 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Important Verdict as to Medical Fees in Hospitals.

A RATHER important question as to the liability of hospital patients for medical fees was investigated by Mr. Justice Gibson and a special jury in the Nisi Prius Court, Dublin, on April 20th. Dr. J. J. Cranny, one of the surgical staff of Jervis-street Hospital, brought an action to recover £25, a fee alleged to be due to him by Mr. Thomas Lee, recently a patient in the institution, to which he had been brought with a compound fracture of his leg due to a street accident. It appeared that the defendant's leg was set by Dr. Cranny, who afterwards visited him at the hospital on thirty occasions and twice subsequently at his private residence. In support of his claim Dr. Cranny stated that it was the custom to charge medical fees to well-to-do patients in hospital. The defendant being a gentleman of considerable means he fixed 25 guineas as the amount of his fee. He had been sent a cheque for 5 guineas, which he returned. Mr. Meldon, the senior surgeon of the hospital, gave evidence as to the reasonableness of the amount claimed. The resident surgeon of the hospital, Mr. Caraher,

deposed that he was paid a salary and not allowed to accept money from the patients, while the visiting staff received no salary or other emolument except the students' fees. The secretary of the hospital, Mr. O'Brien, stated that there were no fees prescribed in either the public or private wards, but that people were supposed to pay according to their means. Dr. Cranny's patient occupied a private ward and acknowledged that a good cure had been effected in his case. For the defence it was alleged that Dr. Cranny attended the defendant, not at his request, but at the bidding of the governors of the hospital in his capacity as surgeon to the hospital and that the defendant by paying 3 guineas for treatment there had discharged all claims against him for medical attendance. The defendant stated, moreover, that the 5 guineas which he had offered to Dr. Cranny were given for the two visits which he had paid to him at his private house. He had been twice in the hospital and on each occasion before leaving gave £5 as a present to the hospital funds. No question as to medical fees was raised while he was there. Mr. Justice Gibson said the question, which he would leave to the jury, was whether Dr. Cranny rendered services on the terms that he was to be paid by the defendant. There should be, he thought, a set of rules in Dublin hospitals such as existed at St. Thomas's Hospital, London, where a man paid so much and received everything that he required. It appeared that in Jervis-street Hospital there was no formal rule. He trusted that in future when a hospital medical man intended to treat a patient as a private patient and charge him fees he would have an understanding on the point. The jury found that the plaintiff did not render the services on the terms that the defendant should pay especially therefor and judgment was accordingly entered for the defendant. The jury expressed their agreement with the judge that there was no reflection of any kind on Dr. Cranny for having brought the action as he did so honestly, believing himself to be acting rightly.

The Royal College of Physicians of Ireland and the Viceroy.

On the evening of April 23rd Sir George Duffey, the President of the Royal College of Physicians of Ireland, had the honour of entertaining at dinner at the College the Lord Lieutenant of Ireland, K.G., and a number of distinguished guests invited to meet his Excellency. The President occupied the chair. On his right sat the Lord Lieutenant, Lord Monck, Sir William Thomson, Sir William Kaye, Sir William Stokes, Sir William Kynsey, Dr. Grimshaw (the Registrar-General), Surgeon-Major-General Preston, Dr. Bull, and Dr. Beatty; on his left were Lord Ashbourne (the Lord Chancellor), Sir David Harrel, C.B., Sir Charles Cameron, Sir F. X. MacCabe, Sir Philip Smyly, Sir C. Nixon, Dr. Atthill, Mr. Swanzy, and Dr. J. W. Moore.

The Sanitary Congress, August, 1898.

The committee of the section of Preventive Medicine and Vital Statistics met on April 20th at the Offices of Public Health, Cork-hill. The chair was occupied by Sir George Duffey, the President of the Royal College of Physicians of Ireland, and subsequently by Dr. Grimshaw, the Registrar-General and president of the section.

Belfast Corporation (Hospitals) Bill.

The board of management of the Belfast Royal Hospital have been compelled, as they say, "with sincere regret," to notice certain statements which have been made in a petition of Roman Catholic ratepayers and inhabitants of Belfast in connexion with their opposition to the Bill promoted by the Belfast Corporation [1] to enable that body to grant a site to the proposed Royal Victoria Hospital. In the reply issued by the Royal Hospital authorities it is said that this regret is much increased by the fact that not only are several of these statements entirely destitute of foundation, but that they are calculated to excite sectarian prejudice against an institution the benefits of which have been always open to the sick of every creed and class with the most absolute impartiality and in which questions arising out of differences in creed, at all times exceedingly rare, have been for many years altogether unknown. Paragraphs 6 and 7 of the Roman Catholic petition contain the following statements: "Your petitioners will have no representation on the committee of management of the said hospital and no voice in the appointment of the managing, medical, surgical, or nursing staffs of the said hospital." "It is understood and believed that the new hospital is to take the place of the existing Royal Hospital. Your petitioners' co-religionists have been almost entirely excluded from the management and staffs of the hospital, and notwithstanding repeated remonstrances no provision has been made for ministering to the spiritual wants of Catholic inmates. Moreover, the Catholic poor requiring hospital accommodation very often found it impossible to obtain access to the wards of the Royal Hospital in consequence of the system of nomination for admission to the wards of the hospital which prevailed and still prevails." In their reply the Royal Hospital board of management say it is difficult to understand how assertions so entirely contrary to fact can have been seriously put forward. At no period did there exist any religious test or qualification for becoming a member of the general committee or of the board of management or of the medical and surgical staff of the Royal Hospital. According to the charter, everyone who subscribes £50 in one payment or £10 annually for six years becomes thereby a life governor and member of the board of management, and every subscriber of one guinea annually may be elected a member of the general committee and subsequently of the board of management. Of those qualified by payment of £50 8 are Roman Catholics; of those elected by the one guinea subscribers there are 3 Roman Catholics out of a total of 15, and of these one, an active and respected member of the board, is a Roman Catholic priest. From 1837 till the close of his valuable life the Right Rev. Dr. Denvir, Roman Catholic Bishop of Down and Connor, was one of the most influential and respected members of the board of management. From 1839 until the present time the medical and surgical staff have never been without one Roman Catholic member, commonly there have been 2, and occasionally 3. The relations of these gentlemen with their colleagues have been always of the most cordial and amicable nature. For many years a Roman Catholic surgeon filled the post of secretary and for the last nine years a member of the same church (Professor Cuming, M.D. R.U.I.) has been chosen by the suffrages of his colleagues to occupy the position of chairman of the staff. The principle of non-sectarianism has been carried out with the most scrupulous care in every detail of hospital management. No question as to his religious belief is ever addressed to any applicant for admission to the hospital, no illuminated texts or religious emblems are displayed on the walls, no public prayers are recited in the wards, there is no chapel within the building,—in fact, the hospital is managed as an institution with the primary object of the cure and relief of disease, while at the same time the committee has taken pains to give to the sick every facility for obtaining the aids and comforts of religion. The following notice is placed in the hands of every patient on admission: "If at any time while you are an inmate of this hospital you feel desirous of seeing a clergyman, on your communicating your wish to one of the medical staff, the house surgeon, or a resident pupil, the clergyman you name shall be sent for provided the visit is considered not injurious by the medical attendant." And further information on the same subject is given in a notice hung up in wards and passages. Every possible provision has been made for the convenience of clergymen called on to give the ministrations of religion to any of the inmates. The charge that the Roman Catholic poor found it very often impossible to obtain access to the wards of the Royal Hospital is sufficiently met by the fact that while it is impossible to state accurately the relative number of Roman Catholics who have been treated in hospital, as no inquiry is made regarding the religion of patients and there are consequently no records, it is the opinion of all those connected with the institution and who have the best opportunities of forming a judgment on the question that about one-half of the patients admitted to the wards are members of that Church, while their co-religionists probably do not amount to more than one-fourth of the population of the city of Belfast. It is most unfortunate that this sectarian dispute should have arisen about the new Royal Victoria Hospital, towards the building of which the inhabitants of Belfast so generously contributed over £100,000 as a memorial of the Jubilee of Her Gracious Majesty Queen Victoria.

[1] THE LANCET, April 16th, 1898, p. 1083.

April 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Rebuilding of the Academy of Medicine.

FOR a long time past the Academy of Medicine has held its meetings in a building which it is only allowed to use temporarily and which in addition is quite insufficient for the purpose. It is the old chapel attached to the buildings of the Charité Hospital and the hall used for meetings is on the ground floor, while the first and second floors are occupied by patients. There are no rooms or buildings which can be used for official work, for storing Transactions, for the library, or for any of the various departments which are under the care of the Academy—for instance, the vaccination department, the board in charge of prophylaxis and treatment of epidemic diseases, the board to which is entrusted the care of the various mineral springs, the sanitary and statistical departments, and the office for dealing with awards granted for sundry scientific researches. This state of matters, which has gone on for forty years, is the cause of continual complaints on the part of the Academicians — complaints all the more justified inasmuch as the Academy is the owner of a plot of ground near the Luxembourg on which it should long ago have erected the necessary buildings but which the State has utilised for the erection of some sheds serving as a temporary chemical laboratory for the Faculty of Sciences pending the building of the new Sorbonne. When this last is rebuilt the temporary buildings, instead of being pulled down and the site handed over to its rightful owner the Academy, are to be used as a new school of industrial chemistry, so that the State has been obliged to find another site for the Academy. That body wish that the new site should be fairly near the present one, so as not to cause unnecessary inconvenience to members. An understanding has been arrived at between the Government and the Academy for the purchase of a plot of ground in the Rue Bonaparte and a decree has just been voted by the Senate and the Chamber authorising the Education Minister to take the necessary steps. The total expense is estimated at 1,500,000 francs, of which the Academy will pay 540,000 francs by annual instalments according to the varying sums needed for the works.

The Learned Societies' Congress.

The annual meeting of the learned societies was held at the Sorbonne from April 12th to April 16th. This congress (originally organised by Durny with a view of being a centre for the reception of the work of the numerous provincial societies and so providing an annual stimulus to their zeal), of which the Minister of Education was president, concluded by a grand soirée held at the Ministry when a certain number of decorations were distributed. The section of the sciences of medicine and hygiene had some very interesting meetings and discussions. Among the papers read were the following:—On the Treatment of Pulmonary Tuberculosis by means of Ichthyol (Professor Combemale), on Infant Feeding (Dr. Lobet), on Tuberculosis in the Army (M. Decaux), and on Suicide among Children (M. Moreau).

The Resection of the Sympathetic.

Messrs. Combemale and Gaudier of Lille showed a patient before the Academy of Medicine at the meeting of April 19th. The patient was the subject of exophthalmic goitre and she had been operated on by undergoing resection of the sympathetic. The results were as follows: first, a most important diminution of exophthalmos; secondly, lowering of the beats of the heart from 200 to 100 in the course of a week while at the same time the painful phenomena in the præcordia disappeared; and, thirdly, there was no marked effect upon the goitre itself. Messrs. Combemale and Gaudier concluded from their observations that in cases of exophthalmic goitre when the tachycardia is intense and continuous, when this is the only symptom, or when there is also exopthalmos, there is always the risk of dangerous symptoms supervening. In such cases section of the cervical sympathetic, which acts most probably by preventing the hypersecretion of the thyroid gland, is the best operation to do. At the same meeting M. Jonnesco read a paper on the Cervical Sympathetic in Epilepsy and glaucoma. He has performed this operation forty-six times. In epilepsy out of 35 cases, some unilateral and others bilateral, 15 had been kept under observation for from nine to eighteen months; 9 were cured completely and no untoward effects had been observed. In exophthalmic goitre total and bilateral resection had always been done. Four operations had been performed from fifteen to twenty months ago, and recovery was perfect in all. The tachycardia disappeared fairly quickly, the goitre got smaller and harder, and as for the exophthalmos it disappeared almost at once. In 6 cases of glaucoma the results were very valuable. When the glaucoma was simple and chronic the results were excellent; the sight improved and the pain disappeared. In one case where glaucoma had appeared after the goitre, bilateral and total resection had acted upon both these affections and a cure was the result. With regard to irritative glaucoma the results were much less satisfactory. Vision did not improve, although the tension in the eyeball became much less. Resection of the cervical sympathetic is, then, in the case of some patients a good operation and gives good results in a number of diverse diseases.

The Invariable Presence of Pneumococci on the Surface of the Tonsil.

On April 15th MM. Bezançon and Griffon laid before the Hospitals Medical Society the results of some researches which they had made on the presence of the pneumococcus on the surface of the tonsil. In place of using inoculations *en masse*, after the method of Netter, they employed a culture medium specially fitted for the pneumococcus—namely, the serum of a young rabbit. It is generally admitted that the pneumococcus can be found in the throats of healthy individuals about once in five times, but according to MM. Bezançon and Griffon this is a wrong proportion and due to faulty technique in the examination. The pneumococcus may exist constantly as a saprophyte in the same way as the streptococcus. If up to now the pneumococcus has not been found in more than a fifth of the cases examined it is easily explained by an alteration in the method of cultivation, the method of culture being for choice by taking some of the tonsillar mucus and not simply the saliva. The forty individuals whom MM. Bezançon and Griffon examined were of varying ages and kinds—quite young children, adults, old men, some taken from a hospital atmosphere, some from laboratories, and some living under circumstances from which any source of contamination could be reasonably excluded. In none of these patients was there any history of pneumonia. The only conclusion which can be drawn from these facts is that this organism is found in a great variety of diseases.

The Military Hospital at Nice.

The President of the Republic has just been taking a few days' rest at Nice. During his stay there M. Faure made a thorough examination of the military hospital and inquired into the matter of the everlasting negotiations which have been going on with the municipality. More than thirty-five years ago the garrison of Nice requested an increase in the hospital which had been originally founded under the Italian *régime*. However, the sanitary service is to-day very nearly in the same condition as it was in 1860 The garrison then numbered 1100 men but now numbers 6000. There are no means for isolating infectious or suspicious cases and the regimental surgeons are compelled to treat a portion of their patients in the infirmary. The President has promised to use all his influence to put an end to this state of things, owing to which the good name of the French sanitary military service has with some reason been discredited.

April 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The English-speaking Practitioner in Italy.

IN the following circular addressed to the prefects throughout the kingdom by the Under-Secretary of State for the Home Department may be recognised the death-knell of the Santini Bill, which had for its object to exclude from practice in Italy all English-speaking medical men not provided with an Italian diploma. I give the circular textually: "I have ground for believing that not in every instance nor in every quarter is respect paid to the

regulations which, in terms of the 'Legge Sanitaria' now in force (Art. 23), apply to foreign physicians and surgeons professionally engaged in the kingdom. To this, therefore, I recall the attention of your worships, begging you kindly to exert a prompt and effective surveillance to the end that, except in special cases for which those physicians and surgeons are expressly summoned from abroad, the said practitioners, if they have not obtained the diploma of Italy, should restrict themselves to vouchsafing professional assistance to foreigners only. I shall feel obliged by your graciously acknowledging this circular.—Signed (for His Excellency the Minister of the Interior), ARCOLEO." Considering that English-speaking practitioners never court an Italian *clientèle*, for the reason (among others) that the low scale of remuneration makes it not worth their while, considering, moreover, that they only ask to be allowed to practise among their compatriots without let or hindrance, we must hold this circular, issued by authority of Government, as giving official and final sanction to the *status quo*, all attempts to modify which (in the sense of the Santini Bill particularly) being discountenanced and therefore to be abandoned. The Di Rudini Government may be congratulated on this decisive step which, let us hope, none of its successors will be ill-advised enough to reverse. One significant clause in the circular cannot have escaped your readers' notice—that, to wit, in which it is conceded that in special cases foreign consultants not possessing the Italian diploma may be called to Italy to give professional advice to non-compatriots, Italian or other. This has to my knowledge been a practice by no means rare. Just ten years ago, when the late Emperor of Brazil was confined to bed in Milan and under the treatment of his body-physician assisted by Professor Semmola of Naples, the supervening cerebral complications led to Professor Charcot being summoned from Paris and with the best results. This happy intervention, however, the Santini Bill would have made irregular and illegal. Now we have it on authority of Government that it is quite a legitimate proceeding and that on the occurrence of a parallel case it may be open to the patient's family and professional advisers to reinforce Italian opinion by that of another school, not only French or Austrian or German, but British or American or colonial.

The Government Inquiry into the Foundling Hospitals.

The "incredible scandals" of which these institutions—particularly in the Neapolitan and Venetian provinces—have been the source or centre are well known to readers of THE LANCET[1] which has also noted from time to time the steps taken to put a stop to them and to introduce a more humane order of things. The "Commissione Reale d'Inchiesta"—medical in its presiding head (Dr. Tommasi-Crudeli) and largely medical in its composition—has been for several months employed in verifying those "scandals" and lately held at the Home Office a plenary sitting to take note of the work already done and that remaining to do. Its chief business was to consider the report of Dr. Raseri, who had been commissioned to collect and summarise the returns of the medical men told off to inspect the provincial foundling hospitals. This duty Dr. Raseri and his subordinates were found to have discharged with thoroughness and effect, whereupon the "Commissione" decided to proceed to inspect on the spot those institutions which Dr. Raseri had indicated as exceptionally bad in their administration and thereafter those which had a fairer record to show. The first localities to be visited turn out to be those already indicated by THE LANCET as offering the grossest abuses in foundling management, and these are Naples and some other cities of the south, and Padua, Venice, Vicenza, and Rovigo in the north. The last-named city will receive peculiar attention as having initiated reforms at once bold, humanitarian, and economical, diminishing the mortality while reinforcing the surveillance, and all this at less outlay than hitherto considered possible. As I have said, the "Commissione" is largely medical in its *personnel* and for the new departure it is taking will command the services of Dr. Celli (Professor of Hygiene in the Roman School) for the south, and of the Senator Tommasi-Crudeli (the well-known pathologist) for the north.

April 23rd.

[1] THE LANCET, June 12th, July 10th, and Oct. 2nd, 1897.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Kasr el Aini Hospital and Medical School.

AT the beginning of 1884 Mr. Clifford Lloyd among his reforms at the Ministry of the Interior, separated the Government Hospital from the School of Medicine and placed the hospital under the direction of Mr. H. Milton. Under his management the building and its inhabitants have been thoroughly reorganised, so that the hospital will in many respects bear favourable comparison with any in Europe. This reform has been a slow growth of many years' zealous toil and reflects the greatest credit upon Mr. Milton. But the school, divided from the hospital only by a paling, has never made the same strides towards a European ideal. Three energetic Englishmen have done their best to leaven the lump of Egyptian inertia, but the teaching language has been Arabic, and it has for years been known that the teaching staff was unfit for modern requirements. One example of this archaism will suffice. The professor of surgery is a man who has done very good work in his time, but his methods in the wards and his systematic lectures are not based on asepticism. Lately, too, the school curriculum has been extended to six years, examinations have been made more severe, and, unfortunately, the initial pay offered to the Government sanitary officer has been reduced to £72 a year. For these reasons, among others, the medical school has ceased to be popular with parents and pupils and it became quite necessary to make some reform. Several times the suggested study of the question had to make way for more pressing needs, such as cholera, the Soudan, and threatened plague, but last October Dr. Perry, superintendent of Guy's Hospital, was invited by the Egyptian Government to report to them in Cairo on the school and hospital. He wrote out a carefully prepared scheme for their future guidance, and this scheme was for five months under the deliberation of various officials of the Government. Now, with a few modifications, it has been passed by the Council of Ministers and will come into effect in October next. The school course has been reduced to four years but a fifth post-graduate year will be open to those who wish for extended study. This fifth year will be compatible with resident hospital appointments and will count as the first year of service for those who elect to enter the Government employ. The school and hospital are to be merged into closer relationship than heretofore and one head is to direct both with the aid of a school committee and a hospital committee chosen from the staff. The director is debarred from private practice and from professional work in the hospital and is to reside within the precincts. Dr. Keatinge has been selected as the first director. A few native teachers will be superannuated, and preliminary scientific subjects will be omitted from the course. Five or six new appointments will be filled by Englishmen, including two resident posts worth about £240 a year, with rooms but without board. The visiting physicians and surgeons, with, of course, right to private practice, will be paid at the rate of £400 and £320 a year. The details of these vacancies have not yet been fixed by the Government, but they will shortly be advertised in the medical press.

Institut Egyptien

Exactly a hundred years ago Napoleon created an Egyptian Institute for discussing scientific questions relating to this country. Several papers bearing on medicine and sanitation were read by well-known army doctors such as Desgenettes, Bruant, Savaresi, and Larrey. Eventually the Institute decayed and was revived by French influence, since when it has been a French stronghold from which all but a few Egyptians and Italians were excluded. For some years there has been but one English member and he was only elected after being blackballed three times. But now a compliment has just been paid to the English medical men in Egypt by the unsolicited election of Dr. Sandwith to a vacancy among the forty.

British Wounded in the Soudan.

Written despatches from the Atbara have not yet reached Cairo, but we know by telegram that the wounded are doing as well as can reasonably be expected under antiseptic care in a hot, dry climate. The following particulars of the

wounds received by soldiers in the storming of Mahmoud's entrenchments on April 8th show that the firing must have been directed low—perhaps after several volleys fired over the heads of the attacking party. Head, 1 severe, 1 slight wound; chest and stomach, 3 severe, 4 slight; hand and arm, 4 severe, 10 slight; shoulder and back, 2 severe, 3 slight; thigh, 3 severe, 3 slight; knee, 7 severe, 1 slight; leg and ankle, 18 severe, 6 slight; not specified, 16; total, 82 wounded. All the wounds in the British brigade were from rifle-bullets, with the exception of two slight spear-wounds, and to-day a telegram has come to say that all the bullets have been extracted. The wounded are now at Genenetti, on the Nile, about twenty miles north of Berber. Thence the new railway will carry them to Wady Halfa, where they will be shipped by steamers to Assouan. The slightly wounded will then travel by post boat to Luxor and thence by train to Cairo, while for the severe and dangerous cases Messrs. Cook's steamer *Mena* is being fitted up as a hospital ship to bring them by river from Assouan to Cairo, under charge of Surgeon-Captain O'Callaghan.

Medical Officers.

The following officers are now with the British troops at the front:—Brigade-Surgeon-Lieutenant-Colonel Macnamara as principal medical officer; Surgeon-Major Robinson, Surgeon-Major Smythe, Surgeon-Major Stuart, Surgeon-Major Braddell, Surgeon-Major Carr, Surgeon-Major Adamson, and Surgeon-Major Mathias; Surgeon-Captain Marder, Surgeon-Captain Reilly, and Surgeon-Captain Borradaile; Surgeon-Lieutenant Bliss, Surgeon-Lieutenant Cummins, and Surgeon-Lieutenant Hopkins. Nearly all the senior officers were fortunate enough to be at the fight of April 8th. It is now fully believed that there will be no more fighting until the Nile rises, and the army generally is anxiously expecting a few weeks' leave.

Cairo, April 13th.

Obituary.

HENRY MARSHALL, M.D. EDIN., F.R.C.S. EDIN., F.R.S. EDIN., M.R.C.S. ENG.,

CONSULTING SURGEON TO THE BRISTOL GENERAL HOSPITAL.

AFTER a short illness Dr. Henry Marshall died at his residence, Caledonia-place, Clifton, on April 24th, the cause of death being pneumonia following influenza. Dr. Marshall, whose father was for many years vicar of Christ Church, Clifton, was born at Edinburgh in 1833 and received his medical education at Edinburgh University, where he graduated M.D. in 1855. Four years later he obtained the F.R.C.S. Edin., having taken the M.R.C.S. Eng. in 1854. After holding resident appointments at the Edinburgh Royal Infirmary Dr. Marshall commenced practice in Bristol and was appointed surgeon to the Bristol General Hospital. Having practised as a surgeon in Bristol for about ten years he severed his connexion with the hospital, except that he was appointed consulting surgeon to the institution, and henceforth practised as a physician. He was also for some years lecturer on medical jurisprudence at the Bristol Medical School. The deceased was F.R.S. Edin. and a past-president of the Bath and Bristol branch of the British Medical Association. Dr. Marshall on one occasion became involved in litigation through having, with another medical practitioner, signed a certificate of lunacy in the case of a woman, who brought an action which was tried at the Bristol assizes. A verdict was returned in favour of both defendants and members of the profession raised a subscription to show their sympathy and to defray the costs of the action. Dr. Marshall was a zealous Churchman and was for many years president of the local branch of the English Church Union. Sympathetic allusions were made to his death by the Bishop and the Dean of Bristol in their sermons on April 24th. The deceased, who was one of the best known medical practitioners of Clifton, was extremely popular and highly respected and much sympathy is felt for the widow and children.

ROBERT HENRY SCANES SPICER, M.D. ST. AND.

THE death is announced at the age of seventy years of Dr. Spicer of North Molton, Devon. He was the only son of the late Robert Spicer of Exeter and obtained his professional education at the Middlesex Hospital. After taking the diploma of M.R.C.S. Eng. in 1855 he at once returned to his native county to North Molton where he practised for forty-three years. He was at work to the last, only the day before his death setting a fractured leg. He passed away after a few hours' suffering from cardiac failure, of which, however, he had had previous warnings. He had always taken the keenest interest in the welfare of the parish and its inhabitants and many a young fellow in both hemispheres owes his start in life and his present good position to the recommendation, advice, and assistance of Dr. Spicer. He was a man of wide general information and culture and was, moreover, an enthusiastic and accomplished sportsman of the old school, to which belonged his friends Parson Jack Russell, Mr. Froude Bellew, and the Rev. John Matthews. Popular and respected by persons of all ranks and opinions in North Devon he has gone to his rest amidst tokens of widespread regret, leaving five children to lament their loss and to cherish his memory.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jules Worms, principal medical officer of the Northern of France Railway and a well-known authority on hygienic subjects. He was born in 1830 in Alsace and studied medicine in Strasburg. He was in the early part of his professional career anatomical assistant in the Military Medical School of Val-de-Grâce and subsequently served as surgeon in the Crimean War. His investigations on the spread of diphtheria and cholera were well known and he was the author of various articles in Dechambre's Dictionary of Medicine. His reading was especially wide and he frequently brought the advances in surgery and gynæcology made in Germany and English-speaking countries under the notice of his medical brethren in France.—Dr. G. Dragendorff, formerly Professor of Pharmacognosis in the University of Dorpat. He died at Rostock, his native place, where he had been living for several years and where he took his degree of Doctor of Philosophy, for he was not a medical man but a pharmacist. In 1862 he went to St. Petersburg as editor of the publications of the Pharmaceutical Society and director of its laboratory, in which capacity he had to occupy himself to a considerable extent with forensic medicine. In 1864 he was appointed to the chair of Pharmacy and to the charge of the Pharmaceutical Laboratory at Dorpat, or Iurieff as it is now called, where he remained until his resignation four years ago. He published a great number of works on medicinal plants.

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.[1]

(FROM OUR SPECIAL CORRESPONDENT.)

HEALTH AT SCHOOL.

ON considering the resolutions which were read out at the final meeting and before the whole Congress it is impossible to avoid a feeling of surprise at their weakness both in bulk and in quality. For instance, one of the best attended sections of the Congress was that dealing with infancy and school life. Here the debates were long and arduous, yet but little was brought forward at the general meeting as resulting from these debates. There was the resolution in favour of the short holiday colonies which I have already described, another demanding that all accouchements should be managed according to the principles of antiseptics, and from the seventh section, which dealt with the question of exercise at school, there were some platitudes to the effect that outdoor exercise was the best form of exercise especially for early childhood and that gymnastics or other special forms of muscular effort which are employed to correct malformations, &c., should be treated as therapeutics rather than as exercise in the ordinary sense of the word. Though there was thus such a poor outcome so far as practical resolutions are concerned, some

[1] Previous reports of the proceedings at the Congress were published in THE LANCET of April 16th and 23rd, 1898.

good papers had been read. The fact is that the Spaniards, who naturally formed the majority in all the sections, have very vague ideas as to the methods of working a congress by means of resolutions. Indeed, the word "resolution" in this sense does not seem to be known to them and the word "conclusion" is used instead, which again is sometimes confused with the word "theme." Thus instead of a pithy resolution consisting of but a few words we were sometimes treated to three or four pages of lengthy dissertations. It was like voting in favour of a pamphlet instead of a resolution. Yet Miss Mercedes Zella worded her conclusions in a practical manner, dividing them under numbered headings: Thus (1) that all school books should be printed in clear, large type; (2) that the paper should not be transparent; (3) that children's eyes should not be strained and that they should not be compelled to stoop over their books; (4) that the lines should not be more than eight centimetres in length, &c. These points, though adopted in the section, were not presented at the general meeting.

STERILISED MILK AND REDUCED INFANT MORTALITY.

One of the most carefully prepared papers read in this section was presented by M. Clement Gény, administrator of the school funds, the *crêches*, and the school colonies of the First Arrondissement of Paris. He showed that the number of children, aged under one year, dying in Paris amounted to 10,000 in 1886; and, in spite of the increase of population, to only 7665 in 1895. The average for the seven first years in this period was 8850, that for the last three years 7573, which is equal to a gain of 14·4 per cent., and this would be higher still if the increase of population were taken into account. In 1886, of the children under one year of age, 364·5 died per 1000; in 1895 the proportion per 1000 was 254·2. The reduction in the death-rate is especially marked in respect to diseases of the digestive organs and with regard to zymotic diseases. There has also been a notable reduction in the number of infants who have died from syphilis, the annual average of deaths from the latter disease being 232 up to 1892 and only 143·5 since that date. But in the same lapse of time the deaths from tuberculosis have increased. M. Gény considers that the more general practice of sterilising the milk given to infants has largely contributed to bring about these good results. This was only done in rare instances previously to the year 1893; but at about that date the utility of such precautions began to be appreciated by the public at large. M. Gény also showed that the proportion of infants who die from diseases of the digestive organs is much greater among those who are fed from the bottle, but that this proportion has been reduced by the abolition of the tubes, the introduction of better bottles, and of sterilised milk. He therefore concluded that the great saving of infant life realised in Paris since the year 1893 is due: (1) to the hygienic measures taken by the city of Paris to prevent the spread of infectious diseases, notifications, disinfections, &c.; (2) to the treatment of diphtheria by the antitoxin serum of Behring and Roux; and (3) to the more general use of sterilised milk and improved feeding bottles. The employment also of the *couveuse* has rendered great service, as formerly 66 per cent. of the children weighing at birth less than two kilogrammes died, whereas now with the aid of infant incubators the greater number are saved. M. Gény therefore urged that hospitals, charitable institutions, and poor relief authorities should provide themselves with incubators so as to help to save the children of the poor.

AN INTERNATIONAL BACTERIOLOGICAL COMMISSION.

The first section, dealing with Bacteriology, passed some important resolutions, which were read out and confirmed at the final general meeting. One resolution was to the effect that an international bacteriological commission should be elected. The names of seven German and six French bacteriologists were suggested, together with those of Dr. Woodhead and Dr. Allan Macfadyen for England. One or two names were mentioned for most of the other nationalities. Then Dr. Janowski, Chief of the Medical Service at the Hospital of the Infant Jesus at Warsaw, proposed a resolution to the effect that there should be a standard definition of diphtheritic antitoxin in all places where serum is produced. On the proposal of Dr. Chantemesse of the Pasteur Institute it was decided that the International Bacteriological Commission should study this matter and report to the next Congress with a view of indicating a method by which antitoxin could be rendered of uniform strength in all countries. Further, the Commission should prepare a report on the question of the harmlessness of anti-diphtherial serum when used in cases of laryngitis and other minor affections. The Commission was also requested to deal with the dangers resulting from the local antiseptic treatment of diphtheria. The section unanimously recognised that such treatment favoured secondary consequences and deprived the organism of its principal means of defence against the malady.

TUBERCULOSIS.

Referring to the Bacteriological Section I should mention an important paper which was read concerning Tuberculosis. At Geneva Dr. Georges Perron commenced some experiments which he continued at Valencia, where Dr. Amelio Gimeno, the general secretary of the Congress, took the matter up energetically. Dr. Jean Torres Babi also joined in the work and the paper was presented in the name of these three gentlemen. They obtained serum from donkeys and with this serum rendered guinea-pigs immune against tuberculosis. The first experiments gave every promise of success. When they applied the serum to human beings they obtained good results for external tuberculosis of the knee and other parts and for lupus. Their patients seemed to be cured. But when dealing with tuberculosis of the lungs the result was very different. Microscopic examination had revealed the presence of the Koch bacillus, but the patients had no fever, no night sweats, and no yellowish-green sputa. Treated with the serum their general health at first seemed to improve and the number of the Koch bacilli decreased in notable proportions. On the other hand, the streptococcus and staphylococcus pyogenes increased. In two cases the last sputa examined showed that the Koch bacilli had entirely disappeared; but with the disappearance of the specific bacillus of tuberculosis hectic fever set in, and one patient died in eight and the other in ten days with the symptoms of septic poisoning. In consequence of these experiences the writers of the paper conclude that tuberculosis and pulmonary phthisis are two absolutely distinct diseases. Tuberculosis is due to the Koch microbe and can be cured by the serum they have prepared. The second is a consequence and after result of the first, due not only to the bacillus of tuberculosis, but also to the streptococcus and the staphylococcus. No remedy has yet been found for this latter development of the disease; it is characterised by hectic fever, nocturnal perspiration, purulent expectoration and cachexia. The experiments made seem to indicate that there is antagonism between the different agents of phthisis and that it is at least dangerous to attack one of these agents without simultaneously destroying the others. Therefore to treat tuberculous phthisis it would be necessary to obtain serum from a donkey which had been rendered immune, not only against the Koch bacillus, but also against the streptococcus and the staphylococcus found in the sputa of phthisical patients. The serum they have prepared from a donkey could be used when dealing only with the Koch bacillus, as, for instance, in the case of children born from phthisical parents, when it could be employed as a preventative.

GEOGRAPHY AND SOCIAL ASPECT OF TUBERCULOSIS.

In the third section, dealing with Climatology, the question of Tuberculosis also came up for discussion. Dr. Albert Palmberg of Finland presided and read a statistical paper on the Geographical Distribution of Phthisis in that country. He did not think the cold was in itself a cause of increased mortality because the Laplanders and those who lived furthest to the north suffered less, but in winter patients could not obtain as much fresh air and out-of-door exercise; also the beneficent effect of sunlight was less felt. In Finland the most fatal months were March and April, when the temperature was relatively high; but at that time, as the contrast between indoor and outdoor temperature decreased, there was less ventilation through the body of the walls and the smaller fires caused less draught.

Dr. Ph. Hauser of Madrid had also a very interesting historical paper on Tuberculosis, from which he concluded that the problem was not only a medical but also a social question. A crusade should be organised against the sputa of phthisical patients. The pathogenic germs were present in all large aggregations of human beings and the disease was one of the consequences of economic and social evolution. The remedy was the improvement of the physical, moral, and intellectual well-being of the population. The disease was the consequence of human degeneration by which the weak were swept away

to make room for the strong. Though infectious it only infected the weak. It may be cured if the patient can be placed under conditions which favour the re-establishment of the equilibrium between his organic forces; and as in the struggle for existence this is often impossible it becomes quite as much an economical or social as a medical question. Section III. finally carried the following resolutions:—

1. The danger of tuberculosis is sufficiently urgent to necessitate legislative intervention.
2. To succeed in this respect we must complete our knowledge as to the causes of propagation or contagion.
3. All nations should study the geography of tuberculosis as the best means of acquiring the necessary knowledge of the subject. To avoid errors this study should be extended over a period of twenty years.
4. The struggle against tuberculosis should be a subject of discussion in all congresses and such discussions should be continued till the disease is finally eradicated.

OLD CLOTHES AND HAIRDRESSERS.

With regard to the prophylaxis of infectious diseases generally a resolution proposed by Dr. F. Ovilo was carried unanimously in the second section and confirmed at the general meeting. The resolution was worded as follows:—

Firstly, old clothes are often a certain vehicle for the transmission of such serious diseases as tuberculosis, diphtheria, small-pox, scarlet fever, &c. The sale of old clothes should be forbidden unless they have been disinfected.

Secondly, the utensils and implements used by hairdressers are often the cause of skin diseases and other more serious complaints such as lupus and syphilis. Each person should use his own scissors, &c., and the authorities should seek by all possible means to induce hairdressers to employ rational means of disinfection. In no case should the master hairdressers be allowed to compel their assistants to attend to the hair of persons bearing evident signs of disease that are known even by the profane (*sic*) public.

URBAN SANITATION.

The discussion which had been anticipated with regard to the drainage of Paris did not take place. Of the two delegates appointed by the Parisian house proprietors' syndicate one only reached Madrid. Evidently he felt that there was a strong majority against him, for he did not venture to raise the question at issue. Consequently the section on Urban Sanitation was able to carry the following resolutions, which were also approved by the general and final meeting:—

1. Public health is ameliorated and the outbreak of epidemics prevented in towns and dwellings by the immediate removal of all fermentable matter and by an abundant distribution of water.
2. The pavement of the streets should be smooth and as impermeable as possible, so as to be easily cleaned and so as to prevent the contamination of the subsoil.
3. Special measures should be taken in the construction of houses, so as to protect the walls and the entire building from damp and from subsoil emanations.
4. The drains within the houses ought to be so constructed and laid as to prevent any stagnation and to secure a rapid flow to the street sewer of soil and slop water. The drain-pipes must be water-tight and air tight, perfectly constructed and ventilated and provided with syphon traps to protect the interior of the dwelling from all sewer air.
5. The public sewers should assure the rapid flow of sewage, so that there shall be no stagnation till the outfall has been reached. The sewers must be thoroughly ventilated.
6. The width of the streets must be as great as possible and in proportion to the height of the houses. This proportion should be established in all localities taking into consideration local and climatic circumstances. The light should have free access to the innermost parts of inhabited dwellings and there should be windows on at least two sides of the building.
7. Special regulations or by-laws should be made in each locality by the public authorities so as to render the practical application of the above principles obligatory. The Government and the municipalities should resolutely seek to realise these principles and more especially those that relate to the interior of dwellings.

THE MILITARY AND NAVAL SECTION.

The Military and Naval Section does not seem to have passed any resolutions, but there were some very interesting debates. The French officers present produced a great impression when they explained that the prevalence of typhoid fever had been reduced in the ranks of the army and the general health of garrison towns improved by prohibiting resort to *cafés* and dram-shops, where the water employed was not above suspicion. The soldiers were ordered not to enter these places and the tradesmen soon found it to their advantage to improve their water-supply.

THE BRITISH SECTION AND THE PERMANENT COMMITTEE.

The Permanent Committee, which was appointed according to the resolution carried at the London Congress, 1891, consists of 29 members, of whom 3 are English, for the division of Hygiene, and of 15, of whom 1 is English, for the division of Demography. Of these 44 members only 10 were present at Madrid and all the 4 British representatives were absent. Fortunately the Permanent Committee may fill up vacancies and may appoint assistant members during a session of the Congress. Consequently the 10 members of the Permanent Committee invited more than 30 of the delegates to assist at the meeting which was to be held early on the Thursday morning. Surgeon-Major Macpherson, delegate of the War Office, and Dr. MacAlister, were requested to be present on behalf of the British Section. It was generally felt that though the Permanent Committee had the legal right to select these gentlemen, still they would hold a much stronger position if their appointment was confirmed by the British Section. Mr. Adolphe Smith, having secured the approval of a few other British members of the Congress, took the initiative of convoking a meeting of the British Section. After a good deal of canvassing this meeting was held at the Hotel de la Paix on the Wednesday after the reception at the Court. 17 British delegates were present and 7 were absent. Dr. MacAlister was voted to the chair. As the members of the Permanent Committee were elected for two congresses at Budapest it was supposed that their mandate would be exhausted at the end of the Madrid Congress. Therefore the British Section thought itself entitled to suggest names for the next Permanent Committee. A good deal was said about figure-heads who did no work and about the mismanagement of the British Section on the present occasion, together with the failure to obtain information and the promised reduction on railway fares. Some delegates, however, testified to the promptitude and courtesy with which Dr. Corfield had answered their letters of inquiry. Others declared that the only information they had obtained was from the columns of THE LANCET. Several prominent names were suggested for the Permanent Committee, and objections were made that, however eminent in the realms of science, these gentlemen had no special experience of international congresses nor were they likely to be able to devote much time to explaining to intending members how they were to obtain rooms and travel at reduced rates, &c. But it was generally agreed that when the next Congress was near at hand a sub-committee or organising national committee would have to be appointed to look after the interests of the British members of the forthcoming Congress. On this understanding the following names were approved unanimously: Lord Lister, Dr. Vivian Poore, Sir Richard Thorne, and Dr. J. Tatham, with the names of Professor Lane Notter of Netley and Dr. Corfield as alternatives if any of the above gentlemen declined to act. The meeting was then about to adjourn, but Mr. Adolphe Smith protested that it was absolutely indispensable to give the British representatives some instructions as to how to act at the meeting of the Permanent Committee to be held on the morrow. He explained that the Congress had of late lost much of its influence because it failed to act in a collective capacity; that as the next Congress would probably meet at Paris an effort would be made to revert to the earlier and better methods of organisation; and he concluded by urging that the British representatives should support such an attempt. This suggestion was approved and the meeting adjourned.

THE PERMANENT COMMITTEE AND THE NEXT CONGRESS.

Forty-seven invitations to attend the Permanent Committee were issued and 40 of the persons who were invited attended. Invitations to hold the next congress at Lisbon and at Brussels were received, but these were withdrawn in favour of Paris during the great Exhibition of 1900. It was then decided that the International Medical Congress and the International Congress of Hygiene should be held in succession one after the other, so that some, at least, of the medical men attending might be present at both congresses. Further, it was resolved to ask the Medical Congress to transfer its section of hygiene to the Congress of Hygiene. With regard to the latter congress the opinion was expressed that the number of sections should be considerably reduced and that, apart from the opening and closing ceremonies, there should be plenary sittings of the entire Congress at which scientific subjects would be discussed. The Permanent Committee confessed that it had failed to revise the resolutions to be submitted to the present Congress but promised to do so in future. A mistake had been made with regard to the election of the Permanent Committee, for though appointed at Budapest it did not sit at Budapest and the two congresses placed under its direction were those of Madrid and the forthcoming congress to be held at Paris. Nevertheless, it was generally felt that the Permanent Committee required to

be strengthened and therefore it was decided to appoint an executive committee which was to act when any emergency occurred. This executive committee was to consist of all the general secretaries of all previous congresses, therefore of experienced congressists, and consequently Dr. Vivian Poore, as the general secretary of the London Congress, represents Great Britain on the executive committee. This committee has the power to appoint three or four persons experienced in the management of congresses. Perhaps we have here, at last, a body technically capable of acting.

A WORD IN PRAISE OF OUR HOSTS.

Looking upon the Congress as a whole I think I may safely assert that it has come to the vast majority of the foreign members as an agreeable surprise. It was not supposed that Spain would do so well, especially in the present critical political situation. The Spaniards are not a business people; they have but little sense of the value of time and these national defects naturally made themselves felt in matters of detail during the Congress. These shortcomings were, however, more amusing than mischievous. For instance, after an excellent dinner given by one of the learned bodies of Madrid the foreign guests present were really more pleased at having the *menu* served to them with the cheese than if it had been forthcoming at the proper time, as this accident supplied the pretext for a little good-humoured merriment. Of the various entertainments and receptions given I have already spoken at some length, but I have not mentioned that the foreign military and naval surgeons were greatly impressed and delighted with the banquet and welcome given to them by their medical colleagues of the Spanish army and navy. It is especially in the social relations established during the Congress that the foreign members have most reason to congratulate themselves on having come to Spain. After all, it is exceedingly pleasant to be in a country where everyone knows how to behave like a gentleman, from the beggar in the streets to the grandee standing on the steps of the Throne. This is all the more welcome as a contrast to the manners displayed by the young students and others who were admitted to the Congress at Budapest. At the Madrid town-hall and elsewhere there undoubtedly was a crush at the buffets, but there were no unseemly scenes. The crush was due to the fact that there were more guests than the building could hold and whenever a foreign delegate made himself known the Spaniards standing in front of him always either made room or tried to pass to him what he wanted. A Spaniard would die a thousand deaths rather than compromise his dignity. A beggar in Spain will refuse relief if it is not given politely. Spain is lacking in the energy, the enterprise, and the capacity for hard work which characterise the virile population of Hungary; but the Spaniards are a race of gentlemen, and this is a very great advantage, especially when so delicate a matter as an international congress has to be taken in hand. Consequently the foreign members carry away with them a very favourable impression of the Madrid Congress. They were, I repeat, most agreeably surprised. If Spain is as ready and able to face the United States of America in war as she has proved herself able, contrary to the anticipations of many, to carry out the work of peace which the Congress came to achieve, the Americans are likely to experience surprises as disagreeable as those of the Congress were agreeable.

TORBAY HOSPITAL RECREATION GROUND.—The land acquired by Torquay as a Jubilee memorial of the Queen's reign was on April 14th formally presented to the governors of the Torbay Hospital by Mr. Rockhey, the ex-mayor, and has been converted into a recreation ground for the use of the patients and staff. The outlay in connexion with the scheme was about £1700.

PRESENTATIONS TO MEDICAL MEN.—On the occasion of the presentation of certificates to the successful members of the Pinxton Collieries Ambulance Class on April 17th, Mr. T. Corkery, M.D. Irel., of Alfreton, the instructor to the class, was the recipient of a silver vegetable dish as a thank-offering for his First Aid instructions.—Dr. Connor, superintendent of the Glasgow Medical Mission, has been presented by the workers and friends associated with him with a number of surgical books and instruments as a practical recognition of his services during the past twelve years.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In April the following candidates passed in the subjects indicated:—

Surgery.—J. Buckley (Section II.), Manchester; F. W. Chesnaye (Section I.), St. George's Hospital; A. E. Freer, St. Mary's Hospital; F. Hasler (Section I.), London Hospital; T. C. Last, St. George's Hospital; F. A. Leete (Section I.), Royal Free Hospital; G. M. F. Pereira, Calcutta and Royal Free Hospital; J. M. Sanderson, Cambridge and London Hospital; and T. B. Sellors, Middlesex Hospital.

Medicine.—J. Buckley (Section II.), Manchester; E. R. R. Cheesman, Charing-cross Hospital; W. A. Clement, Bombay; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; F. Hasler (Section I.), London Hospital; H. W. Hues, Birmingham; E. J. Trevor-Jones, St. Thomas's Hospital; F. A. Leete (Section I.) and Miss Pantin (Section II.), Royal Free Hospital; O. T. A. Phillips, Cardiff and London Hospital; and J. M. Sanderson, London Hospital.

Forensic Medicine.—E. R. R. Cheesman, Charing-cross Hospital; W. A. Clement, Bombay; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; F. Hasler, London Hospital; H. W. Hues, Birmingham; M. Jenkins, Guy's Hospital; J. Jones, Edinburgh and London Hospital; F. A. Leete, Royal Free Hospital; O. T. A. Phillips, Cardiff and London Hospital; and W. R. Wilson, Dublin and Belfast.

Midwifery.—J. Brown and J. Buckley, Manchester; P. Cator, St. Bartholomew's Hospital; H. E. Dalby, Charing-cross Hospital; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; W. St. G. G. Hill, St. Mary's Hospital; B. Hogan, London Hospital; H. W. Hues, Birmingham; O. T. A. Phillips, Cardiff and London Hospital; R. C. Robertson, Charing-cross Hospital; J. M. Sanderson, London Hospital; T. B. Sellors and O. C. Sibley, Middlesex Hospital; N. Walmisley, St. Bartholomew's Hospital; A. J. Watson, St. Mary's Hospital; and W. R. Wilson, Dublin and Belfast.

The diploma of the Society was granted to the following candidates: Messrs. J. Buckley, W. A. Clement, S. R. Hallam, B. Hogan, M. Jenkins, T. C. Last, T. B. Sellors, and E. J. Trevor Jones, and Miss Pereira.

UNIVERSITY OF DURHAM.—At the first Examination for the degree of Bachelor in Medicine, held at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners:—

OLD REGULATIONS.

1. *Chemistry with Chemical Physics, and Botany with Medical Botany.*—William Purton Allen Hardwicke, College of Medicine, Newcastle-upon-Tyne.
2. *Chemistry with Chemical Physics.*—Francis Bernard Henry Caudwell, M.R.C.S., L.R.C.P., Charing Cross Hospital; Herbert William Dudgeon, M.R.C.S., L.R.C.P., Guy's Hospital; and Richard Denington Fisher, M.R.C.S., L.R.C.P., London Hospital.
3. *Elementary Anatomy.*—William Ernest North Smith, College of Medicine, Newcastle-upon-Tyne.

NEW REGULATIONS.

1. *Elementary Anatomy and Biology, Chemistry, and Physics.*—*Second Class Honours:* Harry Jessop, Mason College, Birmingham. *Pass List:* Katharine Mary Helen Hawkins, London School of Medicine for Women; and Kenred Mason, Leonard Montgomery Markham, Leonard Clark Newton, Robert William Nevin, and Frederick Charles Ramsbottom, College of Medicine, Newcastle-upon-Tyne.
2. *Chemistry and Physics.*—Alice Maud Dodd and Ida Emilie Fox, London School of Medicine for Women; Henry Wallace Furnivall, University College Hospital, London; James Alfred Giles, College of Medicine, Newcastle-upon-Tyne; Ivon Henry Skipwith Hawes, St. George's Hospital; Florence Dyer Durell Ledgard, London School of Medicine for Women; and Edward Henry Milner-Moore, St. Mary's Hospital.
3. *Elementary Anatomy and Biology.*—Thomas Engelhart Amyot, College of Medicine, Newcastle-upon-Tyne; Anthony Bourchier Bradford, St. Thomas's Hospital; Clement Harlow Cox, Mason College, Birmingham; Marshall Haver and Ernest Edward Norman, College of Medicine, Newcastle-upon-Tyne; Thomas Eben Pemberton, Mason College, Birmingham; Ralph Stuart Renton, College of Medicine, Newcastle-upon-Tyne; Gayton Warwick Smith, Guy's Hospital; and Basil Edward Spurgin, College of Medicine, Newcastle-upon-Tyne.
4. *Elementary Anatomy, Chemistry, and Physics.*—George Ernest Froggatt, Middlesex Hospital; Alfred Ernest Gisburn, College of Medicine, Newcastle-upon-Tyne; Philip Arthur Hendley, King's College, London; Vincent Blumhardt Neafield, St. Mary's Hospital; and Godfrey de Bec Turke, King's College, London.
5. *Elementary Anatomy.*—Charles Ravenscroft Stewart, St. George's Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Heidelberg:* Dr. Gottlieb has been promoted to the chair of Pharmacology, in succession to the late Dr. W. von Schroeder.—*Madrid:* Dr. Don Antonio Alonzo Cortés of Valladolid has been appointed to the Professorship of General Pathology, in succession to the late Dr. Letamendi.—*Montpellier:* Dr. Baumel has been appointed to the Clinical Professorship of Children's Diseases and will be the first occupant of the chair.—*Rome:* Dr. Giacomo Rem-Picci and Dr. Ferruccio Schupfer have been recognised as *privat-docenten* of Medical Pathology, Dr. Tullio Rossi-Doria as *privat-docent* of Midwifery and Gynæcology, Dr. Saverio Santori

as *privat-docent* of Hygiene, and Dr. Paolo Casciani as *privat-docent* of Medical Hydrology. — *Parma:* Dr. Camillo Lodigiani has been recognised as *privat-docent* of Surgical Pathology and Operative Medicine, and Dr. Serafino Patellina as *privat-docent* of Midwifery and Gynæcology.—*Turin:* Dr. Alberto Benedicenti has been recognised as *privat-docent* of Experimental Pharmacology.—*Vienna:* Dr. Emil Schwartz has been recognised as *privat-docent* of Internal Medicine.

MEDICAL MAGISTRATES. — Mr. F. H. Woods, L.R.C.P. Edin., M.R.C.S. Eng., J.P., of Uralla, and Mr. J. Baldwin Meredith, L.R.C.P., L.R.C.S. Edin. L.F.P.S. Glasg., J.P., of Raymond-terrace, have been appointed members of the Licensing Court for the licensing districts of Uralla and Raymond-terrace, New South Wales respectively.

A SEQUEL TO THE SKIN-GRAFTING CASE AT AUCKLAND.—At a meeting of the Auckland Charitable Aid Board an application from Dr. A. C. Purchas (defendant in the skin-grafting case which was reported by our New Zealand correspondent in THE LANCET of April 23rd), under date March 5th, for three months' leave of absence as honorary surgeon of the District Hospital was declined, and it was agreed to declare the office vacant and to call for applications for the position. In this connexion Mr. Baldwin wrote a memorandum to the secretary of the board stating that he had not received any official notification that Dr. Purchas had left the colony and as it was his week of duty he would be glad to know what arrangements were to be made for the care of his patients. It was unanimously resolved that should Dr. Purchas again apply for appointment to the honorary staff he should be asked to explain why he did not comply with the hospital regulations which provide that he should have arranged with the medical superintendent for the care of his patients when about to leave the hospital.

FACTORY GIRLS' COUNTRY HOLIDAY FUND.—The annual meeting of subscribers to this fund was held at the Mansion House on April 22nd. The Lord Mayor presided and said that during the past year 1250 girls had been sent into the country for 2120 weeks at a cost of £1230, of which he was glad to see that £246 were paid by themselves. Princess Christian had consented to become patroness in place of the late Duchess of Teck, who gave the fund her valuable support in the earliest and most difficult stage of its existence. He urged that one of the most satisfactory features of the work was that those who were sent away for a holiday contributed whenever possible to the expense and that therefore while they were helped they were not pauperised. Mrs. Garrett Anderson urged the immense importance of the country holiday to the girls and the pleasant and helpful recollections it provided them with all the year round. Mrs. Arnold White said that this was not a question of charity but of national importance. The factory girls were penned up in our great cities, shut out from all the health-giving delights of nature, and yet they were to be the mothers of the future. This crowding into the great cities was really deteriorating the fibre of the nation; the monotony of toil was part of the pathos of the city. Canon Newbolt, Miss Yeatman, Mr. Barton Kent (Master of the Skinners' Company), and Mr. W. G. Rawlinson also appealed most earnestly for increased support for the fund. The honorary secretary is Miss Canney, St. Peter's Rectory, Saffron-hill, London, E.C.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, APRIL 21ST.

The Food and Drugs Bill.

MR. CHAPLIN, replying to Mr. Channing, said he would introduce the Bill to amend the Food and Drugs Act as soon as he saw any prospect of making progress with the measure.

Imported Milk.

Major Rasch asked the President of the Local Government Board whether his attention had been called to the resolution passed by the Central Chamber on April 5th with reference to the importation of chemically treated French milk and whether he proposed to take any steps to exclude it.—Mr. Chaplin replied that his attention had been called to this resolution, but the Local Government Board had no power to prohibit the importation of milk into this country or any other article of food or drink and he had not at present evidence which would justify him in taking such action even if it were in his power.

Poisoning at Gosport.

Major Rasch asked the Financial Secretary to the War Office whether his attention had been called to the poisoning of certain soldiers by vinegar said to have been adulterated with arsenic at Gosport and whether he could say if the article was of foreign manufacture, and if not if he would give the name of the contractor.—Mr. Powell Williams replied that the inquiry which had taken place had shown that a further investigation was desirable, and he did not think it advisable at the present moment to make any detailed statement on the subject.

Prosser's Well at Maidstone.

Mr. Henry J. Wilson asked the Secretary to the Treasury, in view of the fact that the chemical officers of the Inland Revenue were appointed referees in disputed cases of adulteration under the Sale of Food and Drugs Act and that water was specially excluded from the operation of that Act under Clause 3, would he state whether it was in any way the duty of the chemical officers to undertake the analysis of water for sanitary purposes and act as referees in disputed cases; and under what authority the chemical officers of the Inland Revenue recently analysed the water taken from a well at Maidstone known as Prosser's Well and in their report expressed the opinion that the water was not liable to contamination; whether, as a consequence of such report, the application to the court to close the well was refused; was he aware that this well was in close proximity to houses in which no less than 14 cases of enteric fever occurred during the recent epidemic; and whether, seeing that the report was not signed by the chief of the laboratory, the action of these chemical officers was sanctioned by the responsible authority.—Mr. Hanbury said that under section 70 of the Public Health Act, 38 and 39 Vict. cap. 56 the magistrates were empowered if they saw fit to cause water of which complaint was made to be analysed at the cost of the local authority. In cases of difficulty the magistrates occasionally asked for the assistance of the Government laboratory and it had been the practice for many years when such assistance was asked for by the court to undertake an analysis of water. In the present instance the Justices at Maidstone requested the assistance of the Government laboratory and it was given in accordance with the usual practice. With regard to the latter part of the question he understood that evidence as to the possibility of danger arising from the local surroundings of the well was given before the court by the medical officer of health and that the magistrates on consideration of all the evidence before them decided to refuse the application. The action of the laboratory officers was not specially sanctioned by the Board of Inland Revenue in this particular instance, but those officers undertook the analysis at the request of the magistrates in accordance with a practice which had for years existed with the approval of the board.

Venereal Disease in the Indian Army.

Mr. James Stuart asked the Secretary of State for India whether he had received a memorial, signed by 79 registered medical women practising in the United Kingdom and in India, protesting against the measures recently enacted for dealing with venereal diseases in the Indian Army; and whether he would lay this memorial upon the table of the House in continuation of the Parliamentary Paper, East India Accounts and Papers, Memorials, and Representations, C. 8495, 415 and C. 8402 of last session.—Lord George Hamilton replied that he had received the memorial and it would shortly be presented to Parliament.

The Institute of Preventive Medicine.

Mr. MacNeill asked the Home Secretary whether he was prepared to grant a licence for the practice of experiments on the bodies of living animals to the new Institute of Preventive Medicine on the Thames-embankment at Chelsea; whether he was aware that a large building, called the animal house, was in course of construction at this institute, where the victims of vivisection experiments were to be kept while awaiting operation and in various stages of their sufferings, and that a crematorium was also in course of construction for the burning of the bodies of animals when destroyed by the vivisectors' experiments; whether he was aware that the Chelsea guardians had passed a resolution deprecating the granting of this licence and that a number of the occupants of the flats on the Embankment had protested against the establishment of this institute in the locality and had given notice to their landlords that they would leave their flats the moment it was established; and whether, having regard to the fact that a petition with 183,607 signatures was presented to the right honourable gentleman deprecating on behalf of the inhabitants of Chelsea the practice of vivisection in their midst, he would withhold his assent to the licensed practice of vivisection in Chelsea.—Sir M. White Ridley replied: I have already stated in this House that after full consideration of every aspect of the question and of representations to which the hon. Member refers I have not thought it possible to refuse the transfer of the registration of the Institute from the present buildings to the new premises in Grosvenor-road. I have satisfied myself that the arrangements at the new premises are perfectly suitable for the purposes for which they are registered. Of course, no painful experiments can be made there until the person wishing to perform them has been properly licensed to do so.

The Supply of Calf Lymph.

Mr. Chaplin, in reply to Mr. Pickersgill, stated that no arrangement had been made, or was proposed to be made, with the British Institute of Preventive Medicine for the preparation or supply by them of calf lymph. The arrangement made was for the hire by the Local Government Board of certain rooms at the Institute for the use of officers of the department in connexion with the preparation or supply of calf lymph by the Board.

The Powers of Vaccination Officers.

Mr. Broadhurst asked the President of the Local Government Board whether, in the case of relieving officers who are also vaccination officers, he intended that they should act in vaccination cases without the authority of the Poor-law guardians or even against their authority, and if so whether legislation would be necessary to provide this new power and if not under what Act the power was given.—Mr. Chaplin said, in reply, that he contemplated that relieving officers who were

vaccination officers should be in the same position in this matter as other vaccination officers and that vaccination officers should undertake prosecutions independently of any directions from the guardians themselves. No new legislation would be required. The vaccination officer would exercise these powers under the Vaccination Acts of 1867 and 1871 and under regulations issued by the Local Government Board under the provisions of the Act of 1874.

The Budget.

There was little of special interest to medical men in the Budget statement made at this sitting of the House by the Chancellor of the Exchequer. Sir Michael Hicks-Beach told the usual story of an increase in the revenue from beer and spirits and tobacco and he was able also to point to a great accession of popularity to the article of cocoa. In the way of concession to the taxpayer he announced his attention to make an abatement of £150 in incomes between £400 and £500, of £120 in incomes between £500 and £600, and of £70 in incomes between £600 and £700. These abatements refer to the amount upon which income-tax is charged.

FRIDAY, APRIL 22ND.

The Dum-Dum Bullet.

Mr. Davitt asked the Under Secretary of State for War whether his attention had been directed to the statements, attributed to Dr. von Brums, in a paper on "Inhuman Weapons of War," read a few days ago at the German Surgical Congress, to the effect that the Dum-Dum bullets used by British troops in the North-West frontier of India produced fearful results on the human body, and that Germany should try to obtain a condemnation from the European Powers of the further use of such bullets; whether any steps would be taken to meet these views; and whether he would forbid the sale of these bullets by British makers to the belligerents in the Spanish-American war.—Mr. Powell Williams said that he had no knowledge of the statements referred to or of the paper mentioned. He thought the general ideas as to the effect of the Dum-Dum bullet were very much exaggerated. It was nothing like so severe as that of bullets which had been previously employed.—Mr. Dillon asked whether the opinions of medical men had been taken by the War Office.—Mr. Powell Williams replied that the English medical officers of the army had been shown the results of the use of this bullet and they were of the opinion indicated in his answer.

Lead Poisoning in the Potteries.

Mr. Coghill asked the Home Secretary whether, to prevent the serious evils arising from the use of lead in the manufacture of china and earthenware, he would appoint a small committee of scientific experts to ascertain if it was possible to use a glaze which would be entirely free from lead in its composition.—Sir Matthew White Ridley replied that he was taking steps to secure the services of two eminent scientific experts to test and report on the various glazes, but it must be clearly understood that the inquiry could deal only with the question of the comparative danger or safety of different materials. The further question how far materials found to be harmless or relatively harmless lent themselves to the practical requirements of each section of the trade was one for the manufacturers to decide by experiment. He felt sure he might count on their coöperation in this matter and their readiness to adopt satisfactory substitutes, if such should be found, for the dangerous glazes now in use.

Prison Medical Officers.

Sir M. White Ridley, in answer to Mr. Pickersgill, said that in England and Wales there were ten local and five convict prisons which had a medical officer who was required to devote the whole of his time to the service.

Vaccination Prosecutions.

Mr. Labouchere asked the President of the Local Government Board whether all prosecutions for non-compliance with the obligations of the Vaccination Act had until now been instituted by boards of guardians; whether it was intended in future that they should be instituted by the medical officer of health, with or without the approval of the board of guardians, under directions from the Local Government Board; and whether the cost of such prosecutions would be a charge on the rates.—Mr. Chaplin replied that it had been the practice of the vaccination officers to institute proceedings under the Vaccination Acts either under general or special directions of the guardians, but he was not prepared to say that it had invariably been the case. There was nothing in these Acts which made it necessary that the guardians should give directions for or approve of these proceedings. It was not proposed that the proceedings should be instituted by the medical officers of health but by the vaccination officers who were under the statute appointed for the express purpose of prosecuting persons charged with offences against the Vaccination Acts or otherwise enforcing their provisions. The cost of prosecutions would be charged on the rates as at present. In reply to a further question Mr. Chaplin said that if vaccination officers refused to fulfil the duties for which they were appointed it would be the business of the Local Government Board to interfere.

The Plague and the Mecca Pilgrimage.

Sir Walter Foster asked whether, in view of the reappearance of plague in Jeddah this year, Her Majesty's Government intended to take any steps to stop the pilgrimage to Mecca from British possessions and from Egypt.—Mr. Balfour replied: It has been found unnecessary to take steps to prohibit the pilgrimage, so far as British Indian subjects are concerned, as the Government of India reports by telegraph that no more Indian pilgrims will leave India for the Hedjaz this season. As regards Malay pilgrims it was decided, when the first outbreak of plague at Jeddah was notified, that it was already too late to prohibit the pilgrimage, as all intending pilgrims for this year's Haj had already left the Straits Settlements. With reference to Egypt the question is one which directly concerns the Egyptian Government, but Her Majesty's Agent and Consul-General at Cairo reports that intending pilgrims have been warned of the danger from plague and informed that those who persist in going in face of this warning will be required to sign a declaration that they will not return to Egypt until the complete disappearance of the plague, and steps have been taken to prevent such return.

MONDAY, APRIL 25TH.

The Treatment of Inebriates.

The Home Secretary introduced and explained the Bill of the Government for the treatment of inebriates. The principal object of the measure, he said, was to substitute for the present penal treatment in prisons of habitual drunkards who rendered themselves amenable to the criminal law—called in the Bill criminal habitual drunkards—a reformatory treatment which should be undergone in institutions specially organised and established for the purpose. These buildings were referred to in the Bill as inebriate reformatories and might either be established by the State—called in the Bill State inebriate reformatories—or by county or borough authorities or private individuals—called in the Bill certified inebriate reformatories. The step now proposed to be taken had already been taken in several foreign countries, and in this country, besides being urged by many local authorities, had in particular been recommended by three recent departmental committees, the Home Office Committee on the Treatment of Inebriates in 1893, the Prisons Committee in 1895, and the Scotch Committee on Habitual Offenders in 1895. Two classes of criminal habitual drunkards were recognised in the Bill. There was first the class of offenders who were guilty of serious crime into which they had been drawn by habits of drunkenness. There was, secondly, the class of petty offenders who appeared continually before the summary courts charged with some one or other of the offences specified in Schedule 1 of the Bill. In their case the drunkenness was the crime or the greater part of it. The first class was deal with in Clause 1, the second in Clause 2. Power was given in both cases to commit to inebriate reformatories under certain conditions and safeguards. These conditions in the first case were that the offender must have been found guilty on indictment of the offence actually charged against him and that the fact of habitual drunkenness, unless admitted by him, must have also been found by the jury. In the second case the conditions were that the offender must be charged with one of the offences specified in Schedule 1 after three convictions of such offences within the previous twelve months, and that unless he consented to his case being disposed of summarily the matter should be tried by a jury. In these cases a committal would only be possible if the jury found both the fact that he had been so previously convicted and the fact that he was an habitual drunkard. The Bill proposed that as a general rule, to which the court would be able to make exceptions if other reformatories were willing to receive them, habitual drunkards of the first class should remain as at present under the complete control of the State and that any period of reformatory treatment to which they might be sentenced should be passed in one of the state reformatories, for which, however, there would be special regulations laid down by the Secretary of State. The second class would be treated in the certified reformatories. These reformatories would require a certificate from the Secretary of State, they would have to conform to the regulations as to management, classification, treatment, employment, &c., which by the Bill the Secretary of State was empowered to make, and they would be subject to inspection by the State. Provision was also made for a contribution from Imperial funds towards the expense of maintaining these institutions. In these respects the analogy of the Reformatory Schools Acts had to some degree been followed. The establishment of these reformatories was not made compulsory upon local authorities. In the case of both classes provision was made for allowing persons committed to reformatories to be released on licence. The second part of the Bill made some improvement in the existing Acts which dealt practically with non-criminal drunkards only. These Acts had not been largely operative and the committees he had alluded to, who made inquiry as to the reason, attributed the fact to the difficulties in the way of admission and readmission into the retreats, the shortness of the *maximum* period of detention allowed, the want of power to require the inmates to engage in healthy occupations, &c. Provision was accordingly made in the Bill to extend the *maximum* period of detention to which a patient might agree to submit himself to two years; to simplify, without weakening the safeguards against abuse, the procedure as regards admission and readmission; and to enable rules to be made regulating among other things the treatment and employment of patients. The Bill extended to England and Scotland, but he would be quite prepared to consider the question of its extension to Ireland.

TUESDAY, APRIL 26TH.

The Troops and Civilian Practitioners.

Colonel Welby asked the Under Secretary of State for War whether he was aware that at stations in the United Kingdom troops and those belonging to troops were in medical charge of civilian practitioners; and whether he could see his way to employing in their stead Army Medical Officers retired on a pension or gratuity, where no additional expense would be entailed on the country.—Mr. Brodrick replied: Yes, sir, a number of civilian practitioners are in charge of troops in the United Kingdom and always have been. Ninety-four medical officers retired on pension are employed and more would be employed if they were willing to accept appointments. There would be no objection to the employment of an officer retired upon a gratuity if he were considered suitable for such employment.

BOOKS, ETC., RECEIVED.

ALCAN, FELIX, Paris.

Chirurgie du Cou. Par F. Terrier, A. G. Guillemain, et A. Malherbe. 1898.

Traité Médico-Chirurgical de Gynécologie. Par F. Labadie-Lagueu. 1898.

ASH, CLAUDIUS, AND SONS, Broad-street, Golden-square, London.

Mechanical Practice in Dentistry. By W. B. Pearsall. Illustrated. 1898. Price 18s. net.

BAILLIÈRE, J. B., ET FILS, Paris.
Nouveaux Éléments de Pathologie Chirurgicale générale. Par Fr. Gross, &c. Tome II. 1898.
Traité de Chirurgie Clinique et Opératoire. Tome VI. 1898. Technique Ophtalmologique Anesthésie: Antisepsie et Instruments de Chirurgie Oculaire. Par Dr. A. Terson. 1898.

BLACKIE AND SON, Old Bailey, London, E.C.
Elementary Chemistry. Practical and Theoretical. First Year's Course. By T. A. Cheetham, F.C.S. 1898.

BLACK, A. & C., Soho-square, London.
Clinical Lectures on Diseases of the Heart and Aorta. By G. W. Balfour. Third edition. 1898. Price 12s. 6d.

CARRE, GEORGES, ET C. NAUD, Paris.
Les Sérothérapies: Leçons de Thérapeutique et Matière Médicale. Par L. Landouzy. 1898.
De la Paralysie générale progressive dans le jeune âge (avant 20 ans). Par Dr. Chas. Thery. 1898.

CASSELL AND CO., London.
The South African Climate. By W. C. Scholtz, M.D. Edin. Illustrated. 1897. Price 5s.
Ringworm in the Light of Recent Research, Pathology, Treatment, Prophylaxis. By Malcolm Morris. Illustrated. 1898.

CHURCHILL, J. & A., Great Marlborough-street, London.
A Manual on Dental Metallurgy. By Ernest A. Smith. 1898. Price 6s. 6d.
A Manual of Dental Anatomy, Human and Comparative. By C. S. Tomes, M.A., F.R.S. Illustrated. Fifth edition. 1898. Price 14s.

GOVERNMENT PRINTING OFFICE, Washington.
Report on Vital and Social Statistics in the United States at the Eleventh Census, 1890. Part I., Analysis and Rate Tables. J. S. Billings, M.D., Expert Special Agent. 1896.

GRIFFIN, CHARLES, AND CO., Exeter-street, Strand, London.
Technical Mycology: The Utilisation of Micro-organisms in the Arts and Manufactures. By Dr. F. Lafar. With an Introduction by Dr. E. C. Hansen. Translated by Chas. T. O. Salter. In two volumes. Vol. I., Schizomycetic Fermentation. Illustrated. 1898. Price 15s.

KING, P. S., AND SON, Bridge-street, Westminster.
The Report of the Royal Commission on Vaccination. A Review of the Dissentients' Statement. By John C. McVail, M.D. Reprint. 1898. Price 2s.

LEWIS, H. K., Gower-street, London.
The Middlesex Hospital, W. Reports of the Medical, Surgical, and Pathological Registrars for the Year 1896-97. Price 2s. 6d. net.

LONG, JOHN, Chandos-street, Strand, London.
Nightshade and Poppies. Verses of a Country Doctor. By D. Moore, M.B. 1898.

MACMILLAN AND CO., London.
Electro-physiology. By W. Biedermann. Translated by Frances A. Welby. Illustrated. Vol. II. 1898. Price 17s. net.

NEWNES, GEORGE, Southampton-street, Strand, London.
The Story of Photography. By A. T. Story. Illustrated. 1898. Price 1s.

PENTLAND, Y. J., Edinburgh.
Diabetes Mellitus and its Treatment. By R. T. Williamson, M.D. Lond., M.R.C.P. Illustrated. 1898.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Tuberculosis of the Genito-urinary Organs, Male and Female. By N. Senn, M.D., Ph.D.; LL.D. Illustrated. 1898. Price 17s.
Pathological Technique: A Practical Manual for the Pathological Laboratory. By F. B. Mallory, A.M., M.D., and J. H. Wright, A.M., M.D. Illustrated. 1898. Price 14s.
Orthopedic Surgery. By James E. Moore, M.D. Illustrated. 1898. Price 14s.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.
A Complete System of Nursing. Written by Medical Men and Nurses. Edited by Honnor Morten. 1898.

SPOTTISWOODE AND CO., Gracechurch-street, London, E.C.
The Dentist's Register for 1898.
The British Pharmacopœia for 1898.
The Medical Register for 1898.

STEINHEIL, G., Paris.
Les Hydrocéphalies. Par Dr. L. d'Astros. 1898.
La Thréapeutique des Empyémes. Par Dr. E. Cestan. 1898.

SWAN SONNENSCHEIN AND CO., London.
A Student's Text-book of Zoology. By Adam Sedgwick, M.A., F.R.S. Vol. I. 1898. Price 18s.
A Century of Vaccination and what it Teaches. By W. Scott Tebb, M.D. Cantab., D.P.H. 1898. Price 6s.

WRIGHT, J., AND CO., Bristol.
An Atlas of Histology. By Arthur Clarkson, M.B., C.M. Edin. 1898. Price 9s. net.
Surgical Technics in Hospital Practice. By K. W. Monsarrat, M.B., F.R.C.S. Eng. 1898. Price 3s. net.

Magazines, &c., for May: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, and St. Peter's Magazine.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALLAN, E. B., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Officer of Health for Daylesford, Victoria, Australia, vice T. R. H. Willis, resigned.

ARMSTRONG, W. G., M.B., Ch.M. Syd., D.P.H. Camb., has been appointed Medical Officer of Health for the combined Metropolitan Districts, Sydney, New South Wales.

BRONTÉ, A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for the District of Shannon, New Zealand.

CHAWNER, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Clay-lane Sanitary District of the Chesterfield Union.

CROOKS, LEWIS A., M.B., C.M., has been appointed Assistant House Surgeon (non-resident) to the Leith Hospital.

CUTHBERT, J., L.R.C.P., L.R.C.S. Edin., L.K.Q.C.P. Irel., has been appointed Health Officer for the Victoria Park District of Perth, Western Australia.

DEVEREUX, W. C., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Tewkesbury Sanitary District of the Tewkesbury Union.

DICK, ROBERT, M.B., Ch.M. Syd., has been appointed Medical Officer of Health for the combined Hunter River Districts of Newcastle, New South Wales.

FULTON, GEORGE C. H., M.B. and C.M. Glasg., has been appointed Medical Officer of Health by the Eston Urban District Council, vice J. A. Malcomson, deceased.

GALT, H., M.B., C.M. Glasg., D.P.H. Camb., has been appointed Professor of Forensic Medicine and Lecturer on Hygiene to the St. Mungo's College, Glasgow.

GODFREY, H. P., M.B., Ch.B. Melb., F.R.C.S. Eng., has been appointed Health Officer for Bardock, Western Australia.

GRANT, COSMO, M.B., C.M. Aberd., has been appointed Medical Officer for the Hadleigh Sanitary District of the Rochford Union.

GROOM, WM., jun., M.D. Camb., M.R.C.S., has been appointed Medical Officer for the First, Second A, and Eighth Sanitary Districts of the Wisbech Union.

HART, J. W., M.B., Ch.M. Edin., has been appointed a Government Medical Officer and Vaccinator for the District of Gunning, New South Wales, vice W. H. Tibbits.

HOPEWELL-SMITH, A., L.R.C.P. Lond., M.R.C.S. Eng., L.D.S. Eng., has been appointed Dental Surgeon to the Chelsea Hospital for Women, Fulham-road, S.W.

HUNT, J. S., L.R.C.P. Edin., M.R.C.S., has been appointed a Government Pathologist for Queensland.

JOHNSTONE, J. E. ST. GEO., M.B., B.Ch. Dubl., has been appointed Medical Officer for the Tirley Sanitary District of the Tewkesbury Union.

JONES, HUGH, M.B., C.M. Glasg., D.P.H., has been appointed Medical Officer of Health by the Dolgelly Rural District Council.

KENT, PERCY W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon and Anæsthetist to the Royal Orthopædic Hospital, vice H. C. Crouch, resigned.

LETHBRIDGE, R. W., M.B., Ch.M. Edin., has been appointed Acting Medical Superintendent for the Ballarat Lunatic Asylum, Victoria, Australia.

LUKER, DONALD, M.B., Ch.M. Syd., has been appointed Medical Officer for the Brewarrina Hospital, New South Wales.

MELLISH, J. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Wells-next-the-Sea Urban District, vice F. Long, resigned.

MULLEN, W. L., M.D., Ch.B. Melb., has been appointed Acting Medical Superintendent for the Sunbury Lunatic Asylum, Victoria, Australia.

OLVER, THOS., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Plympton St. Mary Union.

PARKHURST, R., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Long Sutton Urban District Council.

PERRY, E. V., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Great Witchingham Sanitary District of the St. Faith's Union.

PORTER, CHARLES, M.B., C.M., has been appointed Surgeon for the Out-door Department of the Leith Hospital.

ROBERTSON, F. W., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Medical Officer in Charge of the Casualty Department of the East London Hospital for Children and Dispensary for Women, Shadwell.

ROOKE, CHARLES, M.R.C.S., has been appointed a member of the Emu Bay Board of Advice, Tasmania.

ROE, J. W., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health for the Welshampton Sanitary District of the Ellesmere Union.

SAW, A. J. H., M.B., B.S. Cantab., has been appointed a Governor of the High School, Perth, Western Australia, vice Sir A. C. Onslow, resigned.

SHARDLOW, JOSEPH, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer for the East London Hospital for Children and Dispensary for Women, Shadwell, vice R. P. Cockburn, resigned.

SHAW, B. HENRY, M.B., B.Ch., B.A.O. Univ. Irel., has been appointed Second Assistant Medical Officer for the County Asylum, Stafford.

SIMPSON, FRANCIS ODELL, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Senior Assistant Medical Officer to the Govan District Asylum, Crookston, N.B.

SINCLAIR, ERIC, M.D., Ch.M. Glasg., has been appointed Inspector-General for the Insane of New South Wales, vice F. N. Manning, resigned.

SMITH, ALLAN A., M.B., Ch.B. Glasg., has been appointed Medical Inspector of Seamen for the port of Calcutta, India.

SMITH, W. L., L.R.C.P. Edin., M.R.C.S., has been re-appointed a District Surgeon for the Salford Royal Hospital.

STRUTHERS, JOHN WILLIAM, M.B., Ch.B., has been appointed House Surgeon to the Leith Hospital.

THOMPSON, J. L., M.B., Ch., Ch.M. Edin., has been appointed Acting Medical Superintendent for the Ararat Lunatic Asylum, Victoria, Australia.

TURNER, A. F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Workhouse of the Tewkesbury Union.

WALKER, J. R. HALL, M.B., C.M., has been appointed House Physician to the Leith Hospital.

WILLIAMS, D. E., L.R.C.P., L.R.C.S. Irel., has been appointed Health Officer for Bunbury, Western Australia.

WILLIAMS, W. C., has been appointed a Public Analyst for the County Borough of Bootle.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF MIDDLESBROUGH.—Medical Officer of Health. Salary £350 per annum, payable monthly. Applications to the Town Clerk, Middlesbrough.

CARDIFF INFIRMARY.—Assistant Resident Medical Officer for six months. Board, apartments, and washing provided.

CHESTER GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with residence and maintenance in the house.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

DONCASTER GENERAL INFIRMARY AND DISPENSARY, Doncaster.—Indoor Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Senior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

ESSEX AND COLCHESTER HOSPITAL, Colchester.—House Surgeon, single or widower without family. Salary £100 per annum, with board, residence, and washing at the hospital.

GENERAL INFIRMARY, Gloucester, and GLOUCESTERSHIRE EYE INSTITUTION, Gloucester.—Assistant Surgeon.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon, for six months. Salary at the rate of £20 per annum, with board, lodging, and washing in the hospital.

HANTS COUNTY ASYLUM, Farnham.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Honorary Physicians and Honorary Surgeons.

HOSPITAL FOR SICK CHILDREN, Great Ormond street, Bloomsbury, London.—House Physician, for six months, unmarried. Salary £20, with board and residence in the hospital. Also House Surgeon to out-patients (non-resident), for six months. Salary 25 guineas.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30 for that period. Also non-resident Clinical Assistant.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

LONDON COUNTY ASYLUM, Claybury, Woodford-bridge, Essex.—Junior Assistant Medical Officer. Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk of the Asylum Committee, 21, Whitehall-place, S.W.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—Surgeon to out-patients. Applications to the Secretary at Harrow-road, W. Also House Surgeon to the Female Hospital, Harrow-road, W. Salary £50 per annum, with board, lodging, and washing.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Honorary Physician.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, each for six months. Salary at the rate of £50 per annum attached to the senior post.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Surgeon for the Dreadnought Hospital, Greenwich. Salary £50 per annum, with board and residence. Also Junior House Surgeon for the Branch Hospital, Royal Albert Dock, E. Salary £50 per annum, with board and residence. Applications to the Secretary, Greenwich.

SUFFOLK COUNTY ASYLUM.—Second Assistant Medical Officer, for three years, unmarried. Salary £100 a year, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Melton, Suffolk.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—Lady House Surgeon. Salary £60, and board and lodgings. Applications to the Honorary Secretary, 3, the Pantiles, Tunbridge Wells.

WARNEFORD HOSPITAL, Leamington.—House Surgeon for six months. Salary at the rate of £100 per annum, with board, lodging, and washing.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck-street, London.—Honorary Surgeon.

WEST HERTS INFIRMARY, Hemel Hempstead, Herts.—House Surgeon and Dispenser for two years; unmarried. Salary £100 per annum, with furnished rooms, board, fire, lights, attendance, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL INFIRMARY, Wolverhampton.—House Physician, who will be required to act as Medical Registrar, Pathologist, and Anæsthetist, for one year. Salary £100 a year, with board, lodgings, and washing. Also House Surgeon and to act as Surgical Registrar for one year. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On April 23rd, at "Limehurst," Moor-park, Preston, Lancashire, the wife of Joseph Anderson, M.B., of a son.

CORNER.—On April 21st, at Brook House, Southgate, N., the wife of Harry Corner, M.D., of a son.

DOLAMORE.—On April 21st, at Queen Anne-street, W., the wife of W. H. Dolamore, M.R.C.S., L.R.C.P., of a daughter.

FLEMING.—On April 25th, at Norton Lodge, Arkwright-road, Hampstead, the wife of Alex. J. Fleming, M.D., of a son.

GOODMAN.—On April 22nd, at Elmside, Kingston-on-Thames, the wife of Roger N. Goodman, M.D. Cantab., of a son.

GRUMMITT.—On April 20th, at Kingsbridge, S. Devon, the wife of Charles C. Grummitt, M.R.C.S., L.R.C.P., of a daughter.

HAYWARD.—On April 22nd, at Kenninghall, Norfolk, the wife of Arthur E. Hayward, M.R.C.S., of a daughter.

LEMON.—On April 23rd, at Burnt Ash-road, Lee, Kent, the wife of Edward Henry Lemon, M.R.C.S., L.R.C.P. Lond., of a son.

NORMAN.—On April 13th, at Heaton-road, Withington, Manchester, the wife of Harry W. Norman, L.D.S. R.C.S. Eng., of a daughter.

PATERSON.—On April 23rd, at Windsor-place, Cardiff, the wife of D. R. Paterson, M.D. Edin., of a son.

PRATT.—On April 23rd, at Penrhos House, Rugby, the wife of W. Sutton Pratt, M.D., L.R.C.P. Lond., of a son.

MARRIAGES.

BARKER—HENDERSON.—On April 19th, at Christ Church, Clifton, Toft Barker, L.R.C.P., M.R.C.S., of Corfe Castle, Dorset, to Geraldine Edith, elder daughter of Charles F. Henderson, of Flax Bourton, Somerset.

BRINDLEY-JAMES—GILBERT.—On April 23rd, at St. James's Church, Piccadilly, Joseph Brindley-James, L.R.C.P., M.R.C.S., A.K.C. Lond., to Ellen, daughter of the late Robert Gilbert, of St. Ives, Cornwall.

COWAN—HAMILTON.—On April 20th, at SS. Michael and All Angels' Church, Helensburgh, John M. Cowan, B.A., M.B., B.C., youngest son of the late John B. Cowan, M.D., LL.D., Professor of Materia Medica in the University of Glasgow, to Maud Mary, eldest daughter of George W. Hamilton (formerly of Calcutta), View Park, Row, Dumbartonshire.

CROSBY—WOOLLEY.—On April 21st, at St. John the Baptist Church, Leicester, Thomas Villiers Crosby, M.B Lond., of Osgathorpe House, near Loughborough, to Florence Kate Blennerhassett, second daughter of George J. Blennerhassett Woolley, of Brackendale, Stoneygate, Leicester.

FURNIVALL—BUTLIN.—On April 23rd, at St. Andrew's, Wells-street, Percy Furnivall, F.R.C.S., of Welbeck-street, Cavendish-square, W., to Olive Mary, elder daughter of Henry Trentham Butlin, F.R.C.S., of Harley-street, W.

GALLOWAY—SAWERS.—On April 21st, at St. John's Church, Blackheath, by the Rev. J. W. Marshall, B.A., vicar, James Galloway, M.D., eldest son of the late James Galloway of Calcutta, to Jessie Hermina, elder daughter of the late Robert Orr Sawers of Calcutta and Blackheath.

GEOGHEGAN—JOYNSON.—On April 20th, at the parish church, Wimbledon, by the Rev. R. de Ritchie and the Rev. E. A. Kempson, M.A., vicar of Merton, Albert Victor Geoghegan, M.D. Dublin University, second son of the late Robert Geoghegan, to Flora Letitia, younger daughter of Paymaster-in-Chief Thomas Owen Joynson, R.N., of Cromwell House, Wimbledon.

MIDDLEMASS—ELKINS.—At All Saints', Leaveaden, Herts, on April 23rd, by the Rev. A. Wilson, vicar, James Middlemas, M.B., F.R.C.P.E., Medical Superintendent of Sunderland Borough Asylum, to Loui, elder daughter of Joseph Elkins, of Stanford Mear, Rugby.

PRALL—HUNT.—On April 20th, at St. Mary's, Bampton, Oxfordshire, by the Rev. Herbert Hunt (Bournemouth), brother of the bride, assisted by the Rev. W. K. Hampshire, vicar, John Henniker, M.R.C.S., L.R.C.P., second son of John Thomas Prall, solicitor, of Rochester, Kent, to Beatrice, fifth daughter of the late Rev. E. G. Hunt, Vicar of Bampton, and Mrs. Hunt of "St. Stephen's," Bampton.

WHITE—BUDD.—On April 23rd, at New Barnet, Malcolm White, M.R.C.S., L.R.C.P., eldest son of Brigade-Surgeon White, M.D., of Southsea, to Ethel Palmer, eldest daughter of J. T. Budd, Amblesside, New Barnet, Herts.

DEATHS.

CARTER.—On April 24th, at Kenilworth, Clapham Common, aged 26 years, Wilfrid Becher, youngest son of Robert Brudenell Carter, F.R.C.S., of Kenilworth and 31, Harley-street.

CHALDECOTT.—On April 22nd, at Rose Hill House, Dorking, Horace Chaldecott, M.R.C.S E., aged 64 years.

GOVAN.—On April 1st, at Almera, N.W.P. India, Brigade-Surgeon George Moncrieff Govan, M.D., Bengal, Retired, late 3rd Gorkhas, aged 69 years.

HALL.—On April 23rd, at Newlands House, Tooting, Edward Thomas Hall, M.R.C.S., for 36 years Medical Superintendent at Blacklands House and Newlands House, aged 67 years.

HEWLETT.—On April 18th, at Cannes, France, Caroline Julia, wife of John C. Hewlett, Esq., of Hillside House, Beckenham, Kent, and 40, 41, and 42, Charlotte-street, London, E.C.

MARSHALL.—On April 24th, at his residence, Caledonian-place, Clifton, Bristol, after a short illness, Henry Marshall, M.D., F.R.S. Edin., F.R.C.S., aged 65 years.

SPICER.—On April 16th, at North Molton, Devon, Robert Henry Scanes Spicer, M.D. St. And., M.R.C.S. Eng., L.R.C.P. Edin., in his 71st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (7th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (2nd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (30, Leicester-square).—8 P.M. Papers:—Mr. A. Coleman: A Method for Administering Anæsthetics through the Nose with the object of prolonging Narcosis during Operations on the Mouth.—Mr. W. R. Ackland: Notes on Catarrh of the Antrum. Casual Communication by Mr. G. Thomson.

TUESDAY (3rd).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Payne: Sections of Liver from a case of Acute Yellow Atrophy of the Liver.—Prof. Kanthack: The Distribution of Leprosy Bacilli in the Tissues, and the Origin of Giant-cells in Leprosy.—Dr. R. Bradford: Hæmatoma in a Hydronephrotic Kidney.—Dr. H. Walsham: Latent Tuberculosis of the Tonsils.—Dr. P. Weber: Chronic Endophlebitis Proliferans, microscopic specimens illustrating a condition not rarely felt in middle-sized superficial veins.—Dr. Andrewes, Dr. Garrod, Dr. Drysdale, Dr. Still, and Dr. Batten: Hæmorrhage into the Suprarenal Capsules in Infants.—Dr. L. Freyberger: (1) External Rupture of an Aneurysm of the Ascending Portion of the Arch of the Aorta; (2) The Minute Structure of an Anæmic Infarct of the Lung.—Dr. Rolleston: (1) Pin in the Vermiform Appendix; (2) Round Pellets in a Dermoid Cyst. (Card Specimens).

WEDNESDAY (4th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Targett, Dr. Horrocks, Mr. Doran, and others. Papers:—Dr. C. H. Roberts: Case of Primary Carcinoma of the Fallopian Tube.—Dr. A. W. W. Lea: The Sagittal Fontanelle in the Heads of Infants at Birth.

SOUTH-WEST LONDON MEDICAL SOCIETY (Wandsworth Town Hall).—8 P.M. Discussion on The Midwives Bill, 1898 (opened by Mr. T. A. I. Howell).

THURSDAY (5th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Clinical Evening. Cases and Specimens will be shown by Mr. W. C. Rockliffe (Hull), Mr. Ridley (Leicester), Mr. Devereux Marshall, Surgeon-Captain H. Herbert, and Dr. G. H. Hogg.

FRIDAY (6th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8.30 P.M. Papers will be read by Mr. McA. Eccles and Mr. Tubby.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Mr. W. A. Lane: A few remarks on the Principles that should guide us in Operations for Cancer. To be followed by a discussion. Messrs. Maw, Son, and Thompson: Exhibition of Surgical Instruments before the Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (2nd).—ROYAL INSTITUTION.—5 P.M. Annual Meeting.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Law: Examination of Ear, Throat, and Nose.

TUESDAY (3rd).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. M. Copeman: On the Natural History of Vaccinia. (Milroy Lecture.)

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Keratoses.

CITY ORTHOPÆDIC HOSPITAL.—5.30 P.M. Mr. C. Williams: Angular Curvature of Spine.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Buzzard: Lecture.

WEDNESDAY (4th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Refuse Removal and Disposal.

THURSDAY (5th).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. S. M. Copeman: On the Natural History of Vaccinia. (Milroy Lecture.)

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Green: Clinical Demonstration of Cases in the Wards. (Post-graduate Class.)

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Prof. K. McLeod: Physical Requirements of the Public Services.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Voelcker: Demonstration of Selected Cases.

FRIDAY (6th).—LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: The Microscope and Methods of Cultivation.

ROYAL INSTITUTION.—9 P.M. Mr. H. A. Minchin: Living Crystals.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

HOSPITAL MEDICAL OFFICERS' FEES AT CORONERS' INQUESTS.

IN the Court of Queen's Bench on April 21st an appeal was heard from a decision of the Brentwood county-court judge. The plaintiff was a medical man and the defendant was the coroner for the district. The plaintiff, Mr. C. J. Horner, is the honorary medical officer to a Children's and General Hospital at Walthamstow, and he had attended a child who died in the hospital and on whose body an inquest was held. Mr. Horner made a post-mortem examination and gave evidence at the inquest. For this he claimed a fee of two guineas, which the coroner refused under the well-known section of the Coroners Act which precludes the medical officer o a hospital from the right to receive a fee for such services in the case of an inquest on anyone who has died in a hospital or other public medical institution. A friendly action was brought to test the case and the county-court judge said that the fee was not recoverable. In the appeal it was argued that the hospital in question was not a public institution, but the court dismissed the appeal. There can be no question in this case that Mr. Horner had no right to expect a fee as the law stands. Whether the State has a rigut to expect medical men to give up their time and perform very responsible duties is another question, but the hospital in question is certainly a public institution and Mr. Horner is medical officer of it even though he receives no kind of salary or honorarium.

"UNDESIRABLE PUBLICITY."

To the Editors of THE LANCET.

SIRS,—The attention of the medical staff of the Royal Halifax Infirmary has been drawn to a paragraph under the above heading in THE LANCET of April 23rd. We need scarcely say that the gentleman mentioned neither authorised nor knew of

the insertion of the advertisement and paragraph referred to. The advertisement was drawn up by the senior honorary secretary, but unfortunately was not seen by the medical staff before insertion. The reason why it was not submitted to the medical staff was that the advertisement had to be in on Good Friday and on that day the honorary secretary tried but was unable to communicate with any of the members of the staff, as three were out of town and two were not at home on the afternoon of that day. Anyone reading the advertisement would easily see that it had been drawn up by a layman and that the intention was not to advertise any individual member of the staff but simply to let the public know that the special department had been opened. I am requested by the medical staff to state that neither collectively nor individually have they authorised the form of the announcement and they regret and disapprove of the form in which it appears. I am, Sirs, yours faithfully,

PRIESTLEY LEECH,
Halifax, April 26th, 1898. Secretary to the medical staff.

THE RECENT INQUIRY AT THE BRISTOL CHILDREN'S HOSPITAL.

Two correspondents have written to us asserting that the address affixed to Dr. Christie's letter printed in our columns last week—viz., Church House Children's Hospital, East-street, Bedminster—is a misleading one inasmuch as, they say, there is no hospital at the address. An advertisement from a local paper has also been sent to us in which Church House, East-street, Bedminster, is given as an address where applications may be made concerning a Nursery Aid Society. In this advertisement no mention is made of the House being used as a hospital. If Church House is a *bond-fide* children's hospital we shall be happy to publish Dr. Christie's or anybody else's statement to that effect, but if it is not we strongly advise him to alter the wording of his address for the future.

AN IMPORTANT QUESTION.

To the Editors of THE LANCET.

SIRS,—I should feel glad if you can advise me in the following. For some time I have been attending a patient who suffers from angina pectoris and who has benefited by the treatment. A few days ago a relative called upon me and told me my services would not be required further, as they had called in a chemist who does a lot of doctoring around this neighbourhood to attend him. As I expect the case to end fatally within a short time am I justified in giving a death certificate under the circumstances? Is it legal? and, if so, am I not covering the quack? Thanking you in anticipation,

I am, Sirs, yours faithfully,
April 26th, 1898. M.D.

*** We think that a certificate should on no account be given under such circumstances.—ED. L.

A NEW COPYING MACHINE.

THE Autographic Company of Middlesbrough have brought out a new process for making copies of manuscripts, drawings, plans, and the like. The original MS. or drawing must be executed with a special ink upon a special paper. This paper is covered with some substance which the ink destroys. When the wording or design is complete it is laid face downwards upon the inking sheet. Where the substance on the paper is unaffected by the ink used for writing it comes off on the inked printing sheet, thus forming a protecting film, but the written or drawn lines having destroyed this substance no film is formed by them, therefore the printing ink is exposed. Impressions are then taken off exactly as in the case of an ordinary form of type. The whole apparatus is very simple and inexpensive. It is made in various sizes from ordinary letter size up to brief.

JOHN PAGE HENTSCH APPEAL.

To the Editors of THE LANCET.

SIRS,—I beg to submit a list of subscriptions received up to date.

I am, Sirs, yours faithfully,
410, Brixton-road, S.W., April 26th, 1898. G. DAVID KNIGHT.

	£	s.	d.		£	s.	d.
Dr. W. Domett Stone ...	1	1	0	One who knew him as a boy	1	0	0
Dr. Chas. Terry	5	0	0	A. X.	0	10	6
Dr. C. W. Chapman ...	1	1	0	A Friend	1	1	0
Dr. John Durno	0	10	6	A Friend, per W. H. ...	5	0	0

HAND-FEED TOOL FOR CHAFF-CUTTING MACHINES.

DEPLORABLE accidents involving the loss of both hands not unfrequently happen to men who have to feed chaff-cutters worked by horse-power or driven by an engine. The usual course of events is that in consequence of something preventing the supply of hay being properly drawn into the machine the man forces it between the rollers with his hand, which is thereupon drawn in along with the hay, and the man, not having the presence of mind to reverse the gear and free his hand, instinctively uses the other hand to help the one which is caught, the consequence being that both share the same fate. To prevent men incurring such great danger by bringing their hands in contact with the rollers Mr. James Gillingham, Prospect House, Chard, Somerset, has devised an instrument which he has called the "Hand Feed." It does not contain any complicated parts, but consists of a plate fixed to a wooden handle and provided with teeth somewhat like those of a rake, curved for the purpose of gathering up the hay. It may be obtained either from the inventor or from dealers in agricultural implements. In illustration of the necessity for some such safeguard Mr. Gillingham has sent us photographs of eight workmen who have lost both hands and either portions or the whole of both forearms by chaff-cutting machinery.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me where I can place a young man suffering from general paralysis of the insane. He is very quiet, orderly, can attend to himself, and does not require much supervision. Terms 12*s.* weekly. I am, Sirs, yours faithfully,
April 27th, 1898. W. B. R.

THE "READORITE."

MR. F. DAVIDSON of 120, Great Portland-street has designed this apparatus for the use of those who have undergone the operation of lens extraction for cataract, engravers, retouchers, and others. It consists of a large bi-cylindrical lens fitted over a writing-desk so that it can be adjusted at any angle or focus. The book or other thing to be seen is, of course, laid on the desk and the lens runs easily along a slide. The lenses are made of different focal lengths. We have tried the apparatus for reading a book printed in "brilliant" type and found it answer well. The price is £3 3*s.*

Medicus.—Many medical men have recently gone to South Africa, but for those who can rough it there is still room. It is our opinion, however, that there is no opening at all for men who are not in the best of health as it is the recent settlements which require to be served, not the old-established towns where the standard of personal comfort is high.

Surgery.—Our correspondent is advised to consult the advice which has been given for several consecutive years in the Students' Number of THE LANCET. Under the circumstances which he mentions we recommend Treves's "System of Surgery," Jacobson's "Operations of Surgery," and Pepper's "Surgical Pathology."

Advice.—Such a circular letter would be in order if it is only sent to the writer's own patients. We understand from our correspondent's letter that he sees the necessity for this limitation.

Mr. James Brown.—We are unable to give the information asked for but have forwarded the inquiry to our local correspondent.

Mr. W. M. Taberner.—We will obtain the information with pleasure.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 28th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 22	30·11	E.	...	78	51	39	41	43	Overcast
" 23	30·07	E.	...	87	57	37	41	44	Cloudy
" 24	30·17	E.	...	98	58	39	46	51	Cloudy
" 25	30·14	N.E.	...	80	55	38	45	47	Cloudy
" 26	29·88	E.	0·16	87	60	44	45	46	Overcast
" 27	29·53	ESE	0·23	78	58	46	51	52	Overcast
" 28	29·54	N.	...	58	53	49	51	52	Overcast

During the week marked copies of the following newspapers have been received: *Hastings Times, Alliance News, Sheffield Telegraph, Newcastle Weekly Chronicle, South Wales Daily News, Mark Lane Express, Eastern Morning News, Carmarthen Weekly Reporter, Manchester Guardian, Leicester Post, Huddersfield Examiner, Times of India, Birmingham Post, Pioneer Mail, Western Mercury, Sussex Daily News, Liverpool Daily Post, Architect, Chard News, Glasgow Herald, Llanelly Mercury, Nottingham Evening Post, Brighton Gazette, Yorkshire Post, Builder, Bristol Mercury, The New Age, Morning Leader, Leeds Mercury, Western Australian, Wigan Examiner, Scotsman, Citizen, Hertfordshire Mercury, City Press, Mining Journal, Local Government Chronicle, Reading Mercury, Australasian Medical Gazette, Guy's Hospital Gazette, Surrey Advertiser, Local Government Journal, Buchan Observer, Keene's Bath Journal, Burton Chronicle, Herne Bay Argus, Poole Herald, Loughborough Monitor, Keighley News, Dundee Advertiser, Yarmouth Advertiser, Hinckley Times, Nairnshire Telegraph, Stirling Observer, Morpeth Herald, Framlingham Weekly News, West Middlesex Herald, Evening Times (Glasgow), Western Mail, Prestwich and Whitefield Guardian,* &c., &c.

Communications, Letters, &c., have been received from—

A.—Mr. G. R. Anderson, Southport; Messrs. Armour and Co., Lond.; *Allgemeine Wissenschaftliche Berichte*, Berlin; Messrs. Allen and Hanburys, Lond.; A. R., Lond.; Messrs. J. and R. Archibald, Tillicoultry.

B.—Mr. C. Birchall, Liverpool; Mr. S. H. Benson, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Bromley Union, Clerk of; Messrs. A. and C. Black, Lond.; Dr. A. W. G. Bagshawe, Lond.; Dr. F. T. Bond, Gloucester; Mr. H. Burney-Young, Lond.; *Birmingham Daily Post*, Proprietors of.

C.—Miss M. Canney, Lond.; Cornwall County Asylum, Bodmin, Medical Superintendent of; Messrs. Cassell and Co., Lond.; Cardiff Infirmary, Secretary of; *Clinical Journal*, Lond., Editor of; Cellular Clothing Co., Lond.; Church Missionary Society, Lond., Physician of; Calcutta Corporation, Secretary of; Cortland Wagon Co., Lond.; Chester General Infirmary, Secretary of; Coppice (The), Nottingham, Medical Superintendent of; Chinosol Hygiene Co., Lond.

D.—Dr. C. Delvaille, Bayonne; Messrs. Davies and Rhys, Aberdare; Doncaster General Infirmary, Hon. Secretary of; Mr. H. Downes, Burnham; Messrs. Dodsworth and Fountain, Lond.

E.—Mr. T. S. Ellis, Gloucester; Mr. E. Eissenhardt, Lond.; *Essex County Standard*, Colchester.

F.—Dr. Samuel Fleming, Lond.; Mr. P. J. Freyer, Lond.; Fidex, Lond.; Mr. Herbert Frederick, Lond.

G.—Mr. J. H. Glennie, Lossiemouth; Dr. J. G. Gordon-Munn, Bushey; Gloucester General Infirmary, Secretary of; Miss Ada Gibbons, Edgbaston; Dr. A. H. Griffiths, Manchester; General Medical Council, Lond., Registrar of; Mr. H. J. Gibbs, Singapore.

H.—Mr. H. H. Hilliard, Lond.; Mr. A. Helbig, Lond.; Hants County Asylum, Fareham, Clerk of; H. E. L. P., Lond.; Mr. C. B. Harness, Lond.; Mr. T. Holland, Liverpool; Hull and Sculcoates Dispensary, Hon. Secretary of; Messrs. Hearon, Squire, and Francis, Lond.; Mr. G. Hermanni, jun., Lond.; Mr. J. J. Hanly, Chewton Mendip; Hospital for Consumption, &c., Lond., Secretary of; Messrs. C. J. Hewlett and Son, Lond.

I.—*Illustr. Rundschau der Medizin-Chirurg. Technik*, Bern.

J.—Mr. H. M. Jordan, Lond.; Mr. H. R. Jennings, Lond.; Jeyes' Sanitary Compounds Co., Lond.; Mr. W. W. Jones, Lond.

K.—Dr. E. Kingscote, Lond.; Kronthal Co., Lond., Secretary of; Dr. C. E. M. Kelly, Lond.; Mr. A. Kidd, Godalming; Mr. J. Keith, Hamilton.

L.—Mr. R. L. Leyba, Hamburg; *La Pratique Médicale*, Paris, Editor of; Mr. W. McLaurin, Lond.

M.—Dr. Leonard Molloy, Blackpool; Mr. B. G. A. Moynihan, Leeds; Messrs. Macmillan and Co., Lond.; Manchester Clerical, &c., Association, Secretary of; Maltine Manufacturing Co., Lond.; Milk Preparations Co., Brentwood; Mr. J. Milne, Lond.; Medical Society of Victoria, Melbourne, Hon. Secretary of; Dr F. V. Milward, Birmingham; Dr. J. A. MacDougall, Lond.

N.—Messrs. Neyroud and Son, Lond.

O.—Dr. James Oliver, Lond.; Messrs. Offord and Sons, Lond.

P.—Dr. C. F. Ponder, Kalimpong, Bengal; Pharmaceutical Society of Great Britain, Lond., President of; Potter and Clarke, Lond.

R.—Dr. J. S. R. Russell, Lond.; Radcliffe Infirmary, Oxford, Secretary of; Messrs. Reynolds and Branson, Leeds; Dr. C. Reinhardt, South Stoke; Messrs. R. W. Richards and Son, Carmarthen; Mr. A. W. Mayo Robson, Leeds; Mr. M. Roberts-Jones, Cardiff.

S.—Dr. C. E. M. Sajous, Philadelphia, U.S.A.; St. John's Hospital for Diseases of the Skin, Lond., Superintendent of; Society of Trained Masseuses, Lond., Hon. Secretary of; Mr. H. Sell, Lond.; Messrs. J. P. Segg and Co., Lond.; Salford Royal Hospital, Secretary of; Society of Apothecaries of London, Secretary of; Strait Settlements Association, Lond., Secretary of; Mr. W. H. Smith, Lond.

T.—Mr. T. Pridgin Teale, Leeds.

V.—Mr. J. W. Vickers, Lond.; Vendor, Lond.; Vide et Crede, Lond.; Vinolia Co., Lond.; Dr. W. H. Vernon, Southport.

W.—Dr. J. R. Whitaker, Edinburgh; West Herts Infirmary, Hemel Hempstead, Assistant Secretary of; West End Hospital for Diseases of the Nervous System, Lond., Secretary of; Messrs. W. Woollams and Co., Lond.; Messrs. W. Wood and Co., New York; Mr. J. Wright, Birmingham; Mr. C. L. Worrall, Barberton, South Africa; Warneford Hospital, Leamington, Secretary of; Messrs. J. Wright and Co., Bristol.

Y.—Dr. M. Young, Crewe.

Letters, each with enclosure, are also acknowledged from—

A.—Mons. J. Astier, Paris; Mr. B. Appleton, Thornaby-on-Tees; A. Z., Lond.; Dr. H. H. Aitchison, Wallsend; Messrs. Arnold and Sons, Lond.; Mr. W. Adams, Lond.; A. B., Peterborough; Alpha, Lond.; Albemarle, Lond.; Argentum, Lond.; A. B. Sheffield; Aston Union, Clerk of; A. B., Lond.

B.—Mr. A. L. Bartram, Cambridge; Mr. G. Booth, Woodbridge; Mr. W. G. Burcombe, Lincoln; Mr. J. Browne, Ramsgate; Mr. R. Baker, Lond.; B. W., Lond.; Messrs. Brown, Gould, and Co., Lond.; Biceps, Lond.; Messrs. Benson and Co., Lond.; Barnwood House Hospital Gloucester, Medical Superintendent of; Dr. J. Biggam, Upper Gornal; Messrs. J. Bell and Co., Lond.

C.—Mr. J. Clarke, Hitchin; Mr. F. W. Clarke, Manchester; Dr. J. H. Collier, Bulwell; Clarendon, Lond.; Dr. Cotton, Darsham; Messrs. Callard, Steward, and Watt, Lond.; Messrs. S. Clark and Co., Lond.; Chronos, Lond.; Cambridge, Lond.; Messrs. Curtis and Co., Lond; Clavicle, Lond.; College of Preceptors, Lond.; Dr. R. H. Coombs, Bedford; Mr. E. J. Carter, Tunbridge Wells; Cash, Lond.; Mr. J. Carter' Lond.; Mr. J. Clarke, Plumstead'

D.—Dr. C. V. Dingle, Middlesbrough; Messrs. J. Defries and Sons, Lond.; Messrs. J. Dewar and Sons, Lond.; Sir W. B. Dalby, Lond.; Mr. H. Davies, Lond.; Domus, Lond.; Mr. C. Davis, Glossop; Messrs. Duncan, Flockhart, and Co., Edinburgh; Delta, Liverpool; Digitalis, Lond.

E.—Dr. D. E. Evans, Penarth; Dr. W. B. Edwards, Senny Bridge; E. M., Leeds; Endymion, Lond.; Mr. A. L. Edwards, Senny Bridge; Mr. L. Eminson, Bootle; Messrs. Evans, Gadd, and Co., Exeter; Ethel, Lond.; Etablissement Thermal d'Uriage, France, Director of.

F.—Mr. H. Faulkner, Exeter; Mr. A. C. Farrington, Shelfanger; Messrs. Fletcher, Fletcher, and Co., Lond.; Fellows Manufacturing Co., Lond.; Facilis, Lond.; Flower House, Catford, Medical Superintendent of; Mr. W. A. Frost, Lond.; Messrs. J. S. Fry and Sons, Bristol; Fisherton Asylum, Salisbury, Medical Superintendent of; Flint Dispensary, Holywell, Secretary of; Mr. A. E. Fuller, Cambridge.

G.—Mr. A. Griggs, Sandwich; Dr. R. W. Goodman, Kingston-on-Thames; G. C. S., Ealing; Glasgow Royal Infirmary, Cashier of; Mr. J. J. Griffiths, Lond.; Mr. R. Geoghegan, Merton; Messrs. Gale and Co., Lond.; Dr. R. Griffith, Netherton; Gray's Inn Agency, Lond.

H.—Mr. C. H. Huish, Lond.; Mr. J. Heywood, Manchester; Rev. A. P. Hockin, St. Margaret's-at-Cliffe; Hamilton Association, Lond.; Mr. J. J. Hicks, Lond.

J.—Messrs. W. and A. K. Johnston, Edinburgh; J. P., Lond.

K.—Mr. C. P. Kelly, Hoo; Dr. Keys, Castlefin; Kippell, Lond.

L.—Mr. H. K. Lewis, Lond.; Miss M. Lippiatt, Lond.; Messrs. Lee and Nightingale, Liverpool; Mr. R. Lake, Lond.; Leeds General Infirmary, Manager of; Mons. H. Le Soudier, Paris; Mr. B. W. Lamb, Allbrighton.

M.—Dr. F. K. March, Bradford; Medicus, Dover; Medicus, Leeds; M.P., Blackburn; Mr. S. A. McConnell Steubenville, U.S.A.; Mental Nurses' Coöperation, Lond., Lady Superintendent of. Mr. Martin, Darlington; Messrs. F. G. Moore and Co., Lond.; Mr. G. M. Moss, Liverpool; Mr. W. Middlemass, Edinburgh; Messrs. McClelland, Mackinnon and Co., Glasgow; Dr. R. H. Marten, Adelaide; M. Y., Lond.; Mr. G. Martinson, Hull; Medicus, West Derby; Morganwg, Lond.; Mr. J. A. H. Mogg, Feckenham; Masonic, Lond.

N.—Mr. O. Norris, Sherburn; Numero, Lond.; Nauticus, Lond.; Neuron, Lond.

O.—Mr. H. Owen, Lond.

P.—Mr. H. F. Prall, Rochester; Promptitude, Lond.; P., Lond.; P. R., Lond.

R.—Dr. P. J. Rondopoulo, Athens, Greece; Messrs. G. M. Restall and Son, Birmingham; Ross, Ltd., Lond.; Messrs. Richardson Bros. and Co., Liverpool; R.P.O., Lond.; Royal Cornwall Infirmary, Truro, Secretary of; Dr. R. R. Rentoul, Liverpool; Dr. G. A. Reid, Southsea; Dr. R. Richmond, Great Bardfield; Messrs. J. Richardson and Co., Leicester; Mr. A. Rainford, Port Dinorwic; Dr. H. D. Rowland, New Amsterdam.

S.—Mr. E. S. Saunderson, Otterburn; Surgeon, Chella ton; Dr. S. Spicer, Lond.; Surgeon, Lond.; Southport Infirmary, Secretary of; Dr. R. Stobo, Lond.; Mr. T. Sellors, Coventry; Messrs. Scott Newcastle-on-Tyne; Sunderland Borough Asylum, Ryhope, Clerk of; Mr. G. Stevens, Saltwood; Mr. E. N. Smith, Lond.; Mr. R. K. Swift, Lond.; Surgeon, Manchester; Dr. H. G. Stacey, Leeds; Mr. J. Statim, Lond.

T.—Mr. J. Thin, Edinburgh.; Mr. L. A. Tallerman, Lond.; Mr. R. Trimble, West Bromwich; Mr. F. Treves, Lond.; Triple, Lond.; Mr. J. N. Treise, Burton-on-Trent; Dr. R. G. C. Thornton, Ashby-de-la-Zouch; Tinctura, Lond.; T.C.D., Lond.; Mr. J. R. Tannahill, Greenock.

U.—Union Assurance Society, Lond., Secretary of.

V.—Messrs. G. Van Abbott and Son, Lond.; Mr. Van Praagh, Lond.

W.—Mr. E. H. Worth, St. Day; Dr. N. C. Ward, Chichester; Dr. W. Westcott Lond.; Mr. F. A. Wagstaff, Saffron Walden; West End Pathological Laboratory, Lond.

Z.—Zeta, Lond.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnières Paris.

EXCERPT FROM

A Study of Some Infant Foods in Comparison with Human Milk.

BY R. H. CHITTENDEN, PH. D.,
Professor of Physiological Chemistry at Yale University.

[Reprinted from *The New York Medical Journal*, July 18th, 1896.]

"That there is no special difficulty in modifying cows' milk so that it will resemble human milk, both qualitatively and quantitatively, is clearly apparent from the analytical results shown in the table:—

	Human Milk.	Milk Modified with Peptogenic Milk Powder.
Specific Gravity	1031	1032
Water	86.73	86.03
Total Solid Matter	13.26	13.97
Inorganic Salts	0.20	0.26
Total Albuminoids	2.00	2.09
Soluble Albuminoids	2.00	2.09
Fat	4.13	4.38
Milk Sugar	6.93	7.26
Reaction	alkaline	alkaline

"Cows' milk, modified by the addition of water, cream, and Peptogenic Milk Powder, offers a product containing to the full extent all of the proximate principles present in human milk and wholly free from extraneous admixtures. The proportion of solid matter, fat, albuminoids, carbo-hydrate, and inorganic salts corresponds as closely as one could ask with what is considered as the average chemical composition of human milk. Further, the process of modification takes into account the radical difference between cows' casein and human casein, and affords a method by which the former can be modified to a closer resemblance to the latter without the addition of any substance that will permanently interfere with the purity of the final product.

"The general resemblance of milk modified by the Peptogenic Milk Powder to the infant's natural supply is a very striking one."

PEPTOGENIC MILK POWDER. Originated and manufactured by FAIRCHILD BROS. AND FOSTER, NEW YORK. Supplied in 1/2 lb. and 1 lb. bottles, at 1s. 9d. and 3s. 4d. each. Specimen and pamphlet upon request to BURROUGHS WELLCOME AND CO., Snow Hill Buildings, London.

TRADE MARK 'ENULE' BRAND

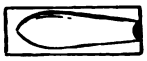
Glycerin Rectal Suppositories.

GLYCERIN 'Enule' Rectal Suppositories are of a new and improved shape, ensuring great ease of insertion and rendering expulsion impossible. They contain 95 per cent. of anhydrous chemically pure glycerin, are free from gelatin, and keep perfectly in tropical climates.



GLYCERIN 'ENULE' RECTAL SUPPOSITORY, WITHOUT SHEATH.

Design Registered.
Nos. 309,366/8.



Top View.



Side View.

GLYCERIN 'ENULE' RECTAL SUPPOSITORY, ENCASED IN SHEATH.

Glycerin 'Enule' Suppositories are guarded from contamination and preserved by a hermetically-sealed sheath of pure tin-foil. This sheath can be instantly stripped off at the moment of using.

Supplied in two strengths.

'ENULE' GLYCERIN (Children's). 'ENULE' GLYCERIN (Adults').

In boxes containing 1 dozen, at 1/- per box.

Burroughs Wellcome and Co.,

Snow Hill Buildings, LONDON.

London Cable and Telegraphic Address:—"BURCOME, LONDON." *Australasian Address:—108, Pitt Street, SYDNEY, N.S.W.*

'Saxin.'

An invaluable sweetening agent when sugar is contra-indicated. It has been aptly described as 'the sweetest thing on earth,' being about 600 times sweeter than sugar, and more delicate in flavour than any other sweetening agent. A small bottle containing 100 or 200 1/4 grs., each equal to one lump of best loaf sugar, can be easily carried in the vest pocket.

Supplied at 7d. and 1s 1d. per bottle.

'Emol-Keleet'

Referring to this product, the *Lancet* says:—"On account of its remarkable velvety smoothness it should possess a unique value as a dusting powder in cutaneous diseases, etc., and for allaying irritation. We have not examined a more unctuous earth." 'Emol-Keleet' has proved successful for drying weeping surfaces when all other powders have failed It is also of great service as a diluent for powerful antiseptics.

In boxes, at 9d. each.

RICHEST IN DIASTASE. Maltine RICHEST IN PHOSPHATES AND ALBUMINOIDS.

TIME can prove all things; and time has shown unequivocally the value of the extract of malt known as "MALTINE." Many causes have contributed to this result. We may note that we led the way in perfecting the mode of preparing malt products. By the process which we introduced of concentrating the malt *in vacuo* at a low temperature, by which the whole of the diastase was retained and fermentation prevented, we were able to place before the profession a product for which higher virtues could be claimed than was the case in any other extract of malt.

The general recognition of this fact has enabled us to devote to the production of "MALTINE" a more elaborate plant than has yet been applied to the manufacture of any pharmaceutical product, and accumulated experience has suggested improved processes that are happily illustrated in "MALTINE" to-day. Analysis shows that it contains an exceptional amount of nitrogenous matter and a richness in phosphates and diastase which adds largely to its usefulness as a nutrient as well as to its value as a digestant. The presence of diastase in a high degree cannot be too greatly insisted upon, especially in connexion with the subject of the chemistry of digestion. Physiologists have shown that the presence of certain hydrolytic ferments is essential to the proper preparation of the food for assimilation by the blood-vessels; among these are amylosytic or sugar-forming ferments, which convert starch, glycogen, &c., into sugar with absorption of water—these are present in saliva, pancreatic juice, in the liver and other organs. As it is the case, however, that some cause or causes may interfere with their proper production, as by faulty condition of the blood from which they are secreted, or by some perversion of nutrition in the gland cells by which they are elaborated, it becomes at once apparent that in their absence the necessary changes cannot take place which are essential to the preparation of the food for absorption. Under these circumstances, then, the great value of "MALTINE," as being the means of supplying an artificial ferment of the nature demanded, scarcely requires further demonstration. Dr. FOTHERGILL says: "In order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase 'MALTINE'." Thus, by means of the administration of "MALTINE," digestion is facilitated, and owing to the high nutritive value of the extract, a tissue-forming and bone-making food is made available for the patient, the good effects of which are not slow in becoming manifest. As a further feature in its favour, we may point out that "MALTINE" is very palatable, and its delicacy of flavour has been highly commended by those who have used it.

Every year that passes shows that medical men and the public insist on pharmaceutical preparations being made palatable; and if composed of drugs which are nauseous or disagreeable, that these two undesirable elements shall be rendered as negative as possible. In preparing "MALTINE" we have paid particular attention to this matter. A good extract of malt should be sweet and pleasant to the palate, so that it not only becomes an agreeable preparation by itself, but also highly useful as a medium for the administration of other drugs the palatability of which falls very far short of that which is acceptable to patients. "MALTINE" will be found to be an excellent medium for administering drugs which have the undesirable characteristic of being distasteful. Its pleasant flavour and convenient semi-liquid consistency are admirably adapted for this purpose; and the measure of its usefulness in this respect is not limited to disguising the taste of a nauseous drug; for, being a food, the patient, so to speak, "kills two birds with one stone"—by combining "MALTINE" with a nauseous dose he both humours his palate besides taking an excellent nutrient. This is a point which should be borne in mind, too, by those who after a dose of medicine are always on the look-out for something with which to "take the taste away." The agreeable taste of "MALTINE," moreover, renders it highly suitable for administration to delicate, badly-nourished children. By many of such, cod-liver oil in any form cannot be tolerated; thus in these cases, where cod-liver oil is indicated, medical men prefer to order "MALTINE," and with results which are very beneficial. "MALTINE" contains so large a quantity of fat-making, heat-producing carbohydrates that for a long time it has been admitted to be an advantageous substitute for cod-liver oil, and its nutritive value is incontestably proved by the patients using it gaining flesh. The excess of diastase in the "MALTINE" enables them to digest more starchy matters than otherwise in their enfeebled state could be possible; and thus "MALTINE" is an almost necessary adjunct in the treatment of al cases of lowered nutrition where digestion of amylaceous material is at a low ebb.

The word "MALTINE" is our Registered Trade Mark.

In prescribing, kindly specify "THE MALTINE MFG. CO."

WE SHALL BE PLEASED TO SEND SPECIMENS FREE OF CHARGE TO MEDICAL MEN.

THE MALTINE MANUFACTURING CO.,

LIMITED,

24 & 25, Hart St., Bloomsbury, London, W.C.

Antiseptic.

For quickly preparing antiseptic solutions of any desired strength. Safer to carry than liquids and more reliable and convenient.

'Soloid' Carbolic Acid, 20 gr.
'Soloid' Mercuric Chloride, 1.75 and 8.75 gr.
'Soloid' Iodic-Hydrarg, 1 and 8.75 gr.
'Soloid' Potassium Permanganate, 5 gr.
'Soloid' L.G.B.

Full list and prices on application.

Anæsthetic.

Enable the material for instantly preparing fresh, active solutions, possessing full anæsthetic power, to be carried in the pocket.

'Soloid' Cocaine Hydrochloride, 1/2, 1 and 5 gr.
'Soloid' Eucaine Hydrochloride, 1 and 5 gr.
'Soloid' Cocaine and Eucaine Hydrochlor., 1/2 gr. each.

Specimens gratis on request.

TRADE MARK **'Soloid'** BRAND

Compressed Products.

The word 'Soloid' is a brand which designates fine products manufactured by

Burroughs Wellcome and Co.,

Snow Hill Buildings, LONDON, E.C.

108, Pitt Street, SYDNEY, N.S.W.

Gynecopathic.

Replace bulky and cumbersome bottles of antiseptic and astringent solutions. More pleasing to the patient, and being portable, secure regularity of treatment.

'Soloid' Alum Compound.
℞ Alum., gr. 15. Zinci Sulph., gr. 15.
'Soloid' Sodium Biborate Comp.
℞ Sodii Bibor., gr. 20. Tinct. Opii, min. 10.
'Soloid' Zinc & Tannin Compound.
℞ Zinci Sulph., gr. 5. Acid. Tannic., gr. 1. Ext. Opii, gr. 2. Plumbi Acetat., gr. 10.

Specimens and particulars gratis.

Nasal.

For conveniently preparing nasal douches, sprays, etc. This class includes various combinations of alkaline and antiseptic agents with or without volatile oils.

'Soloid' Nasal (Alkaline).
'Soloid' Nasal (Antiseptic and Alkaline).
'Soloid' Nasal (Compound Eucalyptia).
'Soloid' Nasal (Compound Phenol).
'Soloid' Naso-Pharyngeal.

See Wellcome's Medical Diary, p. 75.

[COPYRIGHT.] H 44



'KEPLER' MALT EXTRACT

HAS always retained its superiority because it is the uniform product of the finest winter-malted barley. No inferior cereals are used, and the special 'Kepler' process ensures a full percentage of diastase. As a food and as a digester of foods it is unrivalled. "Its qualities are not deteriorated nor its flavour spoiled."

'British Medical Journal'.

Burroughs Wellcome and Co.

LONDON and SYDNEY.

[COPYRIGHT.]

BAILLIÈRE, TINDALL, & COX'S BOOKS.

Ready this day, 400 Illustrations, price 21s. net.

A Manual of Surgery.

By WM. ROSE, M.B., B.S.Lond., F.R.C.S., Professor of Surgery in King's College, London; Consulting Surgeon to the Royal Free Hospital; and ALBERT CARLESS, M.B.Lond., F.R.C.S., Teacher of Operative Surgery, King's College; Senior Assistant Surgeon, King's College Hospital.

Ready Next Week.

Outlines of Practical Surgery.

SPECIALLY DESIGNED FOR STUDENTS.

By WALTER G. SPENCER, M.B., M.S. Lond., F.R.C.S., Surgeon to the Westminster Hospital; Examiner to the Conjoint Board, Royal Colleges of Physicians and Surgeons.

575 Coloured Illustrations, with Descriptive Text. Translated and Edited by R. A. YOUNG, M.D., B.Sc. Lond.

Bound half morocco, gilt edges. Price £1 11s. 6d. net.

Brass's Atlas of Histology.

The most beautiful and artistic medical work ever produced.
A magnificent gift or prize book.

This day, with numerous Tables, price 10s. 6d.

Practical Toxicology for Practitioners and Students.

By Professor RUDOLF KOBERT. Authorised translation from the German by L. H. FRIEDBURG, M.D.

A complete Text-book of General Toxicology, Special Toxicology, Metabolism, &c.

With numerous Coloured Plates, Statistical Tables, &c., price 12s. 6d.

Theory & Practice of Vaccination.

By ROBERT CORY, M.D. Cantab., F.R.C.P. Lond., Physician in Charge of the Vaccination Department, St. Thomas's Hospital; Teacher of Vaccination in the University of Cambridge.

"Dr. Cory's experience is almost unique, and the pages of his book abound with points of deep interest."—BRIT. MED. JOURNAL.

Second Edition, price 7s. 6d. net.

Massage:

ITS PHYSIOLOGICAL EFFECTS AND THERAPEUTIC USES.

By A. SYMONS ECCLES, M.B., M.R.C.S. Eng.

"Dr. Eccles has very happily succeeded in producing a scientific though an essentially practical treatise on the subject."—MEDICO-CHIR. JOURNAL.

Price 10s. 6d., profusely Illustrated.

Manual of Mental Diseases.

By A. CAMPBELL CLARK, M.D., F.F.P.S.G., Mackintosh Lecturer on Psychological Medicine, St. Mungo's College, Glasgow; Medical Superintendent of Lanark County Asylum, Hartwood.

"The various recognised forms of insanity are lucidly discussed in detail. ..... The part dealing with causation, prognosis, and treatment is distinctly good. Most important are his remarks on the insanities of pregnancy and lactation, and also on puerperal insanity. The practical value of these chapters is very considerable."—THE LANCET.

Now ready, price 10s. 6d.

Death and Sudden Death.

A MEDICO-LEGAL HANDBOOK.

By Professor BROUARDEL, of Paris. Authorised Translation by F. LUCAS BENHAM, M.D. Lond., M.R.C.P.

"We have nothing but a hearty welcome to accord to this work."—BRITISH MED. JOURNAL.

"The book is brimming with information and points of practical interest."—MEDICAL PRESS.

Second Edition, ready Next Week, Coloured Plates.

Applied Bacteriology:

A MANUAL FOR STUDENTS AND PRACTITIONERS.

Containing the latest Methods of Research and their application.

By T. H. PEARMAIN and C. G. MOOR, M.A. Cantab., F.C.S. With 81 Illustrations in Colours.

With over 300 Engravings and Coloured Plates, price 15s.

Manual of Physiology.

By Professor G. NEIL STEWART, M.A. Cantab., M.D., D.Sc.

"It is one of the very best English text-books."—THE LANCET.

"We do not know of one that comes up to the ideal text-book as does Professor Stewart's volume."—BRITISH MED. JOUR.

This day, price 4s., Illustrated.

The Diagnosis of Disease.

By J. PORTER PARKINSON, M.D., M.R.C.P. Lond., F.R.C.S.Eng., Medical Registrar to the Westminster Hospital; Assistant Physician to the Hackney Children's Hospital.

Specially written for the use of Students Preparing for Examination, and for Junior Practitioners.

This day, price 7s. 6d.

Respiratory Exercises in the Treatment of Disease.

NOTABLY OF THE HEART, LUNGS, NERVOUS AND DIGESTIVE SYSTEMS.

By HARRY CAMPBELL, M.D., B.S. Lond., F.R.C.P. Lond., Physician to the North-West London Hospital, and to the Hospital for Nervous Diseases.

Price 6s. net, with numerous Photographic Plates.

Röntgen Rays in Medical Work.

A SYSTEMATIC GUIDE TO THE USE OF THE X-RAYS IN MEDICINE AND SURGERY.

By DAVID WALSH, M.D. Ed., Hon. Sec. London Röntgen Society.

With Section dealing with Electrical Methods and Apparatus by J. S. GREENHILL.

"The x-ray pictures are the best we have seen."—THE LANCET.

Price 5s.

Cancer Operations, their Objects and Limits.

By Prof. WATSON CHEYNE, F.R.C.S., F.R.S., Surgeon to King's College Hospital.

"Every practical surgeon should consider it a duty, as well as a privilege, to carefully examine these lectures."—MEDICAL PRESS.

Second Edition, price 5s.

The Modern Treatment of Stone in the Bladder.

By P. J. FREYER, M.A., M.D., M.Ch., Surgeon to St. Peter's Hospital for Urinary Diseases; late of H.M. Indian Medical Service.

"Most practical, admirable in style and method."—MEDICAL PRESS.

"A concise, clearly written, and reliable guide."—BRIT. MED. JOUR.

Chemical Notes and Equations

(INORGANIC AND ORGANIC) FOR STUDENTS.

By G. H. GEMMELL, F.I.C., F.C.S. Price 5s.

Vest-Pocket Medical Dictionary,

INCLUDING PRONUNCIATION.

By ALBERT H. BUCK, M.D. 529 pp., bound roan. Price 3s. net.

London: BAILLIÈRE, TINDALL, & COX, 20 and 21, King William Street, Strand.

**** ***Full Catalogue (English or French) Post Free on application.***

The Milroy Lectures

ON

THE NATURAL HISTORY OF VACCINIA.

Delivered before the Royal College of Physicians of London

BY S. MONCKTON COPEMAN, M.A., M.D. CANTAB., M.R.C.P. LOND.,

MEDICAL INSPECTOR TO HER MAJESTY'S LOCAL GOVERNMENT BOARD; LECTURER ON PUBLIC HEALTH IN THE MEDICAL SCHOOL OF WESTMINSTER HOSPITAL.

LECTURE I.[1]

Delivered on May 3rd, 1898.

MR. PRESIDENT, CENSORS, AND GENTLEMEN,—I feel that it would be superfluous for me to dwell at any length upon the very great gratification it affords me to have been selected to deliver the Milroy Lectures. I can only assure you of my appreciation of the honour you have been pleased to confer upon me and express my pleasure at being granted the opportunity of addressing you on certain points in connexion with the Natural History of Vaccinia—a subject, as it seems to me, specially appropriate to the present occasion, seeing that this year not only marks the centenary of Jenner's first publication but also the inauguration of a new era in the practice of vaccination in this country.

Just one hundred years ago, in the summer of the year 1798, there burst upon the world a treatise the publication of which marked a never-to-be-forgotten event in the history of scientific medicine. This truly epoch-making publication was entitled "An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, a disease discovered in some of the Western counties of England, particularly Gloucestershire, and known by the name of the cow-pox." It was the work of Edward Jenner, a country medical practitioner living at Berkeley in the vale of Gloucester. But in order adequately to appreciate the far-reaching importance of his work, first submitted to the world in the comparatively small compass of a quarto pamphlet of seventy-five pages, it is necessary for us to endeavour to transport ourselves in thought backwards for a century or more in order to realise approximately the truly terrible and far-reaching nature of the scourge the only efficient preventive of which was first introduced to the human race through the publication of Jenner's "Inquiry."

Thus Macaulay, in an oft-quoted passage in which he refers to the death in 1694 of Queen Mary, wife of William III., writes: "That disease over which science has since achieved a succession of glorious and beneficent victories was then the most terrible of all the ministers of death. The havoc of the plague had been far more rapid, but the plague had visited our shores only once or twice within living memory and the small-pox was always present, filling the churchyards with corpses, tormenting with constant fears all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power, turning the babe into a changeling at which the mother shuddered and making the eyes and cheeks of the betrothed maiden objects of horror to her lover."

The ever-present danger and the lively apprehensions engendered through recognition of the slight chance of anyone evading the onslaught of the scourge between childhood and maturity is also brought out somewhat forcibly in an extract from the "Pages from a Private Diary" in the January number of the *Cornhill Magazine* for the present year. It runs as follows: "I came on a curious passage in a letter of Mrs. Waller's to her banished son about the marriage of his daughter. She wishes to know what dowry he is prepared to give. 'I am not in haste to marry her, she is young enough to stay, but the danger is if she should catch the small-pox or her beauty should change it would be a great loss to her.' Everybody," adds the writer, "is familiar with the frequent references to small-pox in the letters and memoirs of the seventeenth century. Pepys is full of it; but I have never met with a passage that brings so keenly home to me the nearness of the risk."

In this connexion, also, may be mentioned a record of an epidemic of small-pox in the small town of Ware in 1722. The population at the commencement of the epidemic was 2515, of whom 1601 are stated to have had small-pox previously, the remaining 914 being therefore presumably susceptible to the disease. During the course of the epidemic, of these 914 persons 612 were attacked, of whom 72 died. The remaining 302 persons who escaped attack are spoken of in the record in quaintly dogmatic fashion as "to have the small-pox." We possess also a record of an epidemic which occurred at Warrington in 1773, where out of 473 deaths from all causes during the year among a population estimated at 8000 no less than 211 were attributed to small-pox. And from a report by Haygarth of Chester we learn, as in the case of Ware, how small a proportion of the population in these places had not suffered from small-pox at one time or another. The actual number of persons attacked at Chester in 1774 was 1202, of whom 202 died, the total population of the town being at this time 14,713. But as the result of an investigation carried out at the commencement of the following year it becomes fairly certain that previously to the outbreak in 1774 there were in Chester, of the whole population, only 2262, or 15 per cent., who had not already had the disease. Consequently, of the remaining susceptible portion of the inhabitants more than half were attacked before the end of the year. These epidemics at Chester and Warrington also illustrate a marked characteristic of small-pox in the eighteenth century which is also noticeable in the records of this and probably also of preceding periods in which the age of those attacked is given—namely, the large proportion of the deaths contributed by children under ten years old. In the Warrington outbreak of 1773 and also in that which appeared in Chester in the following year not a single death occurred in persons above this age, while of the 202 deaths at Chester no less than a quarter of the total number were accounted for by infants of less than twelve months. Other instances of a like condition of affairs noted in the recent Royal Commission's final report refer to Kilmarnock, where out of 622 deaths occurring between 1728 and 1763 of which with nine exceptions the ages are recorded, only seven were of those above ten years, and to records obtained from the burial registers of the graveyard of St. Cuthbert's, Canongate and Buccleuch-street, Edinburgh, from which we learn that during the years 1764–83, of every thousand deaths from small-pox at all ages no less than 993 of these deaths were among children below ten years of age.

In considering the question of ratio of deaths from small-pox to the living population we are beset with several difficulties. In the first place, as Dr. J. C. McVail points out, in no single epidemic in London in former centuries was it possible to see small-pox at its worst, since epidemics followed one another at such rapid intervals that of necessity the material on which at any one period their energy could exert itself was extremely limited. "At any given date the great bulk of the people had already had small-pox, and it was only among a fraction that there was room for the disease to spread. Yet it was among such fractions of the population that small-pox every few years slew its thousands in London alone." If we desire to obtain an illustration of the full effects of an invasion of small-pox when not thus hampered by the existence of very general immunity the result of former epidemics we must turn our attention to some particular locality which owing to its isolated position has previously escaped invasion. In illustration of this point we may take the case of Iceland, where during 1707–9 out of a total population of 50,000 no less than 18,000 persons died from this disease.

Aitken calls attention to the fact that since the date of the first accounts by the Arabian physicians of the ravages of small-pox in Mecca the history of this disease may be arranged in three great stages, each of which is characterised by remarkable epochs. The first of these periods is marked by an improvement in the treatment of small-pox, the merit of this revolution in medical practice being due to Sydenham. In few diseases, indeed, has medical opinion undergone in the course of years a more obviously beneficial change. The second stage is marked by the discovery of the singular phenomenon that the virulence of the poison of small-pox is greatly mitigated by introducing or engrafting the disease into the system through the cutaneous tissues,

[1] Lecture II. was delivered on May 5th and Lecture III. will be delivered on May 10th.

thereby causing the transference of the disease from one person to another by inoculation. To Lady Mary Wortley Montagu, in 1722, we owe the introduction of the practice of inoculation into this country, a deed which must be considered as one of no little bravery when measured by the knowledge possessed by physicians in those days. The third great era is characterised by the remarkable discovery which has rendered the name of Jenner immortal—namely, the modifying and protecting influence of vaccination.

With the therapeutic treatment of small-pox we are not on the present occasion concerned. On the other hand, the practice of inoculation, although prohibited by law since the passing of the first Vaccination Act, is yet deserving of some attention. We shall then be in a position more fitly to discuss the question of the discovery of vaccination and of the evidence on which its employment was originally based. There will remain for our consideration a review of such accretions to our knowledge of the subject of vaccination, more particularly from the standpoint of pathology, as the progress of scientific research during the century since Jenner wrote has rendered available. To marshal these in order, to try to indicate their relative importance, and to direct attention to their bearing on the necessity for certain changes in the regulation and practice of vaccination, as these obtain at the present time, is the chief aim which I have had in view in the preparation of these lectures.

INOCULATION.

Recognition in former times of the certainty that almost everyone would suffer attack by small-pox during some period of his or her life and the lively horror inspired by the disease by reason not only of the high fatality inseparable from it but also of the maiming and disfiguring effects on a large proportion of those who survived its invasion naturally turned men's minds the world over to the question as to whether it were not possible to devise some method for mitigating the virulence of the plague. Whence, however, was originally derived or by whom accidentally or otherwise was discovered the artificial method of communicating small-pox which came to be known by the term "inoculation" it is at the present day impossible to say. According to tradition the process of inoculation has been in use among the Brahmins in India for centuries and a similar claim has been made on behalf of the Chinese. There can be little doubt that in China a method of artificially communicating small-pox was in vogue long ages apparently before the disease had obtained recognition in Europe, but the process was essentially different from inoculation properly so-called, consisting as it did of inserting small-pox crusts into the nostril of the patient, whereby the disease was communicated by way of the respiratory tract. Coming to comparatively recent times, however, we have definite evidence that inoculation was practised in Turkey early in the eighteenth century.

In the 29th volume of the Philosophical Transactions of the Royal Society may be found references to the process as observed in 1713 by Dr. Emanuel Timoni of Athens and in 1716 by M. Pylarini, then Venetian Consul at Smyrna. But it would seem that their description made little, if any, impression at the time and, although published in the records of the Royal Society, passed almost at once into oblivion. The actual introduction of inoculation into England was brought about through the instrumentality of Lady Mary Wortley Montagu, who, apart from her social status as the wife of the English Ambassador at the Ottoman Court, has achieved for herself lasting recognition in literature by reason of her attainments in the gentle art of letter-writing. Indeed, Professor Rayleigh in a recent lecture at the Royal Institution gave it as his opinion that in this respect she should be placed second only to Madame Sevigné. Writing from Adrianople in 1718 she says: "The small-pox, so fatal and so general amongst us, is here entirely harmless by the invention of *engrafting*, which is the term they give it. Every year thousands undergo the operation; and the French Ambassador says, pleasantly, that they take the small-pox here by way of diversion, as they take the waters in other countries. There is no example of anyone who has died in it; and you may believe I am well satisfied of the safety of this experiment, since I intend to try it on my dear little son. I am patriot enough to take pains to bring this useful invention into fashion in England." Lady Montagu had indeed the courage of her opinion, and the first person inoculated in England was her daughter. This first operation by Dr. Maitland in April, 1721, was shortly followed by the inoculation of a child of her family physician, Dr. Keith. Next an experiment on a larger scale was carried out on certain condemned felons who were offered the alternative of submitting to the operation. No ill result having been witnessed thus far, King George I., who had been much interested in the matter, was himself inoculated, as also were several members of his family. Apparently, however, the method did not generally commend itself to public taste; moreover, it was discovered that, contrary to anticipation, persons inoculated with small-pox became themselves centres of infection and, perhaps for the reason that no serious attempt was made at that time to diffuse information on the subject, it was not until thirty years or more subsequently to its introduction into this country that inoculation as a prophylactic against small-pox became practised to any considerable extent.

In his "Synopsis Medicinæ," published in 1761, Dr. John Allen, a Fellow of the Royal Society, gives the following curious directions for the inoculation of the small-pox: "First, a little quantity of purulent Matter must be procured, about 5 or 6 drops taken from the Pustles of some young Person, who has the benign Small-pox of the distinct Kind, which must be brought to the Place where the Operation is to be performed in a Small Vial or in a little Pill-Box; and when all Things are prepared, the Surgeon is to make two small Wounds, one on the Arm, and the other on the Leg, of the Opposite Side; and the aforesaid variolous Matter is to be applied to the Wounds on Dossils of Lint, and a Bandage to be made over it. There is no occasion to make the incisions deeper than just through the Skin, nor any longer than a Barley-Corn. After 24 hours the Dossils may be removed, and the Ulcers dressed with Diachylum Plaister or Cole-Wort leaves once or twice a day, according as more or less Matter is discharged. This being done, the Distemper will gradually be produced; and it is usual for the following Symptoms to arise. About the eighth day after the Operation some Pustles begin to appear not unlike to those that are commonly seen in the distinct Kinds, a little Fever having preceded the Eruption and the other usual Symptoms, but more mild and gentle. As to the places where the Incisions are made, the 4th Day they grow red and are inflamed, on the 6th they tend to Suppuration and discharge an ichorous Pus. Indeed, about the time of the Eruption of the Pustles whilst the little Fever lasts the Ulcers discharge somewhat less; but after the Eruption, even until the Decline of the Pustles, the Pus increases daily and after that it again gradually diminishes, so that commonly in five weeks time the Ulcers are quite dried up. By how much the greater the discharge of purulent Matter is by these artificial Ulcers so much the milder will the Distemper be. In the general it is observable that the Small-pox procured by Inoculation are of the distinct Kind, for the most part void of Danger, that the Pustles are few in number, and pit very little. Very often, however, there follow after them Tubercles and Abscesses, some indeed but slight ones but sometimes very malignant ones, and exceedingly difficult of Cure. To prepare the Body for Inoculation a great many talk much of Bleeding, of giving Emeticks and Cathartick. But in truth, if the Person to be Inoculated has Youth on his side, is of a good habit of Body, and in Perfect Health, none of these things seem to be necessary. It is requisite only, that he take care to observe a temperate Regimen for some time before the Operation. When the Operation is performed the Person need not be kept under any strict Confinement, but may live pretty much after his accustomed Manner, excepting that it will be prudent to forbid him the eating any Flesh-Meat. When the Small-Pox are come out the same Regimen is to be observed as is usual in the distinct Kind, got in the common way; and if there be occasion for anything at all of Medicine, these procured by Art require the same Method of Treatment, as the benign discrete Small-Pox in the natural way."

The subsequent extensive diffusion of the practice of inoculation in this country was undoubtedly due in large measure to the labours of two brothers named Sutton and also of Adams and of Dimsdale, of whom the last named had a barony conferred upon him in commemoration of his having successfully inoculated the Empress Catharine of Russia. The Suttons—two brothers, Robert and Daniel, who lived at Bury St. Edmunds, Suffolk, and Ingatestone in Essex respectively—although not medical men, introduced, or rather revived, the greatly improved method of treating the patients under their

charge. They were extraordinarily successful in the results which they obtained and, indeed, claim to have inoculated no less than 20 000 persons without losing one as the direct result of the operation. Acting on the instructions originally laid down by Sydenham for the treatment of ordinary small-pox—the form of treatment to which, by the way, his contemporaries obstinately refused their adherence—the Suttons adopted and caused their patients strictly to observe what was known as "the cooling treatment," a method much akin to that which appears to have been pursued with good results by the Turkish operators from whom Lady Montagu first derived the knowledge of the process of "engrafting." In the hands of Daniel Sutton, who became specially famous for his successful inoculations, "the great secret of his success seems to have consisted in his making one puncture only; exposing his patients much and often to a cool atmosphere; supplying them freely with refrigerant drinks; and restricting them to a spare diet." By attention to the mode of life and general treatment of persons undergoing the process, together with careful selection of the sources (preferably the primary vesicle) from which the virus was obtained, Adams indeed succeeded in gradually evolving a strain of virus of such tenuity as to produce in a considerable majority of instances nothing beyond a single vesicle at the original site of puncture. The general eruption typical of the disease as contracted in the ordinary manner was in these cases either entirely absent or represented by at most a very few secondary vesicles only. Although doubtless the extremely mild form of the disease thus artificially produced was none the less contagious, the visible effect produced so closely resembled the results then beginning to be known as following on the Jennerian process of vaccination that numbers of Adams's patients could hardly be persuaded that he had not, contrary to their desire, intentionally vaccinated rather than variolated them.

There has always been considerable controversy as to the efficacy of the process of inoculation in restraining the ravages of small-pox, the matter being rendered the more difficult since it is almost impossible to arrive with any accuracy at what may be thought of as the average death-rate of the natural disease which in pre-inoculation times is known to have varied greatly in different epidemics. If, as has been frequently asserted, the average mortality in natural small-pox may be taken as being one in five or six, and, on the supposition that in the majority of cases at any rate inoculation prevented subsequent invasion by small-pox, then it is quite evident that the process was of the utmost value to the persons inoculated.

The statement of the Suttons, already mentioned, that inoculation in their hands was unattended with fatal results is perhaps exaggerated, as may also be the declaration of Baron Dimsdale that in a series of 1500 cases no death had occurred. Nevertheless the records of the Small-pox Hospital for a series of years show that we shall not greatly err and shall indeed be probably within the mark if we accept Dr. Gregory's estimate of 1 death in 500 inoculations as approximately correct. There is, however, perhaps ground for suspicion that inoculations performed in the face of epidemic small-pox were more prone to be fatal than were inoculations undertaken when the disease was not prevalent. On the other hand, we must bear in mind that the general diffusion of inoculation brought under the influence of the disease, although possibly in a mild form, large numbers of persons who otherwise might probably have escaped infection.

It is, I think, hardly possible better to sum up the matter than in the words of Sir Thomas Watson: "The advantages of the practice of inoculation to the individual, supposing him doomed to have small-pox, were great and obvious; to the community at large they were very doubtful. It gave the undoomed individual for certain an ugly disease which was comparatively free from danger in exchange for the chances, on the one hand of contracting a very hazardous form, and on the other of escaping altogether from any form, of variola. We need not inquire which is the most eligible branch of this alternative; we know which was by most men actually chosen. But the practice of inoculation, by carrying the virus and the disease into every village throughout the length and breadth of the land, filled the country with contagion, ensured the disease to all who were subjected to the operation, and diminished to all who were not the chances of escaping it. No doubt the distemper was produced artificially in many more persons than would have caught it naturally had inoculation never been thought of, so that while the relative mortality—the percentage of death from small-pox—was lessened by this practice the absolute mortality was fearfully increased. Such at least is the judgment expressed by most who had thought and written on the subject."

VACCINATION.

It was during Jenner's apprenticeship to Mr. Ludlow, a medical man practising at Sodbury, near Bristol, that his attention first became directed to a belief, widely prevalent in Gloucestershire during the latter half of the eighteenth century, that those persons who in the course of their employment on dairy farms happened to contract cow-pox were thereby protected from a subsequent attack of small-pox. Although himself a native of Gloucestershire he does not appear to have been aware of the local tradition previously to joining Mr. Ludlow at Sodbury. It was while working here that his interest became aroused by a casual remark made by a young countrywoman who happened to come one day for advice and who, on hearing mention made of small-pox, immediately volunteered the statement that she could not take that disease as she had had cow-pox. On coming up to London in 1770 to finish his medical education Jenner entered at St. George's Hospital and became also a pupil of John Hunter, with whom he speedily became a great favourite. With Hunter he discussed the question of the protective power of cow-pox over small-pox, but the great anatomist does not appear to have attached much importance to the matter although subsequently on several occasions he referred to it both publicly and in private. In 1773 Jenner returned to his native village of Berkeley, where he commenced to practise as a medical man. The impression which had been made on him in his student days as to the possibility of obtaining protection against small-pox still persisted, becoming, indeed, stronger as time went on. It would appear, indeed, to have been ever present in his mind and at length he determined to put the matter to the test of direct experiment. It was not, however, until May 14th, 1796, which has been appropriately termed the birthday of vaccination, that he commenced actual experiments. On this day he vaccinated James Phipps, a healthy boy about eight years old, by inserting into two superficial incisions on his arms matter taken from a vesicle on the hand of Sarah Nelmes, a dairymaid, who had been infected while milking her master's cows. The result of this experiment, the details of which are so well known as to need no mention here, must have afforded Jenner the most lively satisfaction, confirming as it did what up to that time had been a pious opinion only. "But the most agitating part of the trial still remained to be performed. It was needful to ascertain whether he (Phipps) was secure from the contagion of small-pox. This point, so full of anxiety to Dr. Jenner, was fairly put to issue on the first of the following July." Variolous matter taken directly from a pustule was carefully inserted by several incisions, but no disease followed. Having succeeded in communicating cow-pox from one human being to another by implantation of the virus in the skin, the next step was obviously to attempt its transference to yet another subject and so on, if possible, through an indefinite series, in order to ascertain whether its protective power was thereby diminished. Through lack apparently of material Jenner's work was interrupted until the spring of 1798 when a simultaneous outbreak of cow-pox and "grease" afforded him the further opportunity he desired. A few months later he published his "Inquiry" in which were set out the results of his observations. The appearance of this work was the signal for an extraordinary wave of enthusiasm which spread so rapidly that within a few years only of Jenner's announcement a knowledge of his method of preventing small-pox had extended to almost every portion of the civilised world.

The experience of the past century, culminating in the definite pronouncement in 1896 of the Royal Commission on Vaccination, having fully justified the principle of Jenner as to the prophylactic power of vaccination, it may be of interest to determine what light pathology is capable of throwing on the relationship which may be thought of as existing between variola and vaccinia.

THE RELATIONSHIP OF VARIOLA AND VACCINIA.

Although it is clear from Jenner's writings that he believed vaccinia to be nothing more or less than "small-pox of the cow" his theory appears not to have received general support even in his own day, and from that time onwards the value of the practice of vaccination has by some been

impugned on the plea that inoculation of one disease, "cow-pox," could not be expected to exert any really protective influence against the ravages of small-pox, a disease supposed by them to be of totally different origin. And if the thesis of essential difference between these maladies were capable of demonstration no doubt the objection would be of considerable weight; for there exists but little well-authenticated evidence that the living virus of one disease is capable when inoculated into an animal of affording protection against the effects of inoculation of the virus of another and totally different disease, although no doubt when two different viruses are inoculated at nearly one and the same time the incubation period of one or other of them may be modified as to duration.

In his first paper Jenner, as has been said, advanced the thesis that small-pox and cow-pox are identical; but even at the present day controversy wages hotly around this question and it still awaits a definite solution. There can, however, be no objection to our speaking of vaccinia as "one with small-pox," since it matters little from our present point of view whether small-pox on its transference from man to the bovine animal becomes actually transformed or, as some would maintain, merely modified. During the long period which has now elapsed since the introduction of vaccination many observers have set themselves the task of attempting by experimental methods to solve the problem of the true relationship of variola to vaccinia. These attempts have all been directed to the possibility of giving rise to cow-pox by the introduction in one or another manner of the virus of small-pox into the system of the bovine animal. In the great majority of such attempts, which are vastly more numerous than is generally supposed, the results have been entirely negative, although so numerous have been the experimenters who from time to time have attacked the problem that the total number of instances in which an apparently successful result has been obtained is now considerable. As far as I am aware the first recorded experiments are those of Gassner of Gunzburg in 1801, who succeeded after no less than ten fruitless attempts in directly inoculating a cow with small-pox virus. The lymph thus obtained was employed for the vaccination of four children, from whom seventeen others were subsequently vaccinated. None of these exhibited any signs of small-pox. Viborg of Copenhagen, in 1807, is stated to have also been successful in variolating the cow. Basil Theile of Kasan twice (in 1836 and 1837 respectively) succeeded in inoculating the cow with small-pox matter and in vaccinating children with the lymph thus obtained. In the light of recent work on this subject his conclusions are of much interest. As stated by himself they are: (1) the so-called vaccine disease is not an eruptive disease peculiar to the cow, but it is produced in it by the transmission of human small-pox to it, and the man and not the cow, as has hitherto been thought, is the source of the disease; (2) the mild disease thus caused in the cow can by direct transmission from the cow to man produce in him as mild a disease, which gives protection against the natural small-pox. Theile also described a method by which he claimed to have brought about such modification of small-pox virus as to render benign its action on the human subject without the intermediate stage of implantation on the tissues of the cow. This altered potency of the material was brought about, according to his statement, by first keeping the small-pox lymph for a period of ten days between two slips of glass, after which milk was added to it and the resulting mixture employed for the vaccination of children. The same process was carried through with the lymph obtained from the first and following series of children vaccinated, until after ten generations addition of milk was found to be no longer necessary.

Seeing that at this date (1836–38) true cow-pox was so much more widespread than at present, that at the commencement of the century Jenner confidently looked forward to its occurrence every year, and that in consequence the majority of milch cows were liable to become infected at one or another period of their existence, this empirical method of Theile bears a curious and noteworthy resemblance to one of the methods proposed by Koch for the treatment of rinderpest. This consists in the injection into susceptible animals of a mixture composed of a small proportion of virulent blood diluted with a much larger quantity of serum obtained from an immune animal. Milk, of course, is merely an emulsion due to suspension of fatty particles in a fluid which may be regarded as blood serum, so that it is conceivable that milk obtained from a cow which had suffered not long before from cow-pox and had so become, for the time at any rate, immune, might so far modify small-pox lymph added to it as to produce some such effect as noted by Theile when the mixture was used for purposes of inoculation. I have been unable to find any records dealing with a repetition of these experiments, but it would be interesting to make investigation into the possibility of producing a similar lessening in virulence of small-pox lymph by admixture with the blood serum of a calf which had been vaccinated some few weeks beforehand.

Ceely, in February, 1839, inoculated three sturks with variolous lymph, with the result that in two of the three he eventually obtained in due course what he considered to be vaccine vesicles. From these, lymph stocks were established which at one time came into such extensive use that in the course of a few months at least a couple of thousand children had been vaccinated therefrom. In his paper recording these experiments he states that on former occasions, even though working purposely at different times of the year, he had altogether failed in attempts to variolate the cow. In order to test the measure of protection afforded to these children by his variola-descended lymph Ceely tried on a number of them the effect of subsequent inoculation at varying intervals of time from their vaccination. In no case did he obtain any greater result locally than on the authority of Willan is known to have attended the test inoculations employed by Jenner and Woodville.

Unfortunately, owing to the particular methods used by Ceely in his variolous inoculations of cows some doubt is thrown on the value of the results obtained by him. He was, according to his own account, working simultaneously with both variolous and vaccine lymph, so that it is difficult to exclude the possibility that his instruments may have unintentionally served to convey the infection of both diseases at one and the same time.

Several years before the commencement of his inoculation experiments Ceely had made trial of a method originally employed by Sonderland of Barmen (1830), who claimed to have infected cows with the contagion of variola by way presumably, of the respiratory tract. This he did by enveloping them in blankets taken from the bed in which a patient had died from small-pox and by hanging other blankets similarly infected around the head of each cow in order that the animal might breathe in the "effluvium" arising therefrom. It is stated that these cows subsequently manifested symptoms of cow-pox and that from this source lymph was obtained and used on the human subject with the result that typical vaccine vesicles were produced. Ceely failed, however, in his attempt to bring about infection in similar fashion, as, indeed, have numerous observers in various parts of the world. Yet Ceely has himself recorded an occurrence observed by him in 1840 which, although apparently but little known, is of interest in this connexion. He relates an instance in which five out of eight milch cows sickened with cow-pox within twelve or fourteen days of their having been seen to be licking over a quantity of flock from the mattress on which a patient had died from confluent small-pox and which had been spread out in a field for purification. Careful inquiry at the time appears to have left no doubt that the animals, which had been on the same farm for a considerable period, were in good health at the time of their admission to the meadow in which the bedding was exposed and also that there had not been any other case of cow-pox in the neighbourhood. The fact that all the animals became affected simultaneously and after a period corresponding to the usual incubation period of variola certainly affords some reason for the assumption that the outbreak owed its origin to the animals being exposed to the "effluvium" from the infected bedding. It is, of course, possible that infection by way of the digestive tract may have been a factor also in this case, since Chauveau and other observers have shown experimentally that such result may be possible, a number of cases having now been recorded in which vaccinia has been communicated both to the human subject and also to the lower animals by the ingestion of vaccine lymph or powdered vaccine crusts.

There surely has seldom been so indefatigable a repeater of experiments as Badcock, the Brighton chemist, who during a period of about twenty-five years performed more than five hundred variolous inoculations. In December, 1840, Badcock, who had commenced his work without knowledge of Ceely's slightly earlier work, first succeeded in variolating a cow from which he carried on a stock of what was indistinguishable from genuine vaccine lymph. Although he

subsequently met with similar success on no less than thirty-seven separate occasions, the difficulty and uncertainty of the work will be appreciated on consideration of the fact that those experiments which eventuated in success represent but 7 per cent. of the total number. The lymph obtained by Badcock as the result of his variolation experiments has been largely employed; he supplied it to hundreds of medical practitioners and many thousands of children are said to have been successfully vaccinated with it. About twelve years (1852) after Badcock had obtained his first successful result two American physicians, Adams and Putnam, were equally fortunate and were able in consequence, as reported at the time in a Boston daily paper, to furnish all the vaccine matter requisite for use in the city and neighbourhood.

In 1865 a commission appointed by the Society of Medical Sciences at Lyons, having Chauveau as its head, reported the results of a comprehensive series of experiments carried out by it during the two preceding years, the results of which were completely at variance with those obtained by previous investigators. These results have been admirably summarised in the Report of the English Royal Commission on Vaccination. "Inoculation of the cow or heifer with small-pox matter in any one of the thirty animals used did not give rise to a vaccine vesicle; nevertheless a definite result was obtained, in the form, however, not of a vesicle, but of a thickening and inflammation of the wound. When a puncture had been made this became a papule; lymph squeezed from such a papule and inserted into a second animal gave rise to a like papule, and this, again, might be used for a third animal, but often failed, and the effect could, in no case, be carried on through more than three or four removes. When the inoculation was repeated on an animal on which a previous inoculation had produced such a papule no distinct papule was formed; and, moreover, lymph squeezed from the seat of the latter inoculation produced no effect at all when used for the subsequent inoculation of another animal. There is evidence that the development of the papule was the result of the specific action of the virus. This inference is strengthened by the fact that no such papule was produced by the Lyons Commission when the small-pox matter was inserted into an animal which had previously had cow-pox naturally or artificially, as well as by the fact that when an attempt was made to vaccinate, with vaccine lymph of proved efficacy, an animal on which a papule had been so developed by inoculation with small-pox matter, the vaccination failed, though the animal had never had natural cow-pox or been vaccinated. The specific nature of the lymph of the 'Lyons' papule is held to be shown by the fact that such lymph, when used on the human subject, gave rise to small-pox. On the other hand it has been urged that in this case the virus producing the effect was simply the original small-pox matter used in the inoculation producing the papule and still *clinging* to the wound. This, however, is considered to be disproved by the experience that lymph from a 'Lyons' papule of the second remove also gave rise in the human subject to small-pox. Thus Chauveau and his Commission found that small-pox implanted in the bovine animal gave rise to a specific effect which was not cow-pox but was of the nature of small-pox, though its manifestations in the cow were different from those of small-pox in man."

A few years earlier, in 1860, Martin of Boston, U.S.A., appears to have had a somewhat similar experience, as about fifty persons vaccinated by him from vesicles raised on a cow's udder by inoculation of variolous matter taken from a pock on the body of a man who had died from the disorder were nearly all attacked with small-pox and three died.

Voigt, the director of the Hamburg Vaccine Establishment, in 1881 brought into extensive use, not only in Hamburg but also in other parts of Germany, a strain of lymph of variolous origin. In the early summer of that year he inoculated three calves with lymph obtained from a case of small-pox. In two of these the operation was apparently unsuccessful, in view of which it is of interest to note the fact that all three calves were afterwards found to be insusceptible to vaccination. In the third calf a single vesicle appeared on the site of one out of five incisions made on the left side of the perineum. Voigt adds, however, that this same animal had been vaccinated in one small place in the right hypochondrium (for what reason is not obvious) and at at this point a normal vesicle developed. Voigt does not consider that this fact invalidates the apparent success his experiment, for the reason that, as he says, the lymph derived from what he considers as the variolous source, proved be more potent as regards its observed effects on children and calves than the Beaugency vaccine lymph which he had in current use at the time his experiment was carried out. Both Chauveau and Berthel have, on the other hand, expressed the opinion that Voigt's variolo-vaccine is merely a continuation of the strain of animal vaccine previously employed in Hamburg.

In 1885 Dr. Simpson succeeded in an attempt to inoculate a cow with small-pox lymph obtained from a young vaccinated girl, but as far as I am aware he did not publish the details of this experiment at the time. Dr. Cory, to whom Simpson sent points charged from the cow on the sixth day after inoculation, has recorded the results following on their use in his recent volume on "Vaccination." Three days after receiving the points Dr. Cory employed them at the Animal Vaccine Establishment, Lamb's Conduit-street, for the vaccination of a young male calf. Three out of five insertions made with the lymph resulted in vesicles indistinguishable from those produced by the current lymph of the establishment. A second calf and also a child were therefore vaccinated from the first calf with successful results in each instance, although in the calf only six vesicles resulted from seventeen insertions of the lymph. From this calf a continuous series of calf vaccinations were carried on during a period of six months. With the lymph obtained from these animals, 79 in number, no less than 1247 children were vaccinated, 1174 of whom afforded an insertion success of 98·4 per cent.

Some years later (in 1892) Dr. Simpson, then resident in Calcutta, was again successful in raising a stock of vaccine lymph of variolous origin. Lymph was taken from a small-pox patient on the fifth, sixth, seventh, and eighth day of eruption and each day a young calf was inoculated, the animal having been taken into the small-pox ward for the purpose. The inoculations with the three later lymphs were unsuccessful, but the first calf showed on the sixth day of inoculation three papules on the abdomen and in the groin at points where no punctures or incisions had been made. These on the following day had developed into vesicles. Two of the incisions and one puncture also contained lymph. On the sixth day lymph was taken (whether from vesicles, incisions, or puncture, or all three, is not clear from Dr. Simpson's paper) for the inoculation of another calf, from which, again on the sixth day, a child was vaccinated, the two insertions giving rise in due course to vesicles. From this child the strain of lymph was carried on successfully through nine generations, and Dr. Simpson remarks that each child showed splendid vaccine vesicles, much more typical in every respect than those obtained from the lymph which had been previously in use.

In 1886 and 1890 Fischer, the director of the Institute for Vaccination at Carlsruhe, obtained two strains of variolo-vaccine as the result of inoculation of calves with human small-pox lymph. In the first series Fischer inoculated a young female calf which he took into the small-pox ward of the Pforzheim Hospital for this purpose. Typical vaccine vesicles had developed on the sixth day, the lymph from which was carried on through twelve generations in the calf, after which it was successfully employed for the vaccination of children. Fischer states that the initial experiment of his second series was carried out in the Carlsruhe Institute, but that the animal was placed in a separate stable and that every precaution was adopted to secure freedom from vaccine contaminations. In this calf directly inoculated with small-pox lymph he again obtained, as in his experiments of four years previously, a vesicular eruption having the characteristic appearance of ordinary vaccinia. With lymph taken at the third remove from this calf he vaccinated his own grandson with complete success, and the strain which has now been continued through a very large number of animals has now been brought by Fischer into general use.

Surgeon-Major King, in 1889, being then stationed at Madras, inoculated a young bull-calf with fifth-day small-pox lymph obtained from a child suffering from the disease. On the eighth day after the inoculation a crop of vesicles made their appearance, not at points of insertion, but some little distance away, from the lymph obtained from which another calf was then inoculated. In this calf again secondary vesicles appeared, but in addition vesicles also formed at each point of insertion of the lymph. The lymph stock was carried on through three more generations in calves, the vesicular eruption being now in each instance strictly localised to the points of insertion. With lymph obtained from the fifth calf of the series a number of children were vaccinated successfully. Dr. Simpson reports that from the stock thus established by Surgeon-Major

King 4240 British and native soldiers have subsequently been vaccinated and also a very large number of the native civil population with most gratifying results, the percentages of success being much above that obtained from the lymph previously in use. For reasons which are unknown to me Surgeon-Major King's investigation appears to have been regarded with disfavour by the Government of Madras, by whom he was ordered back to his regiment and deprived of his special emoluments. Subsequently, however, this injustice was repaired by the reinstatement of Surgeon-Major King in his former position as Director of Vaccination in the Presidency.

In May, 1892, Dr. Hime published the results obtained by him in a single experiment on variolation. The lymph employed for inoculation of the first calf was collected from a semi-confluent case of small-pox in a previously vaccinated woman thirty-seven years of age. No details are given as to where the experiment was conducted, but presumably it was the private establishment from which Dr. Hime supplies vaccine lymph, as he makes the statement that "the calf was placed on the ordinary vaccination table used for these animals." A number of skin incisions were made, into which the variolous lymph was inserted. Of these incisions all subsequently healed, being on the sixth day only "detectable to the touch by a slight roughness"; several "pocks," however, developed at points, for the most part distinct from any of the incisions, and material taken from these on the ninth day of inoculation was employed for the direct inoculation of another calf. All the incisions made on this second calf had "taken" on the fifth day, when lymph was collected in tubes and pulp removed by scraping. Some of the latter made into "conserve" with glycerine was sent to Fischer of Carlsruhe, who obtained excellent results with it on a calf from which children were in turn successfully vaccinated. Dr. Hime also himself vaccinated a child with a capillary tube of the lymph in two insertions at each of which points a typical vesicle presented itself on the eighth day.

The largest amount of research work in this direction during recent years is that of MM. Haccius and Éternod (1893), of whom the former is the Director of the Swiss Vaccinal Institute at Lancy, Geneva, where the work was carried out. M. Haccius gives an account of no less than seven successful series of experiments, in each of which a strain of variolous lymph, obtained in the first instance from the human being, was carried on from calf to calf through, in some instances, as many as six or seven removes. The general result was that by the second or at the most the third remove the effect produced was altogether indistinguishable from that which we are accustomed to see in a calf that has been successfully vaccinated. With the lymph of the fifth or sixth remove a number of previously unprotected children were vaccinated with unfailing success. The resulting vesicles could in no way be distinguished from ordinary vaccination vesicles of equal age. The total number of animals employed in these experiments is not mentioned, but from certain statements in M. Haccius's publication one gathers that it was very considerable. It is obvious, therefore, that the Lancy experience as to the small proportion of success to failures is similar to that of other observers. It is worthy of note also that in those animals in which inoculation of variolous matter appears to have been attended with success no definite vesiculation was ever observed at the site of any of the punctures or incisions that were made. The usual result in the first remove from the human being was either a single vesicle or group of vesicular points on the site of a scarification or denudation of the skin. It is particularly stated that every precaution was taken, as, for instance, by the sterilisation of the lancet before each operation, to prevent the accidental transmission of vaccinia.

Dr. Klein, who in 1879 had obtained in thirty-one trials what then appeared to be mere negative results, renewed his investigations in 1892, employing now calves for inoculation experiments instead of milch cows, as in his earlier attempts. Having procured at the hospital ships off Dartford lymph from the vesicles of two cases of confluent small-pox, one at the sixth and the other at the seventh day after appearance of the rash, this lymph was on the same day inoculated by linear cutaneous incisions on two calves at the Brown Institution. The inoculation of one of these calves afforded no indication of success, but on the other calf he obtained a local result in the groin, which, however, consisted not of a distinct vesicle but merely a thickening and redness together with a linear crust at the site of certain of the incisions into which small-pox lymph had been introduced. Lymph pressed from the thickened wound when inoculated into a second calf produced also by the fifth day a like but rather more marked result, while the thickening and redness still further increased as the process was repeated in a third and fourth calf. In none of these animals was there any appearance of vesiculation. At this stage the fourth calf of the series was removed to Lamb's Conduit-street, where Dr. Cory, with material obtained by clamping and scraping the thickened incisions, on the seventh day vaccinated an infant in five separate insertions with complete success. Each of these presented on the eighth day appearances characteristic of vaccinia. Moreover, Dr. Cory, who kept the child under observation from first to last, was unable to detect in the course of the disorder any deviation from the condition of affairs normal to vaccinia. "Crusts" from the arm of this child were preserved and utilised after being mashed up in sterile salt solution for the retro-vaccination of another calf. In due course there resulted in about half of the total number of incisions vesiculation of a character not to be distinguished from that current in the calves vaccinated in the ordinary course at the Lamb's Conduit-street station. Finally, after a lapse of six weeks, Dr. Klein submitted this retro-vaccinated calf and other calves vaccinated from it to the test of a further and thorough vaccination with current calf lymph and with the result that all these animals entirely resisted vaccinia. I have learnt privately from Dr. Klein that in his former (1879) experiments on cows he in more than one instance obtained results somewhat similar to those witnessed in the calf on which his more recent successful inoculation was performed. He suggested at the time the advisability of attempting a transference to a second animal, but Ceely, who was superintending the experiments, insisted on the necessity of obtaining a vesicle in the first animal inoculated as the only criterion of success and the suggestion was therefore overruled. For his own satisfaction, however, Dr. Klein endeavoured to vaccinate one of the cows which had shown some local reaction, but entirely without result, the animal apparently being immune.

Of my own experiments the most successful series may briefly be described as follows: with variolous lymph (contained in two capillary tubes) taken on July 30th, 1892, from a vaccinated girl, aged sixteen years, at from the fifth to the sixth day of the eruption of discrete small-pox I inoculated on Aug. 11th a cow-calf (A) about six weeks old by 32 linear incisions and 2 superficial scarified patches made on the abdomen. On Aug. 13th (the third day) this calf presented nothing but a slight scab over the scarified patch. On Aug. 15th (the fifth day) some of the incisions were somewhat red and elevated, more particularly at several definite points which tended to be vesicular. At this date, on the inner aspect of each thigh and distant in each instance from incisions or scarifications, was a crop of shotty and incipiently vesicular pimples. On Aug. 17th (the seventh day), having clamped 3 of the incisions, including those with the quasi-vesicular appearance, I removed the lymph with the crusts by scraping and used the material for the inoculation on this date of calf B. The accessory incipient vesicles I left untouched. From first to last calf A never exhibited any appreciable rise of temperature or indisposition of any sort. On the ninth day the linear incisions, the cross scarifications, and the accessory vesicles of calf A were in their decadence and in a few days more the whole process was at an end. More than a month later—namely, on Sept. 22nd—I vaccinated this calf A in 23 linear incisions with calf lymph obtained from the Animal Vaccine Establishment. The result was absolutely negative.

On Aug. 17th, with the scrapings obtained the same day from calf A, I inoculated a cow-calf (B) two months old in 56 linear incisions on the abdomen. On the third day every one of these incisions was distinctly raised and bordered by a delicate pink flush. On the fourth day (Aug. 20th) all incisions had evidently taken, the areola about each being now well marked and about one-eighth of an inch in width, but there was no definite vesiculation. At this date, after clamping, scrapings were taken from certain of the incisions for further experiment. No accessory vesicles appeared in this calf, which, along with calf A, was vaccinated on September 22nd in 17 linear incisions with calf lymph obtained from the Animal Vaccine Establishment. The result, as in calf A, was absolutely negative.

On Aug. 20th, with scrapings taken the same day from calf B, I inoculated a small cow-calf (C), seven weeks old, in 27 linear incisions on the abdomen. On the

fourth day (Aug. 23rd) every incision had "taken" and in most of them there was evidence of commencing vesiculation. Two days later (Aug. 25th) vesiculation was distinct in several of the incisions. At no time were there any accessory vesicles. This calf also was vaccinated (Sept. 22nd) with calf lymph from the Animal Vaccine Establishment. Again the result was altogether negative.

Thus far I have obtained an undoubtedly successful result in one series only out of four attempts, but I have at any rate been able to satisfy myself that it is possible to variolate the calf, and, further, that the result obtained in the first instance may become greatly modified in the course of successive removes; and, again, that animals which have been thus treated are no longer susceptible to vaccination.

I may, perhaps, mention here that all my experiments were conducted at the Brown Institution to avoid any possibility of contamination with vaccinia; that, as a further precaution, new scalpels were used, which were invariably first carefully sterilised in a flame; that before and after use the table was thoroughly washed with carbolic acid and hot water and during the intervals of use kept exposed to the open air.

The Royal Commission on Vaccination, in the section of their report dealing with the question of the relationship of variola and vaccinia, shows that the various series of inoculation experiments, of which I have given a brief account, fall into one or other of three categories. The first category includes the experiments of Thiele, Ceely, Badcock, Voigt, Haccius and Eternod, King, Simpson, Hime, and others. In these experiments "inoculation of small-pox matter into the udder or adjoining parts of the bovine animal gave rise at or near the site of inoculation to a vesicle either identical in visible characters with the ordinary vaccine vesicle produced by inoculation with the matter of cow-pox or to a vesicle the features of which, while not corresponding wholly with those of a perfect vaccine vesicle, so closely resembles it as to justify the recognition of the vesicle as a vaccine vesicle. Also it includes experiments in which, though the local result had not the characters of a perfect vaccine vesicle, yet lymph from it when carried through a second or third remove in the cow or calf presented results fully manifesting those characters and when again transferred to man gave results indistinguishable from the ordinary vaccine vesicles." In the second category are placed the experiments of Dr. Klein and myself. In no instance did either of us obtain any appearance of vesiculation in the animals directly inoculated with small-pox virus, although the appearance of the eruption tended to resemble more and more that typical of vaccinia the further the remove, through a series of calves, from the original strain. In the third category are included the practically negative results of the Lyons Commission obtained by Chauveau and his fellow-workers. A brief account of these has already been set out.

With the exception, then, of Martin and of Chauveau and his colleagues of the Lyons Commission all the observers mentioned claim to have obtained positive results—in a certain number of their experiments at any rate—as regards the production of typical vaccinia after one or more removes as the result of variolation of the cow or calf. By no one, apparently, has success been attained invariably, but it is among the experiments of the earlier observers especially, who made use for the most part of heifers and milch cows, that the largest proportion of abortive attempts are to be met with. Subsequent experience has shown that success is much more likely to be attained if calves be used instead of heifers or cows. In this way, perhaps, Chauveau's somewhat anomalous results may be in part explained.

With reference to recent experiments on variolation of the calf it is worthy of note that, as previously mentioned, different observers have obtained local effects in that animal which in different calves of a series have varied considerably. The final result has, however, after a greater or less number of removes from calf to calf, been invariably the same—namely, a local vesicle is produced which by no means at our command, such as the appearance and course thereof or the protective power of the lymph derived therefrom, is distinguishable from true vaccinia.

Although practically there is unanimity of opinion among those who have worked at this subject it must be confessed that, seeing the conditions under which they were carried out, many, particularly of the earlier experiments, are of little worth. Some of the main objections are based on the fact that experiments on this subject have almost without exception been performed in establishments devoted to the continuous cultivation of vaccinia, on the use concomitantly of vaccine and of variolous lymph on the same animal, and on the want of care as to the cleanliness and freedom from vaccine contamination of lancets and "points" used in the experiments. Objection of similar sort against the variolations of the calf which have been achieved in recent years is hardly valid. In some of the more recent cases, at least, special precautions have been taken to ensure that the instruments and table were sterilised and to render the environment of the animal such as to afford no likelihood of the communication of vaccinia. Most especially was this so as regards Dr. Klein's investigations and my own. The number of successful cases which have been recorded is now so large that it is difficult to believe that sources of fallacy of the above sort should have been present in every instance, and it is therefore well-nigh impossible to resist the conclusion that a change of small-pox into vaccinia must really have come about.

Nevertheless there are found even at the present day those who, like Juhel and Dupuy (1894) and Layet (1895), maintain the essential duality of variola and vaccinia. It is, however, difficult to understand how the results obtained, by the last-mentioned especially, can bear the interpretation he would place upon them, seeing that he obtained as the result of inoculating heifers with small-pox lymph a vesicular eruption, the lymph derived from which reproduced the disease on other heifers. Moreover, subsequent vaccination of all his series of animals was either abortive or wholly without result.

Hervieux (1895), the director of the Vaccine Institute attached to the Académie de Médecine, takes up a similar position to that of Layet and his collaborators, Le Dantec and Benech. He asserts that the only point of similarity between variola and vaccinia which has been brought forward by those who believe in the relationship of these disorders is the likeness between the vesicles which are found in either case and denies that this point forms any argument in favour of their identity. He also considers that the use of lymph of variolous origin is fraught with danger, and so doubtless it may be when that employed is derived—as in Chauveau's and Martin's cases, for instance—directly from the animal first inoculated.

If, as I believe, it can be conclusively proved that small-pox lymph, by passing through the system of the calf, can be so altered in character as to become deprived of its power of causing a generalised eruption, while inducing at the site of inoculation a vesicle indistinguishable from a typical vaccine vesicle, and, more important still, if it be shown that when transferred again to man it has, by such treatment, completely lost its former power to produce a general disease, it may fairly be asserted that cow-pox—or rather that artificially inoculated form of the disease which we term vaccinia—is nothing more nor less than variola modified by transmission through the bovine animal. Perhaps the most reasonable interpretation of such results may be that small-pox and vaccinia are both of them descended from a common stock—from an ancestor, for instance, which resembled vaccinia far more than it resembled small-pox. It is conceivable, indeed, that the seeming vaccinia obtained in the calf by inoculation of small-pox matter into that animal may, after all, be but a reversion to an antecedent type; and in this connexion we may call to mind a fact of universal experience—namely, that vaccinia, however it may have arisen in the past or is made to appear in the present, exhibits little tendency to "sport" (as, for instance, by manifesting a "generalised eruption") in the direction of small-pox.

Mr. Picton and Dr. Collins, in their addendum to the report of the Royal Commission on Vaccination, lay much stress on the want of "evidence to show that inoculation of the pox of the cow on the human skin has ever produced small-pox." Variola and vaccinia may, nevertheless, have a common ancestry, since it is not unlikely that variola may have departed widely from the original type and have gained an exalted virulence by repeated passage through man under conditions favourable to its propagation and activity. If this evolution of the disease has, in fact, taken place variola may have suddenly reverted under greatly changed conditions (as, for instance, implantation on the bovine animal) to an ancestral type. But the reverse process—i.e., sudden "sport" of vaccinia in the direction of small-pox—is not to be expected. It is most unlikely that a less differentiated form (cow-pox), also emanating from the common ancestral stock, should attain to the most exalted virulence in a single individual and *per saltum* declare itself as small-pox, as the dissentient Commissioners insist that it ought to do.

DETAIL IN SURGERY.

BY T. PRIDGIN TEALE, M.A. OXON., F.R.C.S. ENG., F.R.S.,
CONSULTING SURGEON TO THE LEEDS GENERAL INFIRMARY.

I.—OPERATIONS FOR HÆMORRHOIDS.

MY life as a surgeon has been long enough to have seen nearly the whole series of methods by which hæmorrhoids have been dealt with—in modern times, at any rate.

In the earlier operations nitric acid was employed and was applied, without anæsthetic, manacles, or Clover's crutch, to hæmorrhoids protruding from the anus as a result of straining over hot water in a night commode. As an improvement in the nitric acid method I was taught by my father to introduce into the rectum one of Weiss's dilators of the female urethra and then after this preliminary step to apply the acid to the diseased portion of the anal canal whilst thus dilated. Two advantages were gained by this modification: firstly, the freedom of the surgeon from dependence upon the goodwill of the hæmorrhoids for their convenient extrusion; and, secondly and mainly, the thorough dilatation of the sphincter, with its security against subsequent spasmodic contraction upon a mucous membrane which was often both protruding and cauterised. This plan was probably a reaction from an older method of ligature in which the strangled piles had to slough off and which not rarely ended in pyæmia.

My next stage of experience was with Smith's clamp and cautery. To this I held for some years, but the method did not entirely satisfy me, as occasionally there was bleeding into the rectum from the seared stump. About this period my colleague Mr. Walter Brown returned to Leeds as resident surgical officer to the infirmary. He told me of the operation in use at the South London Hospital, where he had recently filled a similar post, in which the hæmorrhoid was transfixed at its base, very firmly tied, and cut away close to the ligature. I thenceforth adopted the plan and made use of it until it was superseded in my practice by what I consider to be the far more satisfactory operation which I have now to describe. To this operation, which I have now used exclusively for the last fourteen years, I was led by four main considerations. 1. The manner in which hæmorrhoids present themselves externally, becoming as accessible as any ordinary growth or tumour on the surface of the body on dilatation of the sphincter, a step I had from a very early time been accustomed to take as a preliminary to all operations on the lower part of the rectum. 2. The method of Coates, which had much impressed me. It consisted in clamping the hæmorrhoid, in cutting it off close to the clamp, and, as a final stage, in closing up the raw edges and bleeding surfaces by ligatures with the clamp still *in situ* instead of arresting the bleeding by cautery. 3. The establishment of a further extension of excision of hæmorrhoids by Whitehead of Manchester, who proposed the complete excision of the anal ring of hæmorrhoidal mucous membrane, the bleeding being controlled by ligature and the union of the divided margins being attained by suture. 4. The development of the convenient volsella forceps which I had devised for holding down the os and cervix uteri when dilating and curetting the uterus and which command a complete mastery over the hæmorrhoids during excision. These four considerations chiefly influenced me in deciding to depart from the procedures in vogue at the time.

Let me now give a description of the details of the operation itself: 1. Believing dilatation of the sphincter ani to be, along with tooth-drawing and reduction of dislocation, the kind of proceeding in which chloroform is attended with more than its usual risk *I would urge ether emphatically as the anæsthetic.* 2. The lithotomy position, maintained by manacles and Clover's crutch. 3. Commence, as a matter of course, by dilatation of the sphincter ani, which not only brings the hæmorrhoids into view but is a security against spasmodic disturbance of the wound subsequently to the operation. 4. Grasp the most prominent hæmorrhoid at each extremity by a volsella forceps and hold it securely during the operation. This gives the surgeon perfect command both during excision and whilst completing the operation by suture. 5. Excise the hæmorrhoid with curved scissors by marking out and partially dissecting off a shallow flap, firstly, on the mucous membrane side and then on the cutaneous side and then excise the hæmorrhoidal mass. 6. Having tied any obviously pulsating vessels, bring the two sides of the wound together by continuous suture in the following manner: commencing about ½ in. from one end, let a continuous suture of fine catgut be passed rather deeply so as to bring the whole surface of the wound together and to control any oozing that may be taking place. Terminate this suture about ½ in. from the other end of the wound but neither tie it nor fix it anywhere. On the contrary, secure it for the time being only by clip forceps, after having drawn it tightly enough to stop all hæmorrhage. 7. In like manner deal with a second or even, if necessary, a third hæmorrhoid, taking care to leave about ½ in. of mucous membrane between each wound. 8. Finally, remove the clips from the sutures, which are then cut, leaving about 1 in. protruding at either end. 9. As a rule the sutures disappear and do not need removal. If they do not they can be pulled out without difficulty at the end of a few days, having no fixed point. 10. The after-dressing is practically *nil*. Some cotton wool is placed between the buttocks to absorb any oozing of blood or serum, but *no lint or other dressing is introduced into the anus.* This is absolute and *de rigueur*.

Advantages claimed for this method.—Having had many years' experience of nitric acid, of clamp and cautery, and of tying with excision, whilst I have had fifteen years' experience of the method just described, I feel that I may claim for the latter the motto, "Cito, tuto et jucunde." *Cito*, if not in the actual operation, at any rate in rapidity of recovery; *tuto*, in the absolute security against hæmorrhage and the increased security against septic accidents—not unknown in the old days of ligature—owing to healing by first intention; and *jucunde*, by reason both of the lessened after-pain and of the greatly reduced tendency to retention of urine, the after-pain being often capable of being reduced to insignificance by very careful soaking of the wound before stitching by a strong carbolic solution (1 in 30).

I am told that retention of urine is common, indeed, almost expected as a matter of course, where hæmorrhoids have been removed by ligature or by cautery. It is comparatively rare after the operation I have been describing, which has also the advantage over Whitehead's of being free from the risk of subsequent cicatricial stricture and is at the same time equally applicable to any degree of hæmorrhoids, however extensive.

One may ask how it came about in former days that cautery and ligature were used and not excision. Purely, I believe, from fear of hæmorrhage after operation, for in days when dilatation of the sphincter as a preliminary to removal of hæmorrhoids was practically unknown and efficient volsella forceps for holding the cut surface in view were uninvented the danger was a very real one. An open wound with a bleeding vessel inside a rectum guarded by a contracted sphincter used sometimes in those earlier days to produce a hæmorrhage at once dangerous and concealed. It was to meet this evil that ligature of the whole hæmorrhoid, destruction by nitric acid, and the method of clamp and cautery were invented. But now that we dilate the sphincter, that we have means of holding any amount of hæmorrhoid in view, that we arrest the bleeding of visible vessels by catgut ligature, and can bring the cut surfaces into firm apposition by a suture which either is absorbed or can be pulled away after a few days, the need for these more primitive details seems to have not only lessened but entirely disappeared.

Leeds.

A METHOD OF PROLONGING NITROUS OXIDE ANÆSTHESIA IN DENTAL PRACTICE.[1]

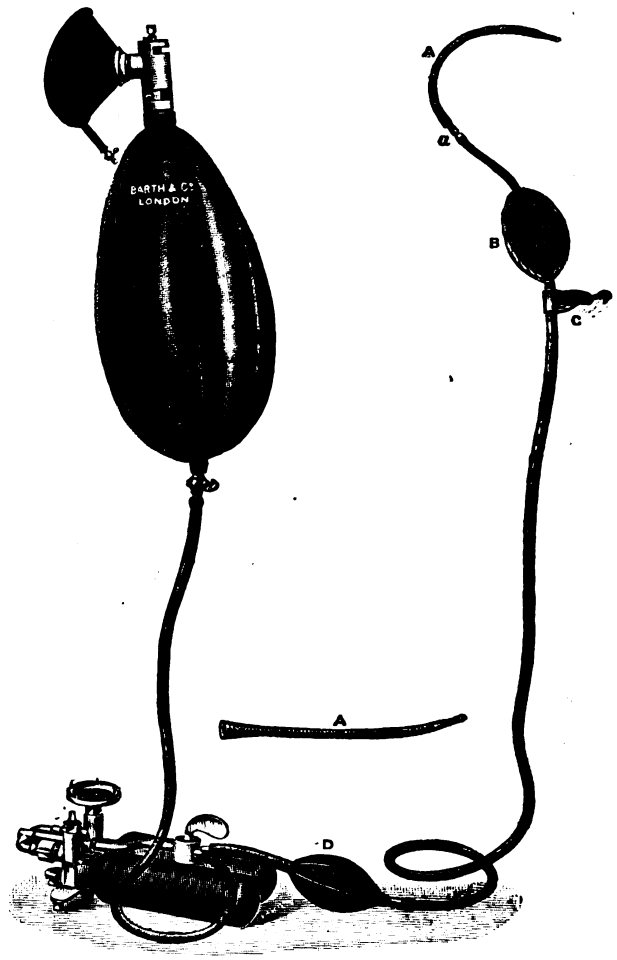
BY HARVEY HILLIARD, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT ANÆSTHETIST TO THE DENTAL HOSPITAL OF LONDON.

ANÆSTHETISTS are agreed that nitrous oxide would be a perfect anæsthetic for dental procedures but for the brevity, after the removal of the face-piece, of the available anæsthesia produced by its inhalation. Hitherto, therefore, only operations of the shortest duration could be attempted when nitrous oxide has been employed, while in those cases

[1] A paper read before the Society of Anæsthetists on March 17th, 1898

requiring an anæsthesia of two to three minutes' duration the nitrous oxide has to be in the vast majority of cases supplemented with the use of ether. Since, however, ether is so liable to be followed by unpleasant after-effects, is so pungent in odour that it clings about the operator's room all day, and since so much preparation of the patient is necessary before the drug can be administered, it is often deemed advisable to perform the operation at the patient's own house in order to minimise these many disadvantages. With nitrous oxide, however, we have practically none of these drawbacks. After-effects, if present, are of such a transient nature that a patient can walk home comfortably within a few minutes of the administration; the gas is without odour and is not unpleasant to inhale; and, moreover, little or no preparation is necessary prior to its inhalation. It is obvious, therefore, that if an anæsthesia of several minutes' duration, after the removal of the face-piece, can be obtained with nitrous oxide, by whatever means, this agent will be used with increasing frequency, and that it will only be supplemented in those cases where an unusually prolonged narcosis is required, as, for instance, in extensive immediate torsions, regulations, and multiple extractions. Up to the present time the means adopted for prolonging the anæsthetic effect of nitrous oxide have been very imperfect, being based for the most part upon the principle of preventing the elimination of the gas, thereby obtaining merely a slightly prolonged anæsthesia; but by preventing this elimination we must prevent or impede respiration also. Such methods, for instance, as pushing backward the lower jaw together with the tongue, thereby closing the orifice of the larynx, or by passing a sponge upon a holder backwards and downwards into the pharynx, produce very marked congestion and cyanosis, with jactitation—in fact, the signs of impending asphyxia. The patient under these circumstances is in a dangerous condition; there is great engorgement of the venous system and right side of the heart, and should there be present any degree of valvular cardiac disease the heart muscle might be unable to cope with the extra strain thrown upon it and the administration might possibly terminate fatally. In almost every reported case of death occurring during the exhibition of nitrous oxide it has resulted from obstructed respiration and consequent asphyxia. We are always very careful, therefore, when administering the gas to patients suffering from valvular disease of the heart not only to ensure perfect freedom of respiration, but also to allow a due admixture of air or oxygen, in order that all jactitation, cyanosis, and cardiac engorgement may be avoided. There is also another grave objection to this mode of prolonging nitrous oxide anæsthesia by preventing elimination, for, as pointed out above, it produces much congestion and cyanosis and this relieves itself locally by increased hæmorrhage from the gums and empty tooth-sockets, so that the patient's mouth rapidly fills with blood, whereby the operator is much hampered or even forced to abandon the operation, as there is not sufficient time for systematic sponging. Further, unless the patient's head be kept in such a position that the lower jaw and floor of the mouth form a sort of reservoir for the collection of this blood, it will gravitate backwards and at the first inspiration (which is always of unusual depth) it will probably be sucked into the air-passages, necessitating immediate tracheotomy to save the patient's life. It should always be our aim, therefore, to maintain the patient's head in the most convenient position for the operator consistent with the safety of the patient, but where the above methods are adopted the operator has to work in an unfavourable position, and thus the ultimate gain in time is practically of no value owing to the increased difficulties of the extractions.

The late Mr. Clover, aware of the advantages of obtaining a prolonged anæsthesia with nitrous oxide in dental surgery, made experiments with a "nose-piece," by means of which he hoped to continue the administration of gas and thus to prolong its anæsthetic action during operations on the mouth after the ordinary face-piece had been removed. To this end, when the patient was fully anæsthetised, he fitted over the nose a small accessory inhaler, to which nitrous oxide was supplied by means of a stopcock and tube communicating with a gasometer. He expected that sufficient gas would be inspired through the nose to maintain an anæsthesia already produced by the ordinary method and thus to enable the surgeon to undertake longer operations upon the jaws than could otherwise have been attempted except under the influence of ether. The results did not prove sufficiently satisfactory and Mr. Clover abandoned the idea. The apparatus was difficult to keep properly adjusted, so much air was breathed through the mouth that the anæsthesia was uncertain, and finally the gas could not be supplied at sufficient pressure to obviate this evil without being likely to cause damage to the olfactory region, the frontal or even the maxillary sinuses. Having found that prolonged administration of nitrous oxide for ordinary surgical procedures was attended with the best results, I attempted to devise a method whereby this anæsthetic could be employed in extensive operations in dental surgery, and I soon discovered that the only channel for the convenient administration of the gas after the removal of the face-piece was by means of a tube passed along the inferior meatus of the nose. First, a small-sized celluloid female catheter seemed to be the most suitable instrument for this purpose; but this was discarded owing to its rigidity, for a surprisingly large



A, Nasal tube; a, Vulcanite nozzle. B, Netted bag. C, Hook for fixing to head-piece of chair. D, Expansion bag.

number of patients are found to have a deviated nasal septum, an unusually arched palate, causing a corresponding curve of the floor of the inferior meatus, or much depressed inferior turbinated bones covered with hypertrophied mucosa which would be considerably damaged by the forcible passage beneath them of a rigid instrument. Next, a No. 7 (English) soft rubber male catheter was tried. This answers admirably, except that it takes longer to pass and is liable to be blown out by the pressure of gas supplied through it combined with the patient's expiratory efforts, and also on account of its flexibility it is more difficult to keep out of the operator's way without kinking. Lastly, a soft gum elastic silk tube was employed. This tube is equal in diameter to a No. 7 catheter; it is six inches in length and its distal end is made like an *à boule* male catheter. This is solid up

to the orifice, which is situated half an inch from the point, the proximal end being expanded to receive the conical attachment of tubing, in connexion with the portable steel cylinders in which the gas is usually stored. Two of these cylinders are connected up in the usual manner and fitted with a stopcock which has been made to my design by Messrs. Barth and Co. It is a tube of inlet to a stopcock chamber which is screwed into the cylinder connexion and lies in the space between the cylinders so as to be out of the way. This chamber is fitted with a two-way stopcock, the tap of which is an elongated broad arm, so that it can be easily turned by the foot. From the chamber lead two tubes of exit. The tap is so arranged that when it is turned on to either of the two exit tubes the arm lies over that tube through which the gas will flow when liberated from the cylinders by means of the ordinary foot-key. The whole gas supply can thus be entirely controlled by the administrator's foot. The exit tubes, like the other parts of the stopcock, are made of brass, are placed at an angle, and are an inch long, with bulbous ends so that rubber tubing can be easily slipped over them. To one is attached a Dr. Hewitt's gas inhaling apparatus; to the other the connexions of the nasal tube, which consist of the following:—A small stout rubber "expansion" bag, intended to regulate the usually irregular flow of gas from the cylinders. This is fixed by one end to a stopcock exit, the other extremity being connected by tubing to a thinner and large rubber bag covered with netting, which is continued as a small tube bearing a conical vulcanite nozzle, fitting into the funnel-shaped extremity of the nasal tube proper, A. This second bag is fixed by a hook to the head-piece of the dental chair and by noticing its degree of expansion the anæsthetist is enabled to tell whether his patient is getting a sufficient supply of gas to maintain anæsthesia.

The administration is conducted in the usual way until the patient has lost conciousness; then, taking the precaution that the ordinary gas bag is full, the stopcock having been turned on to it, and choosing the end of an inspiration, the face-piece is removed, the nasal tube is rapidly passed (this can be done during a single expiration), the face-piece is reapplied, and the stopcock is turned, so that the gas now only flows through the nasal tube; at this stage the inhalation is continued by both nasal tube and face-piece up to full anæsthesia; the face-piece is now finally removed, the operation is begun and narcosis is maintained by the nasal tube alone. To prevent the return of consciousness the "netted bag," B, must be kept fully distended, the gas being supplied at considerable pressure. In a typical case the patient is but slightly cyanosed and there is little or no jactitation (as he inhales sufficient air through the mouth and the free nostril), but the conjunctival reflex is absent. Should, however, he be of the type which requires but little gas, or if for any reason the mouth be considerably obstructed either by sponges or by the operator's hand, the nasal septum being at the same time markedly deviated towards the free nostril, the intake of air in proportion to the intake of gas is so lessened that deep cyanosis, jactitation, and even opisthotonos are produced. If, on the other hand, more gas is necessary to maintain anæsthesia the free nostril can be closed by the anæsthetist's finger or even the mouth can be partially obstructed by inserting a sponge. The extremity of the nasal tube is made to impinge on the posterior pharyngeal wall in order that the flow of gas may be directed by means of the orifice in its under aspect immediately over the upper opening of the larynx, therefore great care must be taken not to permit a very free supply of gas from the cylinder, as by so doing an over-dose would easily be administered.

With this apparatus I have succeeded in keeping patients fully anæsthetised for operations lasting over four minutes and have only then discontinued the administration because the operation has by that time been completed, and not because the anæsthesia could not be further maintained by this method. The tube has been employed in over 100 cases, in 2 of which the operation of tapping and draining the antrum of Highmore was performed and in 1 immediate torsion was exerted upon a lateral incisor tooth. But in a series of 30 consecutive cases of tooth extraction amongst patients of both sexes of which I have made notes the average period of anæsthesia was roughly 1 minute 50 seconds. These cases were chosen as suitable ones for the employment of the tube on account of the necessary extractions being very numerous or appearing to be of unusual difficulty and in only 1 case had the operation to be curtailed; in this case the hæmorrhage from the gums was so profuse that on this account, after 12 extractions, the operation had to be stopped as no sponges were at hand. The anæsthesia in this case lasted 2½ minutes. The tube is easily kept out of the operator's way by being slipped over and behind the patient's ear. There is no fear of conveying sepsis, for the tube can be sterilised with the greatest ease and in hospital practice I am in the habit of employing two, which are used alternately, so that one can be soaking in antiseptic solution while the other is in actual use. The nostril on the same side as that on which the anæsthetist stands is the more convenient for the passage of the tube, but as the nasal septum is not infrequently deviated to this side one is compelled occasionally to pass the tube along the opposite nostril. The only absolute contraindications to its use are marked hypertrophy of the nasal mucosa or adenoid growths in the naso-pharynx, in either of which cases troublesome hæmorrhage would result from injury to these tissues. Great care must be exercised in passing the tube so that it can be felt to impinge on the posterior pharyngeal wall, as it is easy to pass it too far and so to inflate the œsophagus and set up swallowing movements and vomiting. Even where due caution is practised vomiting seems to be less uncommon than in ordinary nitrous oxide anæsthesia and for this reason patients should be recommended to abstain from food for two or three hours before the administration. If this precaution be taken and one is careful also that the patient swallows no blood, unpleasant after effects will be very rarely met with.

In conclusion I claim for this apparatus that it will render the employment of ether unnecessary in dental surgery; that owing to its small bulk and great portability it is more convenient and economical as regards the quantity of nitrous oxide used than any other apparatus employed with the same object; and, finally, that in skilled hands it is free from the risk of damage to the nose, the naso-pharynx, or the mouth and is without danger to the patient.

Welbeck-street, W.

A CASE OF OVARIOTOMY IN WHICH A PRIMARY OVARIAN AND SIX OMENTAL DERMOID CYSTS WERE REMOVED.

BY J. LACY FIRTH, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE BRISTOL GENERAL HOSPITAL.

A WOMAN, aged thirty-eight years, was admitted under my care at the Bristol General Hospital on Sept. 18th, 1897, complaining of abdominal pain and swelling. She had been married fifteen years, but had had no children and no miscarriages. Menstruation had been regular with one exception throughout her married life. The exception was that she missed three periods a year after marriage. She had at that time a three months' illness, which she called "inflammation of the bowels." The pain then was chiefly in the right iliac fossa. A month before admission the patient had been suddenly seized with abdominal pain when walking in the street. It was in the hypogastric and left iliac regions chiefly. With the pain came abdominal swelling. The swelling had steadily increased since. Vomiting had been frequent and she had lost flesh and strength rapidly. Careful inquiry elicited that from time to time during some months before the onset of her present illness she had suspected that the lower part of the abdomen was enlarging. She had had diarrhœa also, though not severely, for three weeks. On admission the patient was sallow and greyish and she looked anxious. The temperature was 100° F. and the pulse was 95. The abdomen was symmetrically distended in the lower half from the symphysis to a level of 2 in. above the umbilicus. The distended region was moderately tense, very tender, especially in the left iliac region, dull on percussion, and yielded a slightly marked thrill when tapped. There was a corona of resonance around it in the flanks and epigastrium. It was central. A softish mass, slightly moveable upwards and downwards, was felt lying across its upper and front part. It was thought to be an adherent coil of intestine (probably it was the thickened omentum containing secondary dermoids).

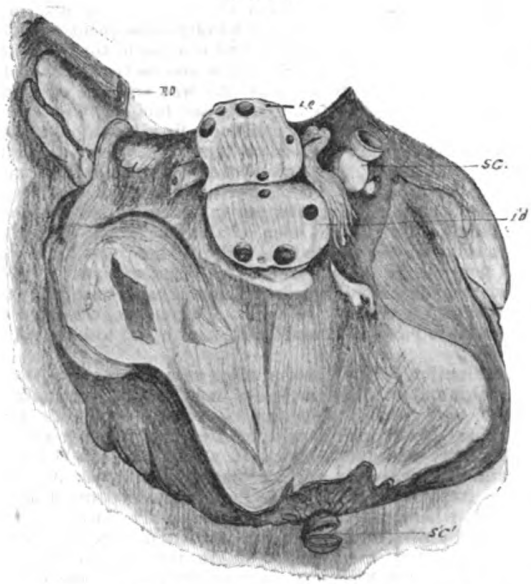
There were no signs of ascites. There was no trouble with micturition. Vaginal examination revealed a long conical cervix with nulliparous os. Through the anterior fornix the body of the uterus was felt in front of the swelling. On each side of the uterus there was a sense of tensity and fluctuation was detected bimanually. Through the mucous membrane of the right lateral fornix three small, hard, and conical eminences were felt, two close together and the other a little posterior in the same line. These bodies were quite fixed. They were felt with extreme distinctness. On rectal examination the same hard eminences were felt through the anterior wall. These hard eminences were regarded as dermoidal teeth, which they subsequently proved to be. The only other view which could be entertained was that they were fœtal bones. Against that view the history of regular menstruation and the absence of any signs of pregnancy or history of these signs or of spurious labour afforded strong arguments. It is not often that a dermoid tumour can be diagnosed with as much confidence as in this case. Six days after admission, the patient's condition having remained stationary, laparotomy was performed (Sept. 24th). Mr. J. Freeman kindly gave ether and Mr. Rayner and Mr. Druitt gave me much valuable assistance during the operation. The median incision which was made bled more than usual, perhaps by reason of the subjacent adhesions. There was some difficulty in defining the peritoneal cavity, the tumour being adherent to the parietes beneath the incision. A Spencer Wells trocar was passed into the cyst as soon as its anterior surface had been exposed and yellow, fatty-looking fluid immediately flowed through it. The cyst could not be pulled out of the abdomen in the least degree, owing to universal adhesions. To complete the emptying the trocar aperture was enlarged and the patient was turned on her side for the fluid to escape through the rent. A mass of hair and sebum of the size of a bantam's egg was removed with the finger. Then the separation of the cyst wall was begun. The hand was freely and frequently inserted into the cavity of the cyst for the purpose of defining its wall. Deep down in the pelvis a mass of bone was felt projecting somewhat conically into the cyst cavity and teeth were felt fixed to its margin. The abdominal incision was carried 1½ in. above the umbilicus. The omentum was peeled from the anterior and upper surface of the cyst. In the omentum, as it was peeled off, were found three ovoid smooth tumours, the largest of the size of a large plum, the smallest of that of a cherry, and the omentum itself was very thick and indurated. Beneath the omentum a coil of small bowel about a foot long had to be peeled off. The most difficulty was experienced in separating the adhesions on the right side. The cæcum and the appendix were adherent and the latter was stripped from its mesentery in the process of separation. Subsequently the appendix was removed as it was not thought safe to leave it in a denuded state. Hæmorrhage caused anxiety on one or two occasions. Several times there were as many as 18 Spencer Wells forceps on different bleeding areas at the same time. At this stage nothing like a pedicle could be seen. Later, when the lateral and posterior adhesions had been freely divided, the deeper part of the tumour with the uterus, tubes, and ovaries attached could be drawn up nearer to the surface, and this made the final steps of the removal much easier. With the finger the posterior surface of the uterus in Douglas's pouch was separated. The cyst appeared equally blended with both broad ligaments. Each ligament was therefore divided and ligatured in successive segments close to the uterus, beginning on the left side with the Fallopian tube. In the end the cyst was extracted complete with the exception of a square inch which was removed later. The right ureter was exposed for two inches as it crossed the brim of the pelvis. It was as thick as a large finger. The three omental dermoids were next removed, with the portions of omentum containing them. From five to eight minutes were spent in flushing out the peritoneum with hot sterilised saline fluid. This fluid flowed away clear at the end. The pelvic cavity was carefully sponged and a Keith's tube was lodged in it. The wound was closed with one row of sutures passing through all the structures of the abdominal wall. The operation lasted nearly two hours. At the end the patient was in a state of severe shock. She was cold and had a rapid, thready pulse. An enema of brandy was given at once on the operating table. This was at 4 P.M. At 10 P.M. reaction had set in; the temperature was 100·6°, the pulse was 121, and the respirations were 34. For the next three days the patient's condition was somewhat critical. There were frequent vomiting and great restlessness and severe abdominal pain with flatulence and hiccough. Under appropriate treatment her condition gradually improved so that at the end of a week anxiety was over. The day after the operation about a drachm of oily fluid, like butter melted, was extracted from the drainage-tube. Oily fluid similarly continued to escape for five days in diminishing quantities. On the sixth day a small quantity of clear serum only escaped and the tube was left out.

The abdominal sutures were removed at the end of a fortnight. At this time and upon every subsequent examination two small swellings were found to exist in the abdomen. They were situated about 2 in. below and to the right of the umbilicus. The more distinct one was smooth, spherical, moderately hard, slightly moveable and tender, and of about the size of a bean and seemed to be fixed to the posterior abdominal parietes. Close below it was a somewhat similar swelling but less distinct and of more elongated form, more like an almond. These bodies were felt again three months after the operation, when the patient came to see me as an out-patient. They were then unaltered, except that their tenderness had disappeared. I believe these swellings were small peritoneal dermoids which had been left behind. The patient was discharged from the hospital in an excellent state of health at the end of five weeks. Three months later she was found to have maintained that health and to have gained flesh.

Examination of the tumour after removal showed it to be unilocular and about as large as a man's head. The interior of the wall had a covering of coarse skin with large sebaceous gland orifices and bristles over the conical projecting bony mass mentioned. In the other parts there was no skin. The external surface was very shaggy. Attached to the front were the ovaries and tubes, separated by an interval where the uterus had been. The ovaries were exposed by dissecting from the front and were laid open. Each presented numerous cysts in the peripheral region (oöphoronic), fairly uniform in size, with a diameter of ¼ in. to ½ in. The right ovary was the larger of the two and irregular in shape. The hilum of each was very dense. The right ovary could easily be peeled from the dermoid cyst, but one surface of the left ovary was in organic continuity with it. This ovary, the left, was almost normal in shape, though somewhat flattened. It was the superior surface of the left ovary which was firmly united to the cyst wall. The union of the two structures in this region was so firm and intimate that they could only be separated without destruction by using the scalpel. Even when the ovary had been shaved off flush with the cyst wall there was still left a whitish layer on the cyst, with the outline of the ovary and an appearance of ovarian tissue. I have described this union of the cyst and ovary with a little detail because it is unusual to find a large dermoid arising in an ovary and leaving that ovary almost normal in appearance and size. It raises a doubt as to the place of origin of the dermoid cyst, suggesting that it may have arisen from a fœtal relic near but not in the ovary. But the intimate union of the ovary and the cyst makes it almost certain that the cyst is of oöphoronic origin, as ovarian dermoids are usually supposed to be. The cyst in all probability from the first grew from the surface outwards and so produced a minimum effect upon the ovarian stroma. The Fallopian tubes in the specimen were easily exposed by a little dissection above the ovaries. They were convoluted but were normal in calibre and length and empty (Fig. 1). It is clear that the tumour from the left ovary grew to the right behind the uterus and behind the right broad ligament. Two portions of omentum were removed, one small piece, containing one cyst, and a larger piece (Fig. 2). Careful examination of this larger piece showed that there were in all five cysts firmly embedded in its substance. The largest one was of the size of a large plum, tense and thick-walled, and contained greyish white sebaceous-looking material, finely granular and of the consistence of thick cream. The two smallest cysts were of the size of split peas, their walls were gritty, no doubt from calcification, and their contents of orange-yellow colour and of somewhat dry and pasty consistence. On the posterior surface of the cyst and low down was a cyst similar to the small ones described but rather larger. It hung in an adhesion at a distance of ½ in. from the cyst wall. Again, loosely attached to the anterior surface of the primary cyst near the ovaries were other small cysts like those just described. They were four in number, one close

to the outer extremity of the right ovary, the other three just above the left ovary. All these with one exception had calcareous walls and ochreous contents. The exceptional cyst was larger, thin-walled, and contained clear watery fluid. It was near those of the left ovary. I believe that two small dermoid cysts like those just described were left in the abdomen at the operation and that they form the

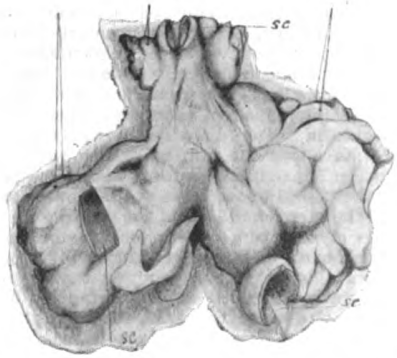
FIG. 1.



The main cyst with ovaries and tubes attached viewed from the front and left side. R O, Right ovary and tube. L O, Left ovary and tube. L' O', Portion of left ovary intimately blended with the wall of the dermoid cyst. S C, Group of secondary cysts near the left ovary. S' C', Secondary cyst. The drawing is somewhat diagrammatic.

swellings still to be felt through the parietes. In all probability many more have been left behind, too small to be detected by palpation. Probably the correct explanation of the origin of the omental and other secondary dermoids in this case is the following: the primary dermoid and the ovary in connexion with it acquired adhesions early in its evolution. It is well known that dermoids of the ovaries are particularly liable to acquire adhesions. Subsequently other dermoids developed from the same

FIG. 2.



Portion of omentum containing five secondary cysts. S C, Secondary cysts.

ovary—that is, other Graafian follicles enlarged and became dermoidal in portions of ovarian struma adjacent to the primary cyst or in its wall. As these became prominent they became more and more intimately connected with adhesions and received a vascular supply from them and they became less and less firmly united to the primary cyst and its ovary. Finally, one at least became quite separated from the main cyst, probably by intra-abdominal movements stretching and rolling its adhesions.

Cases are recorded where a complete ovary and a dermoid in it have been detached from the broad ligament and uterus and fixed to the omentum. An early event in such cases is usually a twisting of the pedicle. The omental dermoids in my case at the time of operation were still adherent to the main cyst as the omentum itself was. They were, however, much more adherent to the omentum than to the main cyst and were therefore easily stripped from the cyst with the former. It is interesting in this connexion to notice how loosely attached to the ovaries and to one another and to the main cyst were the small cysts described above as lying on the anterior surface of the main tumour and near the ovaries. It is easily conceivable that such loosely attached cysts might be distributed within the abdomen by adhesions and abdominal movements or by complete detachment and subsequent adhesion. In 1866, before the Pathological Society of London, Mr. Chas. H. Moore of the Middlesex Hospital described a case in which many dermoids were diffused in the abdominal cavity. Many of these remained attached by long, thin pedicles to a large primary ovarian dermoid, but others were quite free among adhesions of the small intestines.

Another way in which this so-called epithelial infection of the peritoneum may be brought about is by the escape of the contents of a dermoid cyst into the cœlom—e.g., by traumatic rupture.[1] In my case there was no evidence of rupture of a cyst and for that and other reasons given above Moore's explanation of the diffusion of growths appears the more likely to be the true one. Moore wrote as follows: "Either the cysts, now separate, were once parts of the primary cyst and loosening themselves by the lengthening and then by the rupture of their pedicles they started in independent life; or, though formed in the wall of the main cyst, they were cast loose at their first extrusion from it."

The question as to whether dermoids ever arise primarily in the peritoneum independently of the ovaries is not settled by a study of cases such as these alone. It is obvious that no case in which an ovarian dermoid exists and in which peritoneal dermoids also exist can be used as evidence of the primary peritoneal origin of dermoids. It is quite conceivable, moreover, that a primary ovarian dermoid might infect the peritoneum and yet a complete and careful post-mortem examination fail to show how the infection had been brought about, though in the cases here cited there is some evidence bearing on the point. In Moore's case, for example, there were not only dermoids connected by long pedicles with the primary cyst, but in the wall of the latter there were traces of secondary cysts which had ruptured outwards. In his case both the methods of infection mentioned above appear to be illustrated. Similarly, my case appears to be an example of peritoneal infection, if the term may be used, by the extrusion of secondary cysts both with and without pedicles. Infection by the rupture of a cyst, either of the primary cyst or some secondary one, affords the best explanation of the existence of the large numbers of diffused cysts sometimes met with in these cases, though one would perhaps expect the secondary growths to have a warty rather than a cystic form. In some recorded cases they have had a warty form, with tufts of hair upon them hanging freely in the peritoneal cavity. But a transplanted epithelial mass is known to give rise sometimes to cysts in other parts, forming the so-called implantation cysts. If the peritoneal infection is the result of the extrusion of complete cysts, then the multiplicity of the secondary cysts is not explained and is very curious. It was interesting to find in a section taken from the skin patch in my specimen a considerable tract of thyroid tissue. I am much indebted to Mr. F. V. Foss, a student of the hospital, for the two drawings which are here reproduced.

Clifton, Bristol.

[1] Vide Surgical Diseases of the Ovaries and Fallopian Tubes, by Bland Sutton, Chapter x.

THE MIDDLESEX HOSPITAL.—This hospital will be closed from July 17th to Sept. 19th next for the purpose of effecting some very necessary repairs and alterations, repainting, and cleaning the whole of the hospital. No new patients will be received after July 1st, to allow of the wards being cleared by the 17th. The cancer wards, however, will not be closed and these patients will be received the same as usual.

A CASE OF REPEATED FRACTURE OF BOTH FEMORA RESULTING IN GREAT DEFORMITY.

BY DANIEL BROUGH, M.B., C.M. EDIN.,
HOUSE SURGEON TO THE DUMFRIES AND GALLOWAY ROYAL INFIRMARY.

THE following case which has come under my notice is one of interest owing to the peculiar liability which the patient displayed to fracture of the femur on slight injury and the difficulties which must have arisen in the treatment of the various fractures.

The patient was a youth, eighteen years of age, the elder son of a family of two, and had been brought up entirely in the country. The family history was good and showed no hereditary tendency towards fragilitas ossium. The father was the only other member of the family who had had a broken bone; this was a fracture of the bones of the forearm, occurring when he was a young man. The younger brother was a healthy lad working on the railway. He had never sustained any fractures and was a head taller than the patient. The patient had never been very robust and his medical adviser informed me that he had suffered from rickets and from tuberculous glands in the neck. He was 4 ft. 10½ in. in height. The first fracture occurred when the patient was ten months old. He was lying at the time on his nurse's lap and she, in stooping to raise an article from the floor, must have applied some degree of violence to the patient's leg. The medical man who was called in diagnosed a fracture of the right femur. It was treated with splints for six weeks. I have been unable to obtain any definite information regarding the site of the fracture as the medical attendant is now dead. The patient did not walk until he was twenty-two months old. At three years of age he broke his left thigh-bone for the first time. His mother was leading him by the hand and he stumbled and fell. The amount of violence to the thigh must have been slight, for he fell lightly backwards on to the floor. The bone was broken about the middle and firm union took place in a little over six weeks. Eight months after the above fracture had healed he again broke his left femur. He had been attempting to turn a key in the lock of a door. The key came away in his hand and he fell backwards. The fracture was situated at the junction of the upper and middle thirds of the femur. Union took place in nine weeks. At the age of five years, two years after the previous accident, he fell lightly on the floor and broke his left femur for the third time. The fracture was situated at the junction of the upper and middle thirds. Union took place in nine weeks. When he was nine years of age he fell backwards and again sustained a fracture of the femur on the left side at the site of the former injury. The fragments were firmly united in eight weeks. At the age of eleven years he met with another slight accident, resulting in disproportionate injury. He slipped and fell backwards on a frosty road. He was found on this occasion to have sustained a fracture of the right femur at the junction of the upper and middle thirds. In addition, the right collar bone was broken at the junction of the outer and middle thirds. The clavicle united in four weeks and the femur in eight weeks. The last accident occurred in 1897, when he was seventeen years of age. He fell forwards without much force down three steps and sustained a fracture of each femur about the middle. These united firmly in twelve weeks.

Altogether the patient had sustained nine fractures, five being in the left femur, three in the right femur, and one in the right clavicle. In the case of the left femur two of the fractures were situated in the middle of the bone and three at the junction of the upper and middle thirds. In the right femur one occurred in the middle, one at the junction of the upper and middle thirds, while the site of one, occurring in infancy, is unknown. On each occasion the accident was very slight and the resulting fractures were quite disproportionate to the nature of the fall. As will be seen from the history most of the falls were backwards. The diagnosis of each fracture was easy owing to the amount of displacement which occurred. The injuries were treated by long splint and extension and counter-extension bandages, except on the last occasion when the extension was applied by means of the pulley and weight. Owing to the large number of fractures occurring at various sites and the difficulties in the way of treatment a great deformity of the femora has resulted. How much deformity and shortening followed each fracture I am unable to say. No doubt each fracture made the succeeding one more difficult to treat. The thighs appeared to be too short for the length of the trunk and legs and a distinct projection could be seen on the outer side of each thigh even when the patient was dressed. The upper half of the left femur was markedly convex outwards. It was in a position of partial flexion and rotation outwards, the great trochanter being turned backwards. Its rounded lower end formed a marked subcutaneous projection on the antero-external surface of the thigh. The lower half met the upper half at an angle and united with it on its postero-internal aspect. The left femur was at least one and a half inches shorter than the right. On the right side the upper half of the femur was abducted

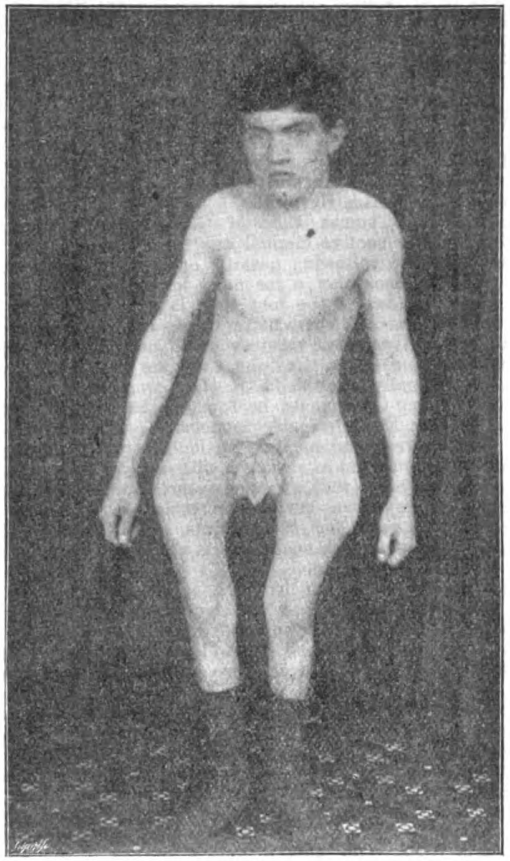


Illustration showing the grave deformity of the femora.

In the right femur it was the upper end of the lower half which formed the subcutaneous prominence on the outer surface of the thigh. The lower end of the upper half joined the lower half on its inner surface. There were great thickening and overlapping in both femora at the sites of the various fractures. It was difficult to estimate the amount of shortening which had taken place. It was due both to the overlapping of the ends of the fragments and to the angular deformity of the bones. Probably it was not less than six inches on the left side and it might be more. The clavicle was united in good position. The pelvis was tilted to equalise the length of the lower limbs and there was compensatory curvature of the spine. The patient was markedly pigeon-chested, the sternum being carried far forward. The other bones were normal.

I am indebted to Dr. Reid of Lochmaben for information regarding the injuries, and to Dr. Thomson of Dumfries for permission to publish the case.

Dumfries,

ON THE WALKING VALUE OF THE LESSER TOES OF THE HUMAN FOOT.

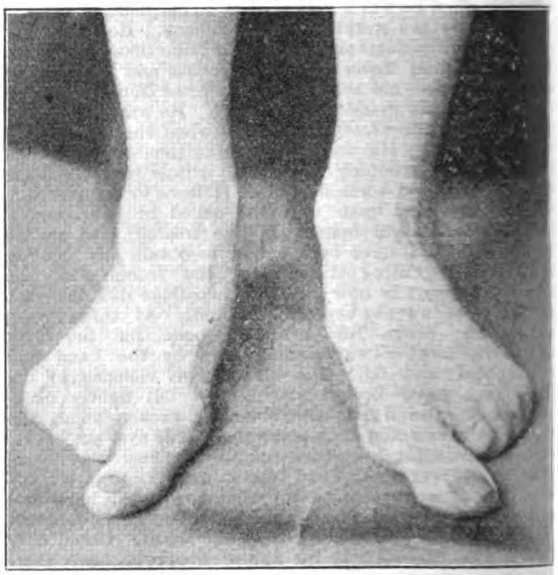
BY HEATHER BIGG, F.R.C.S. EDIN.

THE mechanical value of various parts of the human body is more surely ascertained by actual experiment than predicted by theory; hence whilst it may seem easy enough to formulate reasonable explanations of the uses of the toes it is only by their separate removal and by observing the ensuing results that a completely sound conclusion can be arrived at. In a work which I wrote in 1885 on the losses by amputation of portions of the limbs I endeavoured to show with respect to the toes that the great toe with the head of its metatarsal bone constituted the real tread of the foot and that if this tread was lost in any way it was best to discard the whole foot as useless and to remove it by Pirogoff's operation. On the other hand, I asserted that the remaining toes of the foot were mechanically of slight value and that they could be removed one and all with little detriment to the ordinary walking powers. I based these statements on my own experiences of soldiers who had lost portions of their feet from frost-bites or otherwise during the Crimean campaign and whom I afterwards saw as pensioners of Chelsea Hospital.

In 1889 Mr. Thomas Ellis of Gloucester published an erudite and instructive manual on "The Human Foot" in which work the following passage occurs: "Here let it be said that the toes play a far more important part in the ordinary functions of the foot than is generally admitted. One sees statements (where better things might be expected) to the effect that their services could be dispensed with. Even in walking, as usually done, they are used much more than is generally supposed. If they were not used the muscles moving them would be found to be wasted." Now as I read Mr. Ellis's valuable monograph with considerable care and interest, and as this particular opinion expressed by him was somewhat at variance with my own experience, I was in the hope that at some future time a case might arise under my own entire observation which could be appealed to as settling these points of difference, and I think the following instance, from its absolute completeness, may be cited as doing so.

The patient was born in 1871. Her history prior to my seeing her was, in her own words, as follows: "At the age of two years I suffered with terrible chilblains, which were so neglected that it was only with the greatest care that the toes were saved. Since then my toes have always troubled me. The two little ones began to contract when I was ten years old, and this contraction caused corns which by the time I was fifteen were so bad that they suppurated. I was then under a chiropodist of Manchester, who used to relieve them, but only for a time. Finally, when they pained beyond all endurance, I went to a consulting surgeon in Liverpool, who suggested their tendons being cut, and this was done by our own doctor in April, 1892. As this operation proved of no effect in relieving the continuous and excruciating pain, he amputated both the little toes in June of the same year and with immediate relief. The other toes at this time were not much affected, but by March, 1893, they also had become contracted, causing me much pain, and finally severe corns similar to those formerly on the little toes. In January, 1894, I consulted Mr. Barnard Holt of Savile-row, who recommended complete stretching of the tendons under chloroform and subsequent mechanical extension." Such was the patient's own account of herself. When I first saw her with Mr. Barnard Holt she was a fine, well-proportioned girl, with no other trouble with regard to her health than that due to the persistent pain in the toes. With respect to these toes the contraction of the extensor tendons was by no means spastic, but appeared to be rather accommodative and due to an instinctive effort to save them from coming to the ground in walking. The toes themselves were enlarged and bulbous, their surfaces being covered with corny, unhealthy skin. Further, they were not only painful whilst in boots, but were also so at night and to such an extent as to frequently prevent sleeping.

On Feb. 6th (the extension apparatus having been in the interim prepared) the patient was anæsthetised and the toes were fully and forcibly overflexed on to the plantar aspect of the foot. This was readily done without material resistance.[1] During the six ensuing months mechanical extension on the original plan was pursued, but it soon became evident from the exquisite tenderness of the toes that this method, which answers well enough in simple cases, could only here be intermittent and unsuccessful. Seeing therefore no other alternative and feeling confident that the issue would be satisfactory I advocated amputation of all the remaining lesser toes of both feet and, having obtained the sanction of the patient's father, I took her to Mr. Augustus Pepper for his opinion as to the advantages of the operation. Mr. Pepper's judgment being also in its favour he, on Nov. 10th, removed all the remaining lesser toes by separate incisions, kept well on the dorsal aspect of the foot so as to avoid any chance of the cicatrices being involved in the subsequent tread. The wounds all healed by first intention and within three weeks the patient could stand on her feet which presented the appearance shown in the accompanying illustration reproduced from a photograph which I took



of them. The subsequent results have been such as to justify the wisdom of the operation and to prove distinctively that the lesser toes are not of the paramount value sometimes assigned to them. As the patient lived at a distance and as there was no necessity to keep her in town for observation I asked her to periodically write to me reports of her progress and of this the dated extracts from her letters will probably form the best record.

Dec. 30th, 1894: "I am able to walk perfectly on my feet with little or no pain, but cannot yet wear either slippers or boots as they are still tender."—Jan. 15th, 1895: "I managed to get on my slippers yesterday and wore them with ease for more than six hours."—Jan. 28th: "I put on my boots to-day for the first time. It still pains me slightly to walk, otherwise my feet are going on all right."—Feb. 18th: "I ought to say that the steel plates only half way answer splendidly."—March 24th: "You will be glad to hear that I can walk splendidly now, just like a proper human being; it is just eighteen weeks next Tuesday since the operation."—May 5th: "I have decided to come to town next Monday week to let you see how well I can walk."—June 17th: "I played two sets of tennis on Saturday, and my feet were none the worse afterwards."—July 24th: "You will be surprised to hear that the big toes have lengthened ½ in. since the operation, and I have had all my boots lengthened and the toe line made straighter."—Aug. 30th: "I know that you will be interested to hear that I have just accepted an invitation to

[1] It is a melancholy accompaniment to this case that the late Mr. Barnard Holt became in the middle of this slight manipulation suddenly indisposed and the same day he took to his room which he unhappily never left again. The case, therefore, accidentally passed entirely into my hands.

a dance on Sept. 13th. Whether I shall dance comfortably or not is another thing."—Sept. 14th: "I went to the dance on Tuesday evening and thoroughly enjoyed myself after not dancing for so long. My feet were on their best behaviour, and did not pain me once during the evening. I never realised before that I had no toes until I began to dance, then it seemed so odd only to have one toe, but I suffered no inconvenience whatever from the loss of them."—Dec. 5th: "I get on so well with my bicycle."

It is unnecessary to carry these extracts further: suffice it to say that the patient has been able to walk, cycle, dance, play tennis, and to pursue, in short, every other exercise and amusement which girls of her own age enjoy.

As regards the mechanical assistance which it seemed advisable to give to the tread of the foot during the healing process it may be stated that with her first boots she had a thin steel plate extending the whole length of the foot and lying between the leathers of the sole. After three months these plates were reduced so as to only extend from the instep forwards and before the end of the year it was found that the narrow steel spring beneath the great toe was all that was requisite. These adjuncts to the sole were used to assist the great toe in acquiring complete usage to the tread of the foot. Further, to prevent the foot spreading transversely whilst the tissues at the heads of the metatarsals were consolidating a strip of Leslie's plaster an inch broad was for some time worn round the foot.

Only two disadvantages showed themselves as the result of the operation and these were temporary. One was that the great toes tended to pervert themselves towards the middle line of the feet, a thing which was readily remedied by the use of single-toed stockings and by packing the space in the boot left vacant by the missing toes with cotton wool; the other was a loss of local sense on the outer sides of the feet, which went to show that the lesser toes were missed rather as tactile organs than anything else. This failure of feeling righted itself in time presumably by a vicarious and intenser sense being acquired by the skin of the outer side of the foot. In all other respects the loss of the toes discovered no inconvenience.

There is only this to be added, that whilst the feasibility of so complete an operation is demonstrated in this particular case it would be needless to resort to it except in rare instances. Ordinarily contracted toes can be dealt with by much less radical measures if the toes themselves be sound. Still there are frequent instances in which even after mechanical extension or division of the tendons the toes revert into their inconvenient position and in such cases amputation can be adopted without scruple. I recall an instance of a gentleman whose family had an apparently hereditary disposition to contraction of the third toe in each foot. I took him to the late Mr. Berkeley Hill, who divided the extensor tendons and the toes were readily straightened, but after some time they recontracted; finally, they were amputated without the slightest detriment to his powers of walking and the inconvenience was once and for all removed. This, of course, was only one toe in each foot, but there appears no reason why in necessary cases all or any of the lesser toes should not be removed without crippling disadvantages. I believe that the excellent results in the complete case I have here recorded are largely due to the method Mr. Augustus Pepper adopted of keeping the cicatrices clear of the ultimate tread of the feet.

Wimpole-street, W.

AMYLOLYTIC FERMENTS.

BY WYATT WINGRAVE, M.R.C.S. ENG.,
ASSISTANT SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

THE personal necessity for a starch ferment having suggested a few experiments with several easily obtainable preparations, the experience so gained may possibly prove helpful to others in their selection of a ferment from a group which clinically receives less attention than the proteolytic does.

Choice of ferment.—Starch ferments may be divided into two chief kinds, according to their sources: (*a*) animal, prepared from glands—ptyalin (salivary), amylopsin (pancreas); and (*b*) vegetable or diastatic. The preparation of group *a* is not only attended with some technical difficulty but the products are too unstable and unreliable to become generally available. Not so those of the second group. These, for the most part, are easily obtained, stable, reliable in action and economical in price. The best-known examples are malt-diastase and taka-diastase. Malt-diastase occurs in markedly varying proportions in all extracts of malt (moist and dry), while taka-diastase is prepared by making a cultivation of Eurotium oryzæ (of the Aspergillus group) on hydrolysed wheat bran. The diastatic influence is extracted with water and separated by evaporation as a scaly powder which is readily soluble in water and possesses well-marked hydrolytic power. Many samples were tested against normal saliva and the following three examples were eventually selected as fair representatives of the second group: (1) Kepler's malt extract (moist); (2) Wilcox's desiccated malt extract (dry); and (3) taka-diastase (dry). These were tested chemically and clinically.

Chemical tests.—It must be borne in mind that the condition of all test-tube experiments must differ considerably from normal and morbid digestive changes, and, however carefully carried out, the results must only be judged as approximate. The first series of trials were made in order to ascertain which of the preparations possessed the greatest amount of diastatic power. It would be tedious to detail them all, but the following are illustrative and can be done by anyone. First experiment (test-tube): 20 gr. of malt extract (moist), 5 gr. of malt extract (dry), and 1 gr. of taka-diastase were mixed respectively with 100 minims of a 5 per cent. solution of arrowroot, neutralised and placed in a water bath at 38° C. At the end of twenty minutes the malt extract gave erythrodextrin and a trace of maltose; the taka-diastase chiefly maltose and soluble starch and the desiccated malt chiefly soluble starch. (Saliva gave soluble starch in excess with trace of maltose.) Second experiment: A thick paste consisting of 3 oz. of arrowroot (representing a full meal of carbo-hydrates) boiled with 15 oz. of water, cooled to 40° C. and rendered faintly alkaline, was placed in a flask with 300 grains of Kepler's malt extract, 150 grains of desiccated malt, and 15 grains of taka-diastase respectively. The flasks were placed in a water bath, kept at a temperature of 38° C., and shaken every three minutes. At the end of five minutes the Kepler's malt extract and desiccated malt showed no change, while the taka-diastase could readily be shaken, the paste being broken up and about one-third appeared fluid. In ten minutes it was only lumpy in the centre and in thirty minutes the lumps had quite disappeared, while the Kepler's malt extract and desiccated malt were nearly as gelatinous as at first. It was found that the products of the taka-diastase action were soluble starch, maltose, and erythrodextrin, the original arrowroot being entirely changed while the Kepler's malt extract and desiccated malt only afforded small quantities of sugar, soluble starch and dextrin. This test indicates that taka-diastase possesses greater hydrolytic power than either of the malt extracts, which may be due either to a higher ferment potential or to a greater range of action under disadvantageous and artificial conditions, such as accumulation of sugar and intermediate products, &c. It was further observed that increase of the temperature up to 50° C. increased the action of the malt extract.

Having considered the behaviour of these ferments under what might be termed favourable conditions the next point was to watch them under morbid influences similar to those occurring in so-called dyspeptics. During pyrosis, lactic acetic and butyric acids are present in proportions variable yet minute. A sufficiency of each acid was added to starch solutions to produce the well-known acid taste and the solutions were then watched under the same conditions of temperature as in the other tests. In each case the starch was converted after three times the duration of the exposure used in the other tests into soluble starch and slightly to erythrodextrin, but sugar only appeared in very small quantities after three to four hours. The addition of neutral peptones and proteids did not appear to exert any influence. The presence of 0·2 per cent. of hydrochloric acid after exposure for twenty minutes permanently killed all the ferments, but for a less period activity was restored on neutralisation. Quinine dissolved in citric acid did not inhibit unless the strength exceeded 0·5 per cent., a point which is of clinical interest since my experience has shown that small doses of ½ gr. to 1 gr. undoubtedly act beneficially in cases of pyrosis. The ferments were then tested with raw starch as represented

by scraped fresh potatoes, upon which, like saliva, they had no hydrolytic influence whatever.

Clinical tests.—Having seen that butyric, acetic, and lactic acids retarded the conversion of starch into sugar, their neutralisation was obviously necessarily essential to a satisfactory ferment action in cases of pyrosis. A preliminary preparation of the stomach by means of small doses of carbonate of magnesia and chalk in the form of lozenges, or sodium carbonate dissolved in chloroform-water, proved effectual. For it must be borne in mind that, normally, starch conversion is carried on in the stomach, not in the mouth, and it has every opportunity of being completed in the stomach, since hydrochloric acid may not appear free for from half to one hour. But it is extremely doubtful what proportion of work the stomach and intestines respectively perform in a person living at high tension with an irritable digestive tract. As hydrochloric acid is necessary for exciting and maintaining proteolysis so alkalies are essential for proper starch conversion, and it is almost useless to attempt the digestion of starch in cases of pyrosis without their aid. It is probable that in a very high percentage of cases described as dyspeptic the starch conversion is mainly at fault, and consequently the case shows no improvement under pepsin treatment.

Clinical observations supported the test-tube evidence. The dry malt extract not only acted as a powerful sialogogue, being a pleasant substitute for jam when eaten with bread-and-butter, but the after-effect undoubtedly gave evidence of a greater diastatic power than the artificial tests led one to expect. The fluid malt extract seemed to increase the pyrosis to such an extent that it had to be discontinued in several cases, while in others the excessive sweetness was tolerated and its diastatic action seemed satisfactory. Still the excess of sugar and its bulk more than counterbalanced its diastatic value. Taka-diastase, on the other hand, being free from sugar, is entirely without these disadvantages and its action is unhampered.

The conclusions may thus be briefly summarised: 1. That of the commercial starch or diastatic ferments taka-diastase is apparently the most powerful and the most reliable since it is more rapid in its action—i.e., it will convert a larger amount in a given time than will any other amylolytic ferment. 2. That organic acids, such as butyric, acetic, and lactic, the acids most frequently present in pyrosis, &c., do retard but do not permanently kill the ferments, and when neutralised are harmless. That taka-diastase seems to be less influenced by them, and also by tea, coffee, and alcohol, than are saliva and malt extracts. 3 That hydrochloric and other mineral acids quickly stop and permanently destroy all the starch ferments if allowed sufficient time and if present in sufficient quantities. 4. That taka-diastase and malt diastase have, like ptyalin, no action upon cellulose (uncooked starch).

Devonshire-street, W.

NOTE ON A CASE OF ANGULAR CURVATURE OF THE SPINE IN AN ADULT.

BY CHISHOLM WILLIAMS, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,
ASSISTANT SURGEON, CITY ORTHOPÆDIC HOSPITAL, E.C.

THE patient was a man, aged fifty-six years. His family history was good. His parents are living. The patient is an only son. He had had measles and scarlet fever in early childhood. There was no specific history. Early in the year 1888 on returning from America he was thrown somewhat violently from the upper of two sleeping-bunks to the floor and "wricked his back," which remained painful for a couple of weeks. He then visited the south of France for some months and felt fairly well during this time. During the winter of 1888–89, he noticed that the pain in his back (the dorso-lumbar region) was of a gnawing, dull character with a general feeling of "weak back" which was increased on stooping or hurrying about but was relieved during the night in bed and in a less degree when lounging in an arm-chair. He also noticed feelings of cramp in the calves but of a very slight character. In 1890–91–92 the back symptoms remained fairly stationary but he had two attacks of influenza, laying up for two and three weeks respectively. At the end of 1892, the symptoms becoming greatly aggravated, he was advised to see one of our leading neurologists, who treated him for some months with drugs, diet, &c., and the back was "fired" on seven occasions and the resulting marks bear evidence of the thoroughness of this part of the treatment. In 1893 the pain was almost continuous, being still dull and gnawing, and at times he had attacks of severe cramps, mostly at night. His gait became unsteady, he not being able to walk in a straight line. He was also noticed to stoop very much. Towards the close of the year intercostal neuralgia, chiefly of the right side, much abdominal pain, and other vague sensations about both the abdomen and the limbs made themselves manifest. For the relief of these pains his medical attendant had repeatedly to inject morphia and to give opiates at night. In January, 1894, he was first seen by me, and he then presented the following condition. He complained of two kinds of pain: one a dull, gnawing, incessant pain, slightly mitigated by the use of morphia, situated on either side of the spinous processes of the tenth, eleventh, and twelfth dorsal and first lumbar vertebræ, extending 3½ in. to the right and about 1½ in. to the left; the other a radiating neuralgic pain which darted round the intercostal spaces and down the lower limbs. A peculiar sensation he described was a cold creeping from the sacrum up the spine to the nape of the neck. At this time he had also early-morning cramps of the side and back muscles.

On examination his general appearance was that of a man who had been for a long time a chronic sufferer. He was extremely emaciated, weighing barely 8 st., and being 5 ft. 9 in. in height. His walk was an elongated zig-zag; he also walked somewhat sideways, with the right shoulder in front and slightly higher than the left one; the back was always held perfectly rigid; the spine presented a well-marked slightly reddened "boss" from the tenth dorsal vertebra to just below the first lumbar vertebra on the left side; on a level with this boss was an induration and a sense of resistance over an area of the size of an adult palm. On the right side there was a distinct bulging which was raised about ½ in. above the surrounding skin. At this part deep fluctuation could be easily obtained outwards for a distance of 2½ in. but no further, nothing could be detected in front or towards Poupart's ligament. Over the three lowest intercostals, the right side, and the right half of the abdomen to just below the anterior superior spine of the ilium a condition of hyperæsthesia was observed and several patches at the upper part of the right thigh (back and front) and at the back of the right calf. The rest of the leg seemed anæsthetic. The temperature varied from 99° F. in the morning to 100 5° at night.

Treatment.—The patient objected most strongly to any form of treatment which would confine him to the house, much less to his room, so all thoughts of the prone position had to be abandoned. He stayed in bed, however, for a week whilst the fluctuating swelling was aspirated and nearly 3 oz. of thick yellow pus were removed. Towards the end of the week it was again tapped of about 1 oz. of thin serous fluid, slightly blood-stained. By this time a simple metal spinal support was procured, after the pattern of the late Mr. E. J. Chance's, and was accurately adjusted; the most severe part of the pain ceased in a couple of weeks. By the end of six weeks the cramps and hyperæsthesia had also vanished. The morphia was discontinued after the first week. A course of strengthening and tonic treatment was then carried out, cod-liver oil, syrup of hypophosphites, and malt extract being the chief aids, and was kept up fairly well for a couple of years. The splint was worn day and night for twelve months only and then it was left off unknown to his medical attendant or to myself. When I next saw him, about eighteen months after putting the splint on, he had left it off six months and felt quite well, every symptom having disappeared. The "boss" remains the same, but by being able to hold himself more upright his appearance is greatly improved.

The case is interesting on account of the shortness of the period of treatment in an adult. It consisted of only one week in bed, one year of mechanical support, and two years of intermittent medical treatment. I have seen the patient again this year (1898) and he says he is quite well, having had absolutely no trouble with his back for the past three years or so.

Bishopsgate-without, E.C.

ON SOME MENTAL FACTORS IN THE CAUSATION OF DEATH UNDER CHLOROFORM.

BY ROBERT BALLARD, M.R.C.S. ENG., L.R.C.P. LOND.

THE chloroform controversy has not yet ceased to interest the profession as a whole, and at this stage it may not be inopportune to draw attention to certain clinical aspects of the question which, in the purely academical phase which the discussion has now assumed, are in danger of being overlooked or forgotten. The published conclusions of the Hyderabad Commission have given the much needed stimulus to a closer investigation of the facts connected with the mechanism of death under chloroform. The storm of criticism which those conclusions evoked has resulted in the valuable physiological inquiries of Dr. Leonard Hill and others, and the interest which has been aroused by their investigations into what may be called the hydrostatics of the circulation is apt to divert attention from the significancy of the fact that all laboratory experiments are necessarily conducted upon animals and to cause us to forget for a time the personal equation which enters so largely into all questions connected with the human organism.

In 1894 I recorded in the pages of THE LANCET[1] a case of cardiac syncope under chloroform — happily ending in recovery—in which the predisposing cause of the accident was undoubtedly the terror and mental anxiety of a nervous lad subjected for the first time to an experience the dangers of which were to him the more alarming because unknown. The horror with which some persons regard the idea of an anæsthetic is to many people incomprehensible, but it is none the less real, and I am convinced that the importance to the administrator of ascertaining the mental attitude with which the patient approaches the operation cannot be overestimated. In some cases operative measures are decided upon and the patient's consent obtained three or four days before the operation is finally performed, and during the intervening sleepless nights and long weary hours of waiting in bed the ever-present idea of operation looms larger and larger in the patient's mind. With sickening reiteration he dwells again and again upon what he may imagine to be the details of the operation and endures in anticipation a mental agony out of all proportion to the actual facts. Is it rash to assert that such a patient will be brought to the table with nervous and circulatory systems heavily handicapped for the strain which will be put upon them?

The following case which occurred in my own practice well illustrates the grave condition which may be produced by fear and anxiety. A woman, aged twenty-three years, single, had suffered from frequently recurring attacks of appendicitis of considerable severity and it was decided during a period of quiescence to perform laparotomy for the removal of the diseased appendix. The patient was a pale, nervous woman, much reduced in health by her former attacks, and with a marked neurotic family history on the mother's side. I first saw her the morning before the operation. She was then evidently anxious, but evinced, as far as I could judge, no signs of great mental distress. The pulse was 98, dropping ten minutes later to 89. The heart was normal in every respect and the sounds, though hurried, were clear. On asking her to sit up I fancied I could detect a faint hæmic murmur at the pulmonary base. An examination of the chest gave negative results. When I left the pulse was 84, having dropped 14 in less than half an hour. I did not see her again until the following day when she was brought into the next room for operation. Her condition was then typical. The heightened colour, hurried irregular respiration, compressed lips and fluttering eyelids spoke of the fear and suppressed excitement from which she was suffering. The pulse was 104, and the heaving impulse of the heart could not only be felt but seen. The superficial veins of the neck were slightly engorged, and on careful scrutiny showed a faint but distinct pulsation. Indeed, her condition was so serious and the engorgement of the right side of the heart so obvious that I was in doubt as to whether it was justifiable to operate at all. At the last moment I decided to give gas and ether, in spite of a slight bronchial catarrh from which the patient had been suffering. The sight of the Clover's inhaler added the last straw to her terror, and when on the table she begged that the operation might proceed without an anæsthetic. When fully under the influence of nitrous oxide the signs of engorgement disappeared, the pulse-rate fell, and she eventually took the ether well and made a good recovery.

The chief element of danger in these cases is the profound disturbance of the circulation which commences in many cases some days previously and persists until the patient is well under the influence of an anæsthetic. In the worst cases there are signs of serious embarrassment of the right side of the heart and in two cases I have observed an undoubted temporary tricuspid regurgitation—physiological, no doubt, but none the less dangerous. It may be urged that inasmuch as this condition passes away as consciousness is lost its gravity has been exaggerated; but it is when the patient is still conscious and is struggling and holding his breath that the greatest stress is laid upon the heart and the occurrence of sudden syncope is most to be feared. Every anæsthetist knows that children bear chloroform, on the whole, better than adults and that the victims of sudden accidents necessitating operation are not so liable to syncope as the serious shock they have sustained would lead one to expect. Children, in fact, are in much the same position as Surgeon-Lieutenant-Colonel Lawrie's dogs: they are spared the depressing effects of anticipation and their fear does not begin until they are actually on the table and is then of short duration; and the victims of severe accidents are so overcome by the suddenness of the shock and by the maiming or mutilation which may result that the administration of an anæsthetic is looked upon as a detail of minor importance and an operation of some kind regarded as a matter of course. National character, also, may have more to do with the absence of fatalities from chloroform obtaining in Edinburgh than from any peculiarity in the exhibition of the drug.

In the majority of private operations the anæsthetist is a stranger to the patient. This, when possible, should be remedied. Every surgeon must have remarked the good effect produced upon a nervous patient by a cheerful and optimistic view of the approaching operation when expressed by a comparative stranger and one entitled to speak with authority. Where there are signs of great anxiety and engorgement of the right heart I prefer to give gas and ether. But occasionally these cannot be obtained or are distinctly contra-indicated and chloroform has to be used. It is here that morphia is so useful. One-sixth to a quarter of a grain should be injected at least half an hour before the administration with, as a rule, the happiest results. Where morphia again is contra-indicated—and in spite of the text-books such cases are rare—one would naturally turn to the bromides of ammonium and sodium, but I have not yet had occasion to use these drugs.

High Barnet.

[1] THE LANCET, Nov. 24th, 1894.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF FRACTURED RIBS FOLLOWED BY TUBERCULOUS CASEOUS PNEUMONIA AND DEATH.

BY ROBERT E. LORD, M.D., B.SC. LOND.

THE case of pneumonia following injury and leading to fatal tuberculous mischief in the lung recorded by Dr. Thomas Harris in THE LANCET of April 16th, 1898, induces me to report the following case, which is the only one of the kind I have seen during five years' practice in a health resort to which cases of phthisis are constantly sent during the winter.

A man, aged twenty-nine years, was seen by me in December, 1894, and gave the following history. Until the previous September he had enjoyed good but not robust health. He had not suffered from any but the illnesses of childhood and had always been of strictly temperate habits. He had led a sedentary life, taking very

little exercise and spending his days in his office and his evenings at home or in places of amusement. His family history was good except in the case of his father, who had had a cough accompanied by much expectoration and loss of flesh for some months before his death which happened in the spring of 1894 from pneumonia. In September the patient while at his office was "larking" with some fellow-clerks and fell against the corner of a table, striking the upper part of the right side of his chest against it. He felt severe pain which was so violent as to compel him to go home, where he was seen by his usual medical attendant, who found fracture of three or four upper ribs and applied strapping and sent him to bed. During the evening a small quantity of bright-red frothy blood was expectorated. On the following day he was feverish, the pain still continued and there were signs of pleurisy. Slight hæmoptysis occurred for some days, and signs of consolidation were developed, and later of softening at the right apex. The temperature for several weeks reached from 101° to 102° F. in the evening; he lost flesh, had severe night-sweats, and about a month after the receipt of the injury had a severe attack of hæmoptysis, after which he temporarily improved and was able to be moved to Colwyn Bay in October. In December, when I first saw the patient, he had signs of an extensive cavity in the right apex and of consolidation with some softening at the left. There were large masses of hard lymphatic glands in both supra-clavicular fossæ, especially on the right side, and on this side they were said to have developed soon after the accident. The evening temperature varied from 101° to 103°, falling to 99° or thereabouts in the morning. He had severe night-sweats, much cough, and profuse expectoration containing many tubercle bacilli. The disease rapidly spread to other portions of the lungs; the larynx and pharynx became affected and ulcerated very extensively, and he died on March 31st, 1895, about six months after the accident which apparently originated the affection.

Remarks.—There was evidently a lesion of the lung caused by the fractured ribs either at the time of the accident or within a few hours of it and a favourable site for the growth of tubercle bacilli was thus prepared. From the facts that he had led an in-door life, that he had lived for years in the house where his father (who probably had phthisis) had lived and died, and that the signs of tuberculous infection showed themselves very soon after his fall, it seems fair to assume that he probably already had in his respiratory tract tubercle bacilli which were only enabled to flourish when the special opportunity thus offered arose. This they seem to have done most luxuriantly, as his symptoms were of the acutest character from the very first. It appears that either the infection must have been a very severe one or the powers of resistance of the patient were very slight. No necropsy was obtained, and therefore no opinion can be hazarded as to whether or not he had any tuberculous lesions of older date than the accident.

Colwyn Bay.

TWO CASES OF PERFORATION OF THE INTESTINE BY ASCARIDES.

BY P. APOSTOLIDES, M.D.,
PHYSICIAN TO THE GREEK ROYAL NAVY.

IT is known that round worms can enter the various ducts and organs communicating with the digestive tube in their normal condition, but perforation of the sound intestine by ascarides is a very rare occurrence. The event has been much discussed and even doubted by many authors. According to Davaine, Niemeyer, and others the perforation could only take place in the event of the mucous membrane having been previously ulcerated. Other authors have either discussed the fact or leave it unmentioned. However Leuckart, Mandière, and Magnac say that ascarides can penetrate the peritoneum by primitive perforation of the sound mucous membrane. Charsley also reported some time ago an observation in favour of this assertion. This accident is in my opinion much more frequent than is commonly supposed. I am led to this conclusion by the observation of two such cases in the space of ten years at the Naval Hospitals of Piræus and Salamis. One of these two cases I have already published in the medical journals Ταγγρός of October, 1886, and *La Semaine Médicale* of Nov. 27th, 1886. The second case I now send to THE LANCET, repeating also the first.

The patient in the first case was a man who was admitted to the Naval Hospital of Piræus with attacks of simple intermittent fever. On the night of the fourth day after his admission he presented all the symptoms of intestinal perforation and acute peritonitis and died in the evening of the following day apparently from that cause. At the necropsy the cavity of the peritoneum was found to be full of a sero-purulent fœtid liquid. A little above and to the right of the umbilicus the head of a live ascaris was detected. Upon careful examination, between the jejunum and ileum, in a portion of the intestine otherwise perfectly sound, there was found a small, circular perforation of the size of a lentil, through which the ascaris had penetrated into the cavity of the peritoneum. In the intestines there were also numerous ascarides but the mucous membrane was perfectly sound in all its extent.

The patient in the second case was a sailor, aged twenty-two years, who was admitted into the naval hospital of Salamis on May 7th, 1897, with violent pains in the abdomen, meteorism, foul tongue, and a temperature of 39·2° C. (102·6° F.). During the four days that he was under observation he showed symptoms of peritonitis which would not yield to any treatment and he died on May 11th. At the necropsy the peritoneum was found full of a sero-purulent liquid. At the upper part of the ascending colon there was discovered a perforation of the size of a lentil and from it was removed part of an ascaris the remaining portion of which was found inside the intestine.

As these two cases came under my notice in so short a space of time it is probable that many similar ones occur without their true nature being recognised and that the symptoms are wrongly attributed to peritonitis of tuberculous or other nature.

Piræus, Athens.

A CASE OF DEAD TWIN RETAINED TO FULL TIME.

BY DAVID ROSS, M.B. ABERD.

ON Feb. 15th, 1898, I was called by a Royal Maternity Charity midwife to see a woman, aged thirty-two years, a poor Jewess, whom she had just delivered. The patient was the mother of five healthy children, two of them being twins. During the first three months of her pregnancy she stated that she thought she was carrying twins, the early symptoms being very similar to those of the previous occasion on which she had twins. One morning in her fifth month, after she had felt quickening, she stated that she had had a fright, and on that evening severe metrorrhagia set in which lasted for three days; then for three months after she had a slight yellowish discharge. During the last four months she said that she distinctly felt the movements of a child on the right side, but that in the lower part of the abdomen on the left side she felt as if she were carrying a stone and had a feeling of great weight and dragging pain. Labour began on Feb. 13th at midnight and continued all next day till 6 P.M., when she was delivered, with little trouble, of a dead fœtus about five months old. The midwife waited, as she knew there was another child, and at 8 A.M. on Feb. 15th she was delivered, after a very severe labour, of a fine, healthy, full-time girl. The body of the fœtus was flattened antero-posteriorly, while the head, due to a twist on the neck, was flattened from side to side. The skin was soft, moist, and tough, was very pale, and felt like wet chamois leather; but there was no offensive smell or any sign of decomposition. The features were quite unrecognisable and the sex was indistinct.

The interest attaching to this case is that in spite of the excessive metrorrhagia at the fifth month the dead fœtus was retained, constituting rather an uncommon case of missed abortion.

Kingsland-road, N.E.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—The annual report of this institution states that 1273 in-patients were admitted during 1897, being 62 in excess of the previous year, and 2445 out-patients were treated, against 2660 in 1896; 259 patients were sent to the Pearn Convalescent Home. The ordinary income for the year was £5762 and the total expenditure was £6129.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

A CASE OF TUBERCULOUS ABSCESS IN THE ABDOMEN COMMUNICATING WITH THE RECTUM; OPERATION; RECOVERY.

(Under the care of Mr. WATSON CHEYNE.)

On Dec. 8th, 1893, Mr. Watson Cheyne was asked by Dr. Lendon to see a patient, aged twenty-six years, who had been knocked down by a runaway horse two years before while she was carrying a pair of skates. She fell on the skates and hurt her right side in the inguinal region. About four months afterwards she noticed a swelling on the right side towards the middle line at the lower part, but she did not consult anyone till the autumn. She was then found to have a swelling towards the inner part of the right iliac fossa and extending in the direction of the middle line; the swelling was fairly large and fluctuating. At that time she saw a gynæcologist who sent her to an ovariotomist for operation, but neither of these gentlemen seems to have made a definite diagnosis. In October, 1892, an incision was made above the pubes in the middle line and a little pus was found in the lower part of the abdomen; nothing further was done except that a drainage-tube was inserted. This was kept in for about ten weeks and when it was left out a sinus remained which had never healed. The discharge was at first comparatively slight but steadily increased. The patient went to the seaside and to the country and tried in various ways to improve her general condition. Not very long after the operation it was noticed that pus was being passed per rectum and of late the quantity of pus so passed had increased very considerably. She had also of late been going down hill very rapidly; she was markedly emaciated, had profuse night sweats and hectic temperature, and the pulse varied from 120 to 130. A large quantity of albumin was present in the urine. She had lately seen the gentlemen who operated on her before, but they declined to do anything further and it became quite evident that she was losing strength rapidly.

On examination the patient complained of a great deal of pain on the right side of the abdomen at the lower part, especially on pressure. She was very much emaciated, had night sweats and hectic temperature in the evening ranging between 102° and 103° F., and there was about one-eighth of albumin in the urine. On examination a sinus was seen in the middle line about 1 in. above the pubes, and a probe passed into this sinus went backwards and somewhat to the right for a long distance—in fact, the whole length of a small probe passed in. With the finger in the rectum a thickening was felt as high up as the finger could reach and a mass was also felt in Douglas's pouch, and when the finger was withdrawn it was found to be covered with pus. On vaginal examination a large mass was felt lying towards the right side, slightly moveable but attached to the uterus, which was pushed towards the left. The probe passed into this mass, running down along the right side of the bladder. Bimanually the mass could be very distinctly felt and seemed to fill up the whole region from the rectum to the situation of the sinus in front and towards the right side.

As it was evident that the patient was going down-hill very rapidly Mr. Watson Cheyne determined to explore the sinus more thoroughly and see what could be done with the view of remedying the disease and if possible shutting off the communication with the rectum. Accordingly on Jan. 3rd, 1894, the bowel having been well cleared out and the patient having been placed under the influence of an anæsthetic, a long probe was inserted into the sinus and the opening was sufficiently enlarged in a downward direction to admit the finger, great care being taken of course not to injure the bladder. On gradually dilating the sinus and inserting the finger it passed into the centre of broken-down material and portions of this on being taken out looked like masses of granulation tissue, but it was not certain that they were not masses of tumour substance. It seemed upon consideration that the only chance which the patient had was to attempt to excise the whole mass, even although one ran a great risk of setting up a suppurative peritonitis. Hence the incision was enlarged upwards to the extent of five or six inches, the abdomen was opened, and the intestines were pushed upwards to the left and were guarded with flat sponges. On examination with the hand in the abdomen the mass was found to be adherent to the bladder on the right side and to the right side of the uterus, the ovary and Fallopian tube on that side not being distinguishable from it, and it extended backwards into Douglas's pouch and was adherent to the rectum behind. Having ascertained the connexions of the tumour with the hand in the abdomen it was gradually peeled off from the various structures, beginning at the bladder in front. The front of the mass was gradually detached without any very great difficulty and then it was found that the broad ligament and ovary were firmly embedded in it and the ligament was therefore tied in two places and divided. The mass was then peeled off from the uterus, from Douglas's pouch, and from the rectum, and ultimately was removed as one mass. There were only a few adhesions to the intestines. There was no troublesome bleeding. When the mass had been removed it was found that there was a large hole in the rectum which almost admitted the little finger and a probe could be readily passed through it and out at the anus. The condition left was therefore a raw wound in the pelvic cavity with the uterus, bladder, and rectum forming part of the wall of it, an opening in front, free communication with the rectum, and free communication with the peritoneal cavity. Owing to the great depth of the parts no attempt was made to stitch up the hole in the rectum. The pelvis having been sponged out five large drainage-tubes were inserted, these extending right down to the hole in the rectum, and the rest of the wound was then stitched up and an antiseptic dressing was applied. The patient stood the operation extremely well and was not collapsed afterwards, nor was there any vomiting.

On the following day (Jan. 4th) the temperature rose in the evening to 99·2°, having been in the morning only 88·6°. The pulse was full and 100. The patient was very well, taking her food well. The wound was dressed twice; there was no odour about the dressing; the drainage-tubes were not disturbed. On the 5th the temperature was slightly subnormal and kept at 98° all day; the pulse was 104. The abdomen was not distended and there was no marked tenderness. The wound was dressed twice; there was a slight fæcal odour in the discharge, a good deal of which had escaped by the drainage-tubes in front. On the 6th the temperature in the morning was 98·6° and in the evening 97·8°; the pulse was 112. The patient was not quite so well. The abdomen was considerably distended and tympanitic, but there was no marked tenderness over the abdomen and abdominal breathing was present. There was a great tendency to nausea and once or twice there was vomiting. On the 7th the temperature was 98° in the morning and 98·8° in the evening. The distension was more marked and there was slight tenderness at the lower part of the abdomen, but nothing very noticeable. The patient vomited three or four times during the day and took food badly. Her facial expression was more of the abdominal type and the tongue was dry. There was a good deal of smell from the wound and she passed nothing at all per rectum. A rectal tube was passed beyond the region of the wound and an enema was administered with very slight results—in fact, nothing more than washing out the fæces from the rectum. On the 8th the patient was distinctly worse. The abdomen was very distended, the patient was taking hardly any food, and some vomiting occurred. The pulse was 120. There was no pain; her condition was obviously very serious. The question was evidently between peritonitis and intestinal obstruction, and as the patient was going down-hill it was clear that some investigation must be made as to which it was, although this was very reluctantly done on account of the fear of breaking down the adhesions which had already formed and the consequent risk of infecting the abdomen. The drainage-tubes were accordingly taken out and the finger was inserted into the cavity; it was found that one coil of intestine had been lying between two of the drainage-tubes and very slight

pressure of the finger, without breaking down the adhesions which had formed around, restored this coil to its proper position. Only three of the tubes were reinserted and the general peritoneal cavity was not opened into. On the 9th the patient was very much better. The bowels had acted freely twice during the night and a great deal of flatus had been passed; the distension of the abdomen was less. The vomiting and sickness were also much lessened. The discharge from the wound still had a fæcal odour. The pulse was 112 and the temperature was normal. From this date the wound healed steadily and the patient gradually improved in condition. Upon two occasions when attempts were made to leave out the tubes it was found necessary to put them back, but on the whole the discharge of pus from the wound was comparatively slight and though for a few days it had a fæcal odour this gradually passed off. As regards the discharge from the rectum, after the first three or four days there was apparently no discharge at all, and as far as one could judge no pus subsequently escaped per rectum, so that the opening must have closed or a piece or intestine must have come down over the opening and sealed it from quite an early period in the treatment of the case; the rectal opening, from which so much trouble was feared, as a matter of fact gave practically no trouble at all. The patient was allowed to get up about Feb. 20th and went out on March 6th with a sinus at the seat of the original opening, a drainage-tube being kept in; the rest of the wound was completely healed and she was allowed to walk about wearing an abdominal belt. The albumin in the urine had markedly decreased in amount. From the time of the operation, except on two occasions when the drainage was not very good, there had been no rise of temperature whatever and she entirely lost her hectic fever, night sweats, and rectal discharge. The sinus was a very long time in closing; however, it healed completely in the early part of 1896. The patient has since married and is now in excellent health, being stout and well and with no trouble at all. On examination of the mass removed it was found to be composed of tuberculous tissue containing numerous tubercles which were at parts undergoing caseation.

Remarks by Mr. WATSON CHEYNE.—Here, therefore, the source of the evil was a large tuberculous tumour, which had suppurated, and it was this chronic abscess which had been opened and which had also perforated into the rectum. As to the point of origin of this abscess one really could not come to a satisfactory conclusion; included in the mass which was removed were the remains of the ovary which was recognisable and a piece of the broad ligament, though the Fallopian tube could not be distinguished among the mass of inflammatory material. Whether the disease originated in the Fallopian tube or in connexion with the ovary or whether it originated quite outside these structures and became adherent to them it really was quite impossible to say. Against the view that it was in the first instance a tubal condition was the fact that certainly nothing like the whole tube was distended. The tube in the immediate vicinity of the uterus was perfectly healthy and I am rather inclined to think that it originated in the cellular tissue of the pelvis, probably outside the peritoneal cavity.

The great interest of the case is of course the possibility of removing a septic mass like this without infecting the peritoneal cavity and more especially the possibility of leaving an opening of considerable size communicating freely with the rectum and the peritoneum without the occurrence of any subsequent peritonitis. It seemed to me that all that could be done was to see that there was a free opening for the discharge anteriorly and to trust to the rapid shutting off of the general peritoneal cavity by the matting together of the coils around. The rectum, of course, had been very carefully washed out beforehand and it was also washed out through the opening with weak sublimate solution; therefore, one could hope that no actual solid particles of fæces would find their way into the abdominal cavity before the part was completely sealed off. And this anticipation was evidently entirely realised. Since I operated on this case records of cases have been published in which openings have been left in septic cavities in the abdomen, where the wound has been packed with gauze to absorb the discharge and also to shut off the general peritoneal cavity. This is the method which I have adopted also in cases in which I have had to do with abscess where it was not properly shut off from the abdominal cavity. But I cannot say that I like the plan any better than that of using drainage tubes; the gauze does not absorb very well and adheres firmly to the intestine, and in taking it out one may have to use considerable force and may thus run a certain risk of tearing up the young adhesions at the time when there is more infective material about than there was when the operation was performed; and in one case I have seen an accident occur in regard to the partial strangulation with gauze similar to that which happened in my case with the tube. That point is also one of great importance and interest, viz., the occurrence during the few days of symptoms in which the diagnosis between obstruction and an insidious peritonitis was difficult; and until I was quite sure that some intervention was necessary I hesitated to disturb the wound and run the risk of infecting the peritoneal cavity. Very possibly one large tube would have sufficed, but I did not like to trust to it, and this occurrence illustrates the disadvantage of using more than one tube owing to the tendency of the coils of intestines to slip in between the tubes. If I had a similar case again I should use one very large tube in the first instance. The case teaches us to bear in mind the possibility when one is draining the cavity, whether with a tube or with gauze, that distension and other symptoms which at first may lead one to think that peritonitis is setting in may be due to partial or complete constriction of the intestinal canal by the tubes.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Distribution of Leprosy Bacilli in the Tissues.—Hæmatocele in a Hydronephrotic Kidney.—Latent Tuberculosis of the Tonsil.—Hæmorrhage into the Suprarenal Capsules of Infants.—External Rupture of an Aortic Aneurysm.—Exhibition of Specimens.

A MEETING of this society was held on May 3rd, the President, Dr. J. F. PAYNE, being in the chair.

Professor KANTHACK exhibited, for Dr. BERGENGRUEN (Riga), specimens showing the Distribution of the Leprosy Bacillus in the Tissues and the Histogenesis of the Giant Cells in Leprous Lesions of the Larynx. Unna was the first to maintain that the leprosy bacilli inhabit the lymphatics and not the cells. This was denied by all except Leloir. In 1895 Dr. Bergengruen together with Gerich proved unequivocally the correctness of Unna's view Last year Herman and Dohi also confirmed Unna's view at the Leprosy Conference in Berlin, but those observers overlooked Dr. Bergengruen's previous work. The specimens prepared by the latter showed clearly that the so-called "globi" and "lepra cells" are merely cross sections of bacillary thrombi in the lymphatics. In impression specimens prepared from leprous intra-laryngeal ulcers the bacilli were found in irregular branched clusters, not inside the cells. The masses were cylindrical and evidently consisted of tubular structures. In sections the bacillary masses were arranged in delicate chains and bands, often running as parallel lines through the tissue. They generally lay in spaces lined by endothelium. They possessed no nuclei or cell outline. The "globi" and "lepra cells" represented bacillary thrombi. He had no doubt that leprosy bacilli were occasionally found in the cells also. Further, the specimens distinctly proved that the giant cells in the leprous larynx were due to endothelial proliferation around the bacillary thrombi. The latter appeared to be engulfed by the giant cells, but actually they remained in the lumen of the lymphatic vessel. The thrombus acted like a foreign body and irritated the contiguous endothelium at some parts, causing the cells to proliferate and form a plasmodial mass. Dr. Bergengruen's conclusions, he insisted, were only to be applied to the lesions which he had investigated, but in these he held that the specimens shown established his contentions.—The PRESIDENT said that he had examined several specimens of organs from cases of leprosy and till lately he had had no doubt that the bacilli were intra-cellular. But that day he had examined preparations prepared by Mr. Shattock from the skin of a case which had recently been under his care, and in this specimen the "globi" were not well seen and strings of bacilli were scattered through the section and did

not seem to be included in the cells.—Dr. HEBB said that for some years he had taught that the "lepra cells" were non-existent. In transverse sections of affected nerves the bacilli could be easily seen to lie between the fibres and away from the cells.—Dr. ANDREWES, without in the least questioning the correctness of the description of the appearances as described by Dr. Kanthack, asked if it were not possible that while in primary surface lesions the bacilli might be in the lymphatics in the internal organs they might be intracellular. In the spleen, for instance, he thought that he had seen them distinctly within the cells.—Professor KANTHACK, in reply, said that there were special difficulties in the case of the spleen in deciding whether organisms were in the cells or merely lying on them. The question could only be solved by making serial sections. But he would not be surprised at leprosy bacilli being found in the splenic cells as the spleen was the grave of almost all organisms.

Dr. J. ROSE BRADFORD showed a Hæmatocele in a Hydronephrotic Kidney. The patient, a man, forty-four years of age, was admitted into University College Hospital for delirium tremens and for hæmaturia. The hæmaturia was profuse and clots came away when the bladder was washed out. He had had several previous attacks of hæmaturia, but there was no history of renal colic. A tumour could be felt in the region of the left kidney; there were pain in the loin and frequency of micturition. He died from delirium tremens three days after admission. At the necropsy all the organs were found to be healthy except the left kidney and ureter. The ureter was dilated but the lower orifice was normal. The kidney was converted into a hydro-nephrotic sac, which was filled up by blood-clot, some of it recent and some old and laminated. Embedded in the clot was a large calculus one and a half inches in length. There was a villous condition of the pelvis in places and he thought this had been the source of the hæmorrhage. There was no evidence of growth.—Professor GREENFIELD asked if the renal veins were normal, as thrombosis might account for the hæmorrhage.—Dr. BRADFORD, in reply, said that the renal veins were not thrombosed. There was no interstitial hæmorrhage in the remains of the kidney.

Dr. HUGH WALSHAM read a paper on Latent Tuberculosis of the Tonsils the result of an investigation at the Victoria Park Chest Hospital. The inquiry was divided into two parts: 1. Examination of the tonsils and adjacent structures in patients who had died from tuberculosis. In a few cases there were signs of tubercle which appeared to be primary, being more advanced in the tonsil than it was elsewhere. In a large proportion he found evidence of tubercle in the tonsil which he thought to be secondary and to be due to auto-inoculation from the passage of sputum over it. This occurred even when the tonsils were atrophied. 2. Examination of the tonsils and adenoid vegetation removed by operation. In this case there was evidence of primary affection of the tonsils in a few cases, but as a rule the presence of tubercle bacilli could not be demonstrated.—The PRESIDENT remarked on the extreme importance of the paper. It had often been suggested that the tonsils were the point of entrance of the bacilli, but instances of definite tuberculous lesions were certainly far from common, possibly because the tonsils had great power of resistance and of destroying any invading organisms.

Dr. ANDREWES showed a specimen of Hæmorrhage into the Suprarenal Capsule taken from a female infant, fifteen months old, who died after about thirty-six hours' illness. There was a purpuric rash and some spots of commencing molluscum contagiosum. At the necropsy all the organs were found to be normal except the suprarenal capsules, which were both affected with interstitial hæmorrhage. Cultures from the suprarenal capsules, the blood, the lung, the kidney, and the spleen were negative except one from the lung the result probably of accidental contamination. The clinical features were those of an acute toxæmia, but if organisms were present they must have been species which did not grow on ordinary media or stain with ordinary reagents. A similar condition was sometimes seen in guinea-pigs after injection of diphtheria toxin. There were some points of resemblance to hæmorrhagic small-pox, but there was no case of that disease in the neighbourhood before or afterward.

Dr. G. F. STILL showed a specimen of Hæmorrhage and Acute Congestion of the Suprarenal Capsules in Infants from a child, aged fourteen months, who died from acute tuberculosis. The left suprarenal was uniformly infiltrated with extravasated blood, especially the medullary portion. The right was normal. Excluding cases in stillborn infants Dr. Still had only been able to find 18 cases in which acute congestion or hæmorrhage occurred in the suprarenals of infants. In 11 of these there was hæmorrhage and hæmorrhage occurred much more often in the right suprarenal than in the left (3 to 1). The cases were arranged in three groups: 1. Those in which death occurred within a few hours or days of birth. These form the largest group. In some of these the suprarenal hæmorrhage was the immediate cause of death, the capsule being ruptured and the blood escaping into the peritoneal cavity; the symptoms were abdominal pain and collapse. 2. Those in which the suprarenal lesion was a complication of some definite disease, usually of the respiratory tract—e.g., acute tuberculosis, broncho-pneumonia, &c. 3. Those in which after an acute illness lasting only two or three days, usually with a purpuric or bullous eruption, death occurred and the suprarenal lesion appeared to be part of the fatal disease. The etiology of the suprarenal lesion is obscure. In some cases it was certainly traumatic, in a larger number asphyxial, and in the third group almost certainly toxic. Experiments have shown that certain poisons, essence of cloves, Friedländer's bacillus, diphtheric toxin, given by the mouth or by injection, to guinea-pigs produce acute congestion or hæmorrhage in the suprarenals.

Dr. GARROD and Dr. DRYSDALE also showed a specimen of Hæmorrhage into the Suprarenal Capsule of an Infant. The patient was an unvaccinated infant, aged four months, who was brought to the hospital dead. The body, which was well nourished, was covered with a purpuric rash. No membrane was found in the pharynx and larynx and there was no ear disease. Both suprarenals were of a dark, purplish-red colour, but were not enlarged and retained their shape. On microscopical section all parts of the glands were seen to be affected, the meshes of the stroma being in places filled with red corpuscles. There can be little doubt that the disease was the same in this and in the case brought forward by Dr. Andrewes.

Dr. F. E. BATTEN showed a specimen of Hæmorrhage into the Suprarenal Capsule of a child, aged two and a half years, who was taken ill suddenly one morning with diarrhœa and vomiting, which continued during the day and following night. He was taken to the Hospital for Sick Children, Great Ormond-street, next morning, but as the onset of scarlet fever was feared he was sent home. At noon on the same day the child was again taken to the hospital as he had had a convulsion and was still convulsed. On admission the child was comatose, the temperature was 102° F., the pulse was 200, and the respiration was of the Cheyne-Stokes type in character. He had frequent convulsive attacks, the temperature rose to 106°, and the child died eight hours after admission. At the necropsy made ten hours after death, two or three small ecchymoses were found on the floor of the lateral ventricles; the lungs, heart, liver, spleen, and kidneys presented nothing abnormal. The right suprarenal body was much larger than the left and was of a dark purple colour. On microscopical section it was found that the whole suprarenal body was extremely congested with extravasation of blood into the medulla; the left suprarenal appeared to be perfectly normal.—Dr. W. S. COLMAN also mentioned a case. The patient was an infant, about ten months old, who was admitted to the Hospital for Sick Children, Great Ormond-street, in 1893, with acute fever of a day's duration and a bullous eruption which had only been present a few hours. There were a few purpuric spots. The child died about an hour after admission and a necropsy was performed a few hours later. Both suprarenal capsules were found to be affected with a diffuse interstitial hæmorrhage. The other internal organs were healthy. Cultures were made from the suprarenals, from the ventricular blood, and from the fluid in the bullæ. One colony of some cladothrix (almost certainly accidental) was found in one of the cultures from the blood, but the other cultures remained sterile. No organisms were found on staining sections of the various organs.—Dr. VOELCKER mentioned a case which he had seen at the Middlesex Hospital in a child, two years old, who was supposed to be suffering from hæmorrhagic small-pox. Hæmorrhages were found after death in both suprarenal capsules. In nearly all the cases which had been quoted there had been convulsions during the illness. The nature of these was not clear. During last year he had examined the body of a girl who had died in the Middlesex Hospital under the care of Dr. Coupland. During life she had symptoms which suggested strychnia poisoning. The only lesion discovered was advanced

caseation of both suprarenal capsules.—The PRESIDENT observed that the cases bore some resemblances to some forms of phosphorous poisoning due to the administration of small doses for some time. In these cases the onset was often sudden and hæmorrhages occurred into the internal organs, but he did not know that the suprarenal capsules were specially affected.

Dr. FREYBERGER showed a specimen of External Rupture of an Aneurysm of the ascending part of the Arch of the Aorta, taken from the body of a woman, fifty-two years of age, who died in the Great Northern Central Hospital in April, 1898. There was a history of the presence of a lump on the front of the chest for two years, but there had only been pulsation for three months. The tumour rapidly increased in size after her admission and after a week the skin which had become thinned over it cracked and blood oozed out. This oozing increased and she died from hæmorrhage in a few hours. At the necropsy the tumour in front of the chest was found to consist of firm blood-clot lying in an irregular cavity which opened into the aneurysmal sac, which passed through the second internal intercostal space, eroding the rib and cartilage to open into the ascending part of the arch of the aorta.

The following card specimens were exhibited :—

Dr. H. D. ROLLESTON : (1) Pin in the Vermiform Appendix; and (2) Round Pellets in a Dermoid Cyst.

Mr. G. B. JAMES: Primary Sarcoma of the Œsophagus.

Dr. HEBB : (1) Perigastric Cyst; and (2) Cancerous Infiltration of the Pericardium secondary to Cancer of the Œsophagus.

CLINICAL SOCIETY OF LONDON.

Transplantation of Tendon.—Bradycardia following Graves's Disease.—Congenital Heart Disease in a "Mongol" Idiot.—Acute Gangrenous Appendicitis.—Amyotrophic Lateral Sclerosis.—Hemiplegia after Typhoid Fever.—Osteitis Deformans.—Acute Epiphysitis of the Femur.—Estlander's Operation for Empyema.—Gastro-jejunostomy.

A CLINICAL meeting of this society was held on April 29th, the President, Mr. LANGTON, being in the chair.

Mr. F. S. EVE showed three cases in which he had performed the operation of Transplantation of Tendon to correct deformities due to paralysis. The operation was one which had undergone a good deal of modification since it was first devised and he followed the method of Goldthwaite. The method consisted in making a longitudinal incision into the tendon of a paralysed muscle and inserting and fixing into the incision the cut end of the tendon of a muscle which was normal. In many cases, no doubt, this merely acted as a support to a lax tendon as unless the muscle whose tendon was used came from the same group it could hardly be expected that the patient should be able to call it into action except in connexion with the muscles with which it was accustomed to act. One of the patients was a boy, aged nine years, who had paralysis of the external peronei and extensor muscles of the leg as a result of division of the external popliteal nerve, in which recovery had not followed the suture of the divided ends. He therefore divided the tendon of the posterior tibial muscle near its insertion and inserted it into the tendon of the extensor longus digitorum. He then exposed the tendo Achillis and separated a band from it and carried it above the external malleolus and inserted it into the tendon of the peroneus longus. In another case of ordinary infantile paralysis there was extreme talipes equino-varus and complete paralysis of the peroneus longus and nearly complete loss of power in the extensor longus digitorum. Mr. Eve performed an operation for lengthening of the tendo Achillis and also carried the tendon of the tibialis round and inserted its cut end into the tendon of the extensor longus digitorum. There was now hardly any talipes equinus remaining.—Mr. JACKSON CLARKE said that some years ago he had assisted Mr. Noble Smith to insert the tendon of the peroneus longus into the tendo Achillis to correct talipes calcaneus. If there were much contracture of the tendo Achillis it would be advisable to correct this before attacking the other tendons. He thought that the term "tendon re-implantation" was better than those usually employed to describe the operation.

Dr. PASTEUR showed a woman, sixty-five years of age, suffering from Exophthalmic Goitre which had been followed by Bradycardia. The symptoms of Graves's disease followed rather acutely after some gynæcological operation twenty-four years before. The symptoms at that time were typical, her pulse being from 130 to 140 per minute. She also had a goitre, exophthalmos, and tremors. At the present time the goitre had been followed by almost complete atrophy of the gland and the pulse rate had fallen to from 40 to 50 per minute. The only symptoms of Graves's disease which had persisted were the exophthalmos and the tremors. There was definite enlargement of the left ventricle and evidence of some lesion of the aortic valves, probably atheromatous in character. There were no symptoms of myxœdema except that she was extremely sensitive to cold and that her voice was a little suggestive. The heart lesion was similar to that which had been met with in other cases of bradycardia and he thought on the whole that the bradycardia was due to the cardiac lesion rather than to myxœdema.—Dr. A. MORISON was inclined to attribute the bradycardia to the shrinkage of the thyroid gland. The pulse although normally slow became much faster when the patient was excited or nervous, whereas it had been observed in the cases of bradycardia due to organic disease that these variations did not occur.—Dr. ARTHUR DAVIES discussed the occurrence of myxœdema after Graves's disease. He also mentioned several cases of Graves's disease which he had followed up which showed that the prognosis was not necessarily bad.—Dr. DE HAVILLAND HALL had lately seen a patient who had had Graves's disease twelve years ago and now had early though distinct signs of myxœdema.—Dr. PASTEUR, in reply, said that the association of myxœdema and Graves's disease could not be common. The antecedents of patients with myxœdema were always carefully gone into and yet there was hardly ever a history of previous enlargement of the thyroid gland. The possibility of myxœdema had been constantly present in his mind, but there was no definite evidence of it. The patient had been treated with small doses of aconite and with belladonna, with bromide, and later with thyroid extract. The latter did not agree, causing palpitation, and it was given up. The patient had lost weight during her illness, which did not support the idea of myxœdema, but he admitted that the nature of the case was doubtful and he hoped to report the progress at a later date.

Dr. A. E. GARROD showed a child illustrating the association of Congenital Heart Disease with the "Mongol" type of Idiocy. The case was one of a series which he had collected and intended to bring before the society at a later date. The child was sixteen months old and had the typical facies, with sloping eyes, large epicanthal fold, round forehead, large tongue, which was nearly constantly protruded and withdrawn, and had a very brachycephalic skull. In addition she was cyanosed and had marked clubbing of the fingers. There was a loud systolic murmur best heard to the left of the sternum, about the centre of the cardiac area. At this site there was also a thrill. The site of the lesion was uncertain, but it did not seem to be an ordinary case of pulmonary stenosis. Dr. Garrod had observed this association of congenital heart disease with the "Mongol" type of idiocy in seven cases. Such cases did not appear to be met with in idiot asylums, probably because they did not live till the age at which they were admitted to these institutions. There was an article by Dr. John Thomson of Edinburgh in the March number of the *Scottish Medical and Chirurgical Journal* on "Cases of Imbecility in Infancy" in which he mentioned 3 cases in which the association was present. Dr. Garrod had previously pointed out how frequently other malformations were associated with congenital heart disease and therefore the association of mental defect with these cases was interesting to him. The association of heart disease, however, with idiocy in general was rare.—Dr. G. A. SUTHERLAND said that in the last 3 years he had seen 3 cases presenting this association. In 1 which died there was a patent foramen ovale.

Mr. W. G. SPENCER showed a case of Gangrenous Appendicitis in a boy, aged thirteen years, who had had several previous attacks of abdominal pain. The onset of the symptoms in the present attack was sudden, with pain in the right iliac fossa, for which his mother administered castor oil, after which he began to vomit. On admission his temperature was 102° F. and there was acute pain and tenderness in the right iliac region at McBurnie's point. On cutting down in the usual manner he found the appendix kinked on itself and gangrenous. A drop of pus could be squeezed out of it before it was opened, showing how near it was to perforation.

It was removed and the abdominal wall was carefully sutured in layers. Recovery was uneventful. On section the appendix was found to contain a fæcal concretion. Mr. Spencer observed that in young persons appendicitis rarely led to the formation of a perityphlitic abscess, but perforation and peritonitis were rapidly brought about.

Dr. C. E. BEEVOR showed a woman, aged forty-seven years, suffering from Amyotrophic Lateral Sclerosis, who presented the phenomenon of jaw clonus. The illness had begun two years ago with bulbar symptoms and during the last few years she had developed some atrophy of the muscles of the left hand and spasticity of the lower limbs. The knee-jerks and elbow-jerks were much exaggerated and there was well-marked ankle clonus. There was also jaw clonus, a symptom to which he had drawn attention in 1881, and which with one exception he had only met with in cases of amyotrophic lateral sclerosis. The disease was one affecting the upper part of the pyramidal tract, the lower reflex centres being unaffected. Thus although voluntary power over the palate was entirely lost it contracted in a reflex manner when it was touched.—Dr. ORMEROD said that he had seen an exactly similar case in which amyotrophic lateral sclerosis began with bulbar symptoms and in which there was jaw clonus.

Dr. H. D. ROLLESTON showed a man, aged thirty years, suffering from Left Hemiplegia, which occurred on the twenty-fourth day of an attack of typhoid fever. He was a left-handed man and at the onset there was some aphasia. There were no convulsions at the onset. The fever ran a normal course and the hemiplegia had gradually improved. Dr. F. Hawkins had collected 17 cases of this kind and in all the cases in which there was a post-mortem examination there was embolism. Osler had reported 2 cases in which there was cerebral thrombosis, the arteries being affected. In his case he thought that the balance of evidence was in favour of arterial thrombosis. The absence of convulsions was against the view that this could be due to venous thrombosis, but the differential diagnosis between arterial and venous thrombosis was notoriously difficult.—Dr. HERRINGHAM mentioned a case in which hemiplegia occurred in the third week of typhoid fever. Two years later there was still some one-sided weakness and disorderly movement on effort and sometimes some athetoid movement even when the arm was at rest. As regards the question of the probability of thrombosis he mentioned that it was common in cases of typhoid fever to find minute thrombi in the renal vessels.—Dr. FRANCIS HAWKINS said that there were only 8 cases recorded in English literature and of these 4 were in children. More than half recovered and in all of those which were examined post mortem a clot was found in the middle cerebral artery.

Dr. ROLLESTON also showed, for Mr. C. T. DENT, a woman, aged fifty-two years, suffering from Osteitis Deformans. Twelve years ago she had begun to suffer from pain and swelling in the long bones in all four extremities and during the last few years this had increased. Skiagrams were shown which demonstrated considerable thickening and also bending of the bones, so that those of the forearm were seen to be curved like those of the anthropoids. It was generally supposed that most of the cases occurred in men, but out of 45 recorded cases the numbers occurring in patients of either sex appeared to be almost equal. Drug treatment had had no effect in relieving the pain.—Dr. DE HAVILLAND HALL said that in a similar case he had given the patient great relief by the administration of 5 grains of iodide of potassium combined with 2 grains of quinine.—Dr. F. PARKES WEBER mentioned a case in which he had administered iodide of potassium without benefit, but the pains at once diminished after an accident in which the patient broke his thigh.—Dr. LEONARD GUTHRIE mentioned a case in which a woman had this affection almost confined to the lower limbs and in which treatment entirely failed to relieve the pain.

Mr. WALLIS showed an infant, sixteen months old, who had suffered from Acute Epiphysitis of the Head of the Femur leading to the formation of a large abdominal abscess in which the head of the femur was found. The symptoms began acutely and after three weeks there was a large abdominal swelling. An incision was made just above Poupart's ligament and a large quantity of pus escaped. On introducing the finger the head of the femur was found attached to the hip bone by a small shred of membrane, having evidently perforated the acetabulum. Recovery was rapid and there was only ¾ in. of shortening.

Mr. SPENCER showed a young woman on whom he had performed Estlander's operation. The original empyema did not drain well, partly owing to the inaction of the left half of the diaphragm which formed a pocket. Portions of four or five ribs had been freely removed. There was now a large gap in which the pleura was covered by cicatricial skin only. Nevertheless the movements of the chest were good and there was practically no lateral curvature.

Mr. WALLIS showed a woman, over fifty years of age, suffering from Carcinoma of the Stomach, for whom he had performed the operation of gastro-jejunostomy. At the time of the operation the patient was extremely emaciated, but since then she had gained flesh and was able to take ordinary food although the growth remained. The operation was performed under the influence of local anæsthesia produced by the subcutaneous injection of a 4 per cent. solution of eucaine. This solution acted very rapidly and it was unnecessary to wait even a minute before using the knife.

SOCIETY OF ANÆSTHETISTS.

A MEETING of the above society was held on April 21st, Dr. DUDLEY BUXTON, President, being in the chair.

Mr. GRANT MORRIS read notes of the following case. The patient, a woman, aged thirty years, suffered from pain in the region of the left kidney. At the time of admission she looked cachectic and had a trace of albumin which disappeared before the day of operation. She was operated on, an exploratory abdominal section being performed. Ether was given from a Clover's inhaler, but was never pushed; the induction was normal. Towards the end of the operation some cyanosis and a good deal of secretion of frothy mucus appeared; neither was alarming in amount. After sixty-five minutes she was removed from the operating table. She was then cyanosed, the breathing was unimpeded but shallow and sighing, and her condition was thought to betoken the onset of vomiting. Conjunctival reflex was present and the pupils were equal and contracted. Fifteen minutes later she became of a ghastly ashy grey colour, respiration ceased and with it the pulse. Artificial respiration was performed, a large quantity of frothy watery secretion coming away. The necropsy showed the lungs to be full of frothy secretion. Death apparently resulted from failure of respiration due to acute œdema of the lungs set up by the ether.—In answer to the PRESIDENT it was stated that no hæmorrhage into the medulla had occurred.—Dr. SILK had met with a somewhat similar case in which, owing to a large quantity of ether being inhaled, acute œdema had caused waterlogging of the lungs. Artificial respiration in these cases, he opined, did harm.—Dr. STARLING thought the condition of the kidneys might be a factor in producing the acute œdema. He instanced a case supporting his view.—Mr. DAVIS had met with a case in which giving ether to a patient with Bright's disease had been followed by hæmaturia and death in twenty-four hours.

Dr. SILK narrated a case of a patient, aged sixty-five years, in whom after a very brief administration of the A.C.E. mixture (fifteen minutes) jaundice and albuminuria had developed. She had been in hospital eight days and appeared to be free from renal or hepatic disease and in fairly good health. The operation was simply the incision of a mammary tumour causing no shock. Two days after the administration albuminuria was noticed and in a week bile was found in the urine, which persisted for six days. The albuminuria was present for two days longer. Ultimately both disappeared. — Miss ALDRICH-BLAKE had met with severe albuminuria in a child, aged eight years, following a brief administration of chloroform. The condition appeared twenty-four hours after the inhalation and persisted for four days.

Mr. MACCARDIE narrated an instance of Albuminuria following Ether.—The PRESIDENT pointed out that milder forms of jaundice and "biliary upset" were not unfrequent sequelæ of taking anæsthetics, especially in the case of chloroform. With regard to albuminuria recent statistics showed that that condition was more frequent after chloroform inhalation than after ether provided the kidneys were sound.

Mr. CHAPMAN (Tunbridge Wells) communicated the notes of a case of Death following the Exhibition of Chloroform.

Mr. HORACE PECHELL read a paper on Ether Administration. He pointed out the various methods in use and then described the method which he advocated. An Ormsby

inhaler of special construction was used. Two ounces of ether were poured into the bag and the sponge was replaced. The valve was left open but gradually closed and then the ether from the bag becomes inhaled. The administrator then gently tilts the bag, thus wetting the sponge with ether. As toleration is effected more and more ether is allowed to soak the sponge. In giving gas before ether he allows nitrous oxide to be inhaled for 30 seconds and then applies the Ormsby inhaler in the manner described above. Mr. Pechell advocates the semi-recumbent posture for etherisation in dental operations.—Mr. CARTER BRAINE described his method of giving gas and ether. He had tried Mr. Pechell's plan but had found that it destroyed the bag. He exhibited an inhaler which was a modified form of Ormsby's instrument, being adapted for the exhibition of ether, of chloroform, or of the A.C.E. mixture. It was capable of complete sterilisation.—Dr. SILK thought that Mr. Pechell's method was not free from objection. The view that any form of etherisation ought to, or was expected to, produce lividity and cyanosis was, he contended, quite wrong. The posture referred to was commonly adopted amongst anæsthetists.—Mr. BELLAMY GARDNER thought that the amount of ether employed was excessive and that some would probably fall on the patient's face.—The PRESIDENT was surprised that Mr. Pechell had omitted to mention Mr. Clover's method, which was, he thought, superior to all those he had described. No cyanosis or lividity followed its use when the method was understood and properly carried out. It was the only method whereby an unbroken nitrous oxide and ether anæsthesia could be obtained.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Detail in Surgery.—Method of Exposing the Kidney without Division of Muscles, &c.—Recurrent Hæmorrhage from the Ear.—Deciduoma Malignum.—Xerostomia.—Exhibition of Cases and Specimens.

A MEETING of this society was held on April 22nd, the President, Dr. J. BRAITHWAITE, being in the chair.

Mr. PRIDGIN TEALE read a paper on Detail in Surgery, illustrated by operations for hæmorrhoids, which will be found on page 1244 of our present issue.

Mr. MAYO ROBSON read a paper on a Method of Exposing the Kidney without Division of Muscles, Vessels, or Nerves.

Mr. W. H. BROWN read notes of a case of Recurrent Hæmorrhages from the Ear. The patient, a child aged five years, suffered from follicular tonsillitis followed by otitis media and otorrhœa. There was little pain and only slight rise of temperature. Two weeks later, without any obvious cause, free arterial hæmorrhage took place from the right ear, about a pint of blood being lost. The ear was packed with gauze and a compress for four days and a few hours after this was removed a second violent hæmorrhage occurred. A swelling bulging into the soft palate and pushing inwards the tonsil was now noticed and believing that the source of hæmorrhage was the internal carotid artery Mr. Brown ligatured this vessel. No further bleeding took place and the child ultimately quite recovered.

Dr. HELLIER showed the Uterus and Appendages from a case presenting the symptoms and appearances characteristic of the condition called Deciduoma Malignum, also drawings of the recent specimen and microscopic sections of the primary and metastatic growths. He also showed by the lantern photographic reproductions of the drawings published by Sänger in his original paper and by Nové Josserand and Lacroix and others. The patient, aged thirty-nine years, died twenty weeks after an apparently normal confinement. Her main symptoms were continuous hæmorrhage and fœtid discharge. Death resulted from septic pneumonia. There was malignant growth in the fundus uteri, broad ligament, and ovaries, perforation of the uterus and rectum, and secondary growths in the peritoneum and lungs

Dr. SHARP (Whitby) read notes of a case of Xerostomia (Mouth Dryness), which was published in THE LANCET of April 23rd.

The following cases, pathological specimens, &c., were exhibited :—

Dr. CHURTON : (1) A case of Addison's Disease ; and (2) Cases from the Wards of the Leeds Infirmary.

Dr. TREVELYAN : (1) Anomalous case of Congenital Cardiac Disease ; (2) specimens from a case of Cerebral Abscess ; (3) specimens illustrating the Anatomy of the Cerebral Ventricles ; and (4) specimen of Enlarged Thymus the probable cause of sudden death.

Mr. LITTLEWOOD : (1) Case of Actinomycosis in a child, with microscope specimens ; (2) boy who was impaled on a stake ; (3) Gall-stones from a case of Cholecystotomy ; (4) Fibro-cystic Tumour of the Uterus removed by Abdominal Hysterectomy ; and (5) Malignant Disease of the Penis.

Dr. MANTLE (Halifax) : Case of Progressive Muscular Atrophy.

Dr. CHADWICK : Two cases of Pseudo-hypertrophic Paralysis—(1) Hypertrophy with Paralysis ; and (2) Atrophy with Contraction.

Dr. CHADWICK and Mr. W. H. BROWN : Specimens from a case of Hydronephrosis (R) with Congenital Cystic Degeneration (L).

Mr. W. H. BROWN : (1) Vermiform Appendix recently removed for Recurrent Inflammation ; (2) Hydrocele of the Canal of Nuck ; (3) case of Removal of the Jaw for Malignant Epulis ; (4) Multiple Keloid ; and (5) Lumbar Colotomy six years after operation.

LIVERPOOL MEDICAL INSTITUTION.

The Acidity of the Urine.—Non-diphtheritic Membranous Sore-throat.—Exhibition of Cases, &c.

A MEETING of this society was held on April 28th, the President, Dr. MACVIE CAMPBELL, being in the chair.

A collection of recent radiographs by Mr. THURSTAN HOLLAND and Nine Photographs of Surgical Disease by Mr. THELWALL THOMAS were exhibited.

Dr. T. R. BRADSHAW read a note on the Acidity of the Urine. He showed that litmus could not be employed as the indicator in the estimation of acidity of the urine, because solutions which contained salts of phosphoric acid were never neutral to litmus ; if they were not distinctly acid or alkaline they were amphoteric. He advocated the employment of phenol-phthalein as an indicator and maintained that the objections which had been urged against it were not valid. His observations led him to differ from the teaching of Bence Jones and Sir Wm. Roberts, who held that the acidity of the urine was diminished after a meal. He found from the averages drawn from 160 estimations of the acidity of the urine of a healthy man that the acidity followed a fairly regular curve : high during sleep, it fell rapidly after "getting up," and remained at a minimum until about noon, after which it rose steadily and reached a maximum about 9 P.M. He found that the absolute amount of acid excreted varied nearly on the same lines as the relative acidity and, further, that it varied inversely as the volume of urine. The latter was a remarkable circumstance which was unconsciously acted upon by the physician when he gave alkalies to promote diuresis.

Mr. S. KELLETT SMITH read a note on the Dum-Dum Bullet.—Mr. BANKS, Mr. WESTBY and Dr. PERMEWAN spoke.

Dr. J. R. THOMPSON read notes of a case of Non-Diphtheritic Membranous Sore-throat. The illness began with hoarseness and redness of the left posterior pillar of the fauces ; on the third day a thin white membranous exudation appeared, covering the left tonsil and left side of the pharynx accompanied by marked malaise and pain in the throat without swelling of the tonsil or lymphadenitis. On the fourth day the membrane was thicker and greyish, and on removal of a portion for examination the mucous membrane bled slightly but was not eroded. The membrane re-formed to some extent. There was an attack of syncope on the fifth day. The temperature ranged between 99° and 102° F. for three days and then became normal. There was no albuminuria and no paralysis. Convalescence was tedious. Bacteriological examination on the fifth day showed a rod-like bacillus, shorter and thicker than the Löffler bacillus, and no cocci, while on the seventh day it showed a bacillus longer than the Löffler bacillus and a net culture of streptococci.—Dr. C. A. HILL thought that the case was one of streptococcal infection, and pointed out that all cases of membranous sore throat were not necessarily due to the diphtheria bacillus.—The PRESIDENT, Dr. WARRINGTON, Dr. LOGAN, and Dr. PETER DAVIDSON spoke.

Mr. RUSHTON PARKER showed a man, thirty-eight years of age, on whom he had performed Amputation at the Hip-joint

for Recurrent Tumour of the Femur. In June, 1895, the patient was admitted into the Royal Infirmary for constant pain in the right hip of some nine months' duration. The diagnosis lay between ostitis and tumour of bone, but in the absence of definite swelling at first that of ostitis was made. A small soft swelling eventually appeared and an incision over the hip-joint was made and a myeloid sarcoma was removed from the head and neck of the femur. The wound healed, all pain disappeared, and for a time a useful limb resulted. Towards the end of 1896 the patient fell in the street and was taken to the Royal Southern Hospital, where he was under the care of Dr. Alexander, who attempted to remove the growth which had recurred. This not proving practicable amputation was proposed. For this purpose the patient placed himself again under the care of Mr. Parker, who amputated at the hip-joint. He is now in good health and apparently free from disease.

Mr. BANKS showed a woman from whom he had removed a portion of a Parenchymatous Goitre and gave a lantern demonstration of Illustrations of Ancient and Modern Surgery.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Diseases of the Nose.

A MEETING of this society was held on April 20th, Dr. CATTLE, the President, being in the chair.

Mr. MACKIE read a paper on Diseases of the Accessory Sinuses of the Nose. After alluding to their anatomical features attention was more particularly directed to suppuration occurring in the maxillary sinus, which he believed to be a more common disease than was generally supposed, fourteen cases having come under his observation in the last fifteen months. Catarrh of the mucous membrane with stenosis of the ostium accounted for the majority, and though cases of dental origin were not infrequent they were less important and quickly recovered after the extraction of a tooth. The distinguishing signs of the disease were pointed out and the value of transillumination as an aid to diagnosis was demonstrated on a patient. In the treatment of recent cases frequent irrigation by a catheter passed through the ostium sufficed to effect a cure; but when the disease was of long duration it was necessary to drill a hole through the canine fossa, subsequently enlarging it with a chisel, and at the same time making a counter opening into the lower meatus of the nose, the cavity being packed with iodoform gauze and treated with an astringent douche. In suppuration of the ethmoid sinuses surgical interference was both difficult and dangerous, but when the employment of a warm nasal douche failed to give relief it was necessary to puncture the bulging ethmoid bone.

Dr. CATTLE, Mr. WILLIS, Mr. COX, and Dr. TRESIDDER took part in the discussion which followed.

TYPHOID FEVER AT EXETER.—At the meeting of the Exeter city council held on April 27th Dr. G. T. Clapp, the medical officer of health of No. 2 district, Exeter, reported that 7 cases of typhoid fever with 1 death had occurred in that division. Most of the patients had partaken of milk supplied by a dairy where the water used for washing the milk cans had, on being submitted to bacteriological examination, showed contamination by animal refuse. The objectionable source of supply had now been closed.

CONGRESS OF HYDROLOGY, CLIMATOLOGY, AND GEOLOGY.—The fifth International Congress of Hydrology, Climatology, and Geology will be held at Liège from Sept. 25th to Oct. 3rd, this city being selected on account of its proximity to the principal Belgian mineral springs (Spa, Chaudfontaine, &c.), rendering it easy for members to visit those localities. Other excursions will include various places of interest, such as Verviers (with especial reference to the reservoir for water-supply), to the seaside bathing establishments at Ostend and other coast towns, and to Aix-la-Chapelle. Applications for membership should be sent before May 15th to the general secretary, Dr. G. Jorissenne, 130, Boulevard de la Sauvenière, Liège, together with a remittance of 20 francs (16*s.*) for members and 10 francs (8*s.*) for wives of members or university students. The northern railway companies of France and Belgium have promised a reduction of 50 per cent. in the fares.

Reviews and Notices of Books.

The Peritoneum. By BYRON ROBINSON, B S., M.D. Chicago, Illinois. Part I. Histology and Physiology. With 247 Illustrations. Chicago: C. V. Waite and Co. Pp. 400. 1897. Price $3·75.

THESE are indeed the days of monographs. The handsomely got-up, well-illustrated, and portly volume before us labelled "The Peritoneum" deals only with the histology and physiology of that important membrane. There are still the anatomy, the pathology, and the symptomatology and treatment of its diseases to come, that is, if the promise held out in the preface, "that it is intended to publish in each volume as much bibliography as can be selected from the literature on the peritoneum," be any indication of the future progress of the work. The bibliography appended to this volume is portentous and must have taken much time and research to complete. It extends over 103 pages with upwards of 50 references on each page, making a total of nearly 6000. There can be no doubt in regard to the value of such work, for it greatly facilitates the labours of all those who are engaged in the same line of research and is a good example of what will have to be done for each organ if the immense number of facts which have been observed and recorded in journals are not to be buried in total oblivion. The peritoneum is as a rule rather curtly dismissed by anatomical writers, who of course busy themselves chiefly with its folds and attachments, and still more so by the physiologists, by whom it is merged in their account of serous membranes generally, whilst by the histologists the several elements, as endothelium, lymphatics, nerves, and vessels, are described under separate sections, and it is therefore difficult to state what space is accorded to it; but taking the treatises at hand, such as those of Blandin, Cruveilhier, Quain and Sharpey, Testut, Sappey, Hyrtl, Krause, Aeby, and Poirier amongst the anatomists, and those of Toldt, Stricker, Kölliker, Renaut, Satterthwaite, and Piersol amongst the histologists, we should think about from ten to twenty pages is the limit assigned to it. The appearance of a large work exclusively devoted to it is therefore welcome, especially when written by an original worker, since it is frequently the subject of disease and is almost as frequently exposed to mechanical injury in the course of surgical operations.

There is abundant evidence that the author has taken great interest in his work and that the study of the peritoneum has been to him a labour of love. He has made many original drawings and has treated each constituent of the membrane with great minuteness. In this prolixity is the defect of the volume. It would have been twice as valuable if it had been reduced to half the size. We are continually inclined to say with Falstaff, "Oh, thou hast damnable iteration." The work commences with a historical sketch, which is succeeded by chapters devoted to the membrane as a whole and to its separate elements—as the endothelium, the subperitoneal tissue, the blood-vessels, the lymphatics and nerves, the physiology, and the methods of preparation and examination—and closes with a chapter giving a *résumé* of the whole subject. The author describes in much detail the endothelial cells, or flattened cells with sinuous borders which form the membrane proper, with the stomata at the angles and the pseudo-stomata between the sides or applied margins of the cells. He particularly insists on the double character of the inter-endothelial line and shows that if examined with high powers a space, the inter-endothelial space, lies between the contiguous borders of adjoining cells and that this space is crossed by numerous protoplasmic processes

connecting the cells with each other; it is, he contends, through and along these spaces that leucocytes migrate. He believes the stomata spuria to be actually connective tissue corpuscles or their processes projecting upwards between the endothelial plates.

The stomata vera he entertains no doubt are the apertures of vertical canals which open, on the one hand, into the peritoneal cavity and, on the other, into the subperitoneal lymph spaces; they are in many instances lined by germinal granular polyhedral nucleated cells, whilst others are destitute of these cells. The active processes of absorption take place through both the stomata vera and the inter-endothelial spaces as well as through the blood-vessels, the former openings being particularly numerous in the peritoneum investing the tendinous centre of the diaphragm, where absorption is known to be rapid both for fluids and for solid particles. The peritoneum, owing to the number of leucocytes it possesses, has a limited power of resisting septic germs. The subperitoneal tissue with its blood-vessels and nerves are decribed at great length.

A long and important chapter is devoted to a description of the subperitoneal tissue, a subject which is usually very lightly passed over. Dr. Robinson, with Henle, limits the peritoneum proper to the single layer of endothelial cells which covers the opposed surfaces of the sac. The subperitoneal tissue includes a membrana limitans, fibrous tissue, elastic tissue, areolar tissue, fixed and migratory tissue corpuscles, various kinds of cells, such as vacuolated, branched, fibrillated nerve and fat cells, together with nuclei,—each of these receives a due share of attention. The white fibrous tissue is composed of long wavy bundles and presents two forms; one of these, the reticulated, appears in the omentum. It is liable to atrophy and exhibits holes, due to an atrophic process, which is not well understood, but which, Dr. Robinson has observed, may commence at the age of two years in the human subject. Each bundle is entirely invested with a layer of endothelial cells. The other form consists of parallel wavy bundles arranged in planes. These elements of the tissue can be well seen when freshly mounted in glycerine. The second element is the elastic, the fibres of which are straight and unite with each other in a reticulated manner, the closeness of the network varying much in different parts and in different animals. It is very abundant in the rabbit and in the human subject, in the subserous tissue of the ligamentum latum and in the parts adjacent to the bladder, for obvious reasons. Dr. Robinson describes three forms and alludes to a fourth—Henle's fenestrated membrane. The several forms of the various kinds of cells are fully considered and the accounts of each are illustrated by good drawings which are quite original. The importance of the easily separable planes of the subperitoneal connective tissue in promoting the spread of pus from one region to another is particularly emphasised. Dr. Robinson finds three forms of nerve fibre in the peritoneum—viz., medullated nerves, non-medullated nucleated axis cylinders, and fibres of Remak; the last-named he describes as consisting of a striated, fibrillated nerve axis and a nucleated neurolemma with a probable trace of medullary sheath, and as closely resembling irregular bundles of connective tissue.

Dr. Robinson's style of writing does not recommend itself to us. It is somewhat disjointed, giving to the reader the impression that the casual thoughts of the author have been jotted down as they occurred to him and then strung together to form a paragraph. Passages like the following are frequent: "Pathologic processes make the peritoneum manifest in exudation as in ascites, which experimentation of injecting fluid into the peritoneum makes its absorptive power manifest" (p. 290); "which," we presume, is a misprint for "while"; but even admitting this the sentence runs badly and is barely intelligible. What is to be said of this sentence: "It appears from my experiments that the leucocyte is possessed of wonderful malleability of plasticity of adjustability" (p. 186). Perhaps the two "of's" should be two "or's." Then the correction of the press has been very carelessly done. Here (p. 5), for example, is a quotation under the head of Johann Friedrich Meckel in which that anatomist's work is quoted as "Nova Experimenta et Observationes de Finibres Venosum ac Vasorum Lymphaticorum in Ductus Niscerague Excretoria Corporum ejusque Structuræ utilitate." Dr. Robinson has a curious mode of twisting a sentence so that it looks like a translation from the German with the verb at the end. For example, speaking of the relations of the blood capillaries to the lymphatics, he says (p. 211): "In the interstitial spaces, especially in the amphibia as is noticed in the cut presented, on the turtle the blood capillaries are embedded." No cut, or reference to a cut, is appended. The errors of the press are, indeed, almost innumerable. To mention only a few of the many we have noticed "splinter" is printed for "sphincter" and "diaphram" for "diaphragm." Then, again, we have the "ligamentum peritonei" instead of "ligamenta peritonei," p. 161; "unstripped muscles" for "unstriated," p. 170; "branches" for "branched"; "vacuolation" for "vacuolated," p. 200; "cilibre" for "calibre"; "flummerzellen" for flimmerzelle," p. 251. Pflueger may be right or wrong, but Pflüger spells his name in the latter mode, as anyone who refers to Pflüger's "Archiv" is well aware. "Nucleus" for "muscle," p. 263; "one stomata vera" for "one stoma verum," p. 247; "stomata acts" instead of "stomata act"; "wells" for "walls," p. 271; "laminæ" for "lamina," p. 272; "swelling" for "swellings," p. 273; and "the" for "a"; "*Journ. de la Anat. de la Phys.*" for "*Journ. de l'Anat. et de la Physiologie*," p. 285; "guarded" for "guard," p. 291. The index again is very unsatisfactory, the references being arranged without the least attention to the order of sequence of the letters, so that Ptolemy precedes Peritoneum, Purkinje Paladino, and Rudolph Radiation—in fact, the references are thrown in anyhow, necessitating the perusal of every item under each initial letter to discover any particular reference. Even the word "Peritoneum," which might be expected to be correctly indexed, is split up into three parts, whereof the first gives 5 references, the second 16, and the third 15, each entry being separated by other headings. In like manner there are five distinct headings of "Endothelia," all of which should have been grouped under one. Notwithstanding these blemishes, which will no doubt be removed when another edition is called for, the work will prove serviceable to histologists and physiologists as an epitome of the present state of our knowledge of this extensive and important membrane, and there can be no doubt that in these days of laparotomy, hysterectomy, and other formidable operations, the details both of the anatomy and physiology of the peritoneum should be familiar to every surgeon.

Researches on Tuberculosis: The Weber-Parkes Prize Essay, 1897. By ARTHUR RANSOME, M.D., M.A. Cantab., F.R.S. London: Smith, Elder, and Co. 1898. Price 2*s.* 6*d.* net.

THE subject chosen for the essay in the first triennial competition for the prize founded by Dr. Hermann Weber for bestowal by the Royal College of Physicians of London was as follows: "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis, especial regard being had to their application to Human Tuberculosis." The successful essay is now published and it cannot be said to ignore any of the issues of this far-reaching subject. Hence perhaps its somewhat condensed form and didactic expression, but it teems with information and contains many original observations. In order to give some idea of the

scope of the essay it will suffice to enumerate the chief departments into which the author has divided his subject, each one of which could well be expanded into an essay of equal length with that which here treats of them all. These divisions are:—(*a*) the Past and Present Prevalence of Tuberculosis in this Country and its Fatality—where it is shown how regularly and almost uniformly has been the fall in the death-rate from this disease during the past half century. (*b*) The Distribution of the Disease in Nations and in Local Areas—which proves clearly that density of population is a prime factor in its prevalence. (*c*) The Natural History of the Bacillus of Tubercle, its Nature, its Habits, Forms, Products, Degrees of Virulence, and the Influence of External Conditions upon its Growth and Infective Power. This section contains several very interesting inquiries undertaken by the author as to the conditions favourable to the development of the bacillus outside the body, especially the influence of organically charged vapours when removed from the air and light. (*d*) Bodily Predisposition, Natural or Acquired. It is of interest here to find Dr. Ransome expressing a strong doubt as to the alleged close relationship between pleurisy with effusion and tuberculosis. (*e*) The Channels and Sources of Infection. In this chapter is ably summarised the existing knowledge of the modes of tuberculous infection, the commonest of course being the inhalation of dried tuberculous dust; next, that of the ingestion of infected food, as well also of "dust" from the atmosphere; next, inoculation through the skin; rarer still, direct infection by the generative organs; and, he adds, significantly, "direct infection from the breath of phthisical persons is probably the rarest of all." Two cases of "mixed infection" in which anti-streptococcic serum was injected without avail are related. (*f*) The Conditions and Limits of the Power of Infection form the next heading, whilst the final section deals with Preventive and Prophylactic Measures and also with the Dietetic and Medical Treatment of the Disease. Thus the subject is completely surveyed and with much skill, so that the essay constitutes a valuable contribution to literature which cannot fail to be consulted by all subsequent students of this universal malady.

The Tallerman Treatment by Superheated Dry Air: Case Notes and Medical Reports, with numerous Illustrations. Edited by ARTHUR SHADWELL, M.A., M.B. Oxon., M.R.C.P. Lond. London: Baillière, Tindall, and Cox. 8vo, pp. xii. and 173. 63 Plates. 1898. Price 3*s.* 6*d.* net.

MANY endeavours have from time to time been made to utilise high temperatures in the treatment of disease, and in several instances a certain measure of success has followed these attempts; but the temperature attained by these methods has never reached any very great height and, in fact, in no case has it approached the boiling point of water. The failure we now know was due to the fact that the heat was applied either by means of steam or, if dry air were at first used, it became very quickly saturated with moisture by the increased perspiration of the part treated, so that practically steam was applied in this way also. Now, it is not possible for any of the tissues of the human body to endure watery vapour at a temperature at all near the boiling point of water, though if the heat is applied by means of air which is perfectly dry far higher temperatures can be borne, but the difficulty consists in maintaining the dryness of the air in spite of the greatly increased evaporation from the surface of the body. It is in the solution of this difficulty that the merit of Mr. Tallerman's invention chiefly consists; he has devised an apparatus by which the air is kept really dry and in this way a limb or a part of a limb may be exposed to temperatures varying from 200° to 300° F. without any discomfort. The local effects of the high temperature are to dilate all the cutaneous blood-vessels, to stimulate the circulation of the part, and to relieve pain. The general effects are to dilate the superficial vessels, to increase the pulse-rate and the force of the heart's action, and to raise temporarily the general temperature of the body. This increase of temperature may amount to two or even to three degrees Fahrenheit. So far we have considered only the means by which these high temperatures have been rendered possible and their physiological results. The therapeutic value of the method remains to be dealt with. The method is undoubtedly of value in several forms of joint disease, especially in chronic rheumatism and rheumatoid arthritis which are so little amenable to ordinary treatment, and in this book many cases are recorded in which other diseases, such as peripheral neuritis, chronic ulcers, and flat-foot have been benefited. The treatment has been employed fairly extensively, but is certainly deserving of being more widely known. Of course, it is not a panacea and time will enable us to distinguish what cases are likely to derive benefit from it. The power of relieving pain is sometimes very great, and the increased freedom of movement in chronic joint disease is equally remarkable. The book contains notes of a large number of cases in which the apparatus has been employed and in many instances photographs are given of the patients before and after treatment. Mr. Tallerman is to be greatly commended in that he has not endeavoured to bring his invention before the public but has confined its employment to the members of the medical profession. We feel sure that before long the Tallerman method of applying air at high temperatures to diseased portions of the body will take the place it deserves in the estimation of medical men as the most satisfactory method at their disposal of treating many hitherto very intractable morbid conditions.

A Catechism of Palmistry. By IDA ELLIS. London: George Redway. Pp. 155. Plates, 19. 1898. Price 2*s.* 6*d.*

PALMISTRY has become a fashionable amusement for "at homes," &c.; and for those who wish to amuse their friends by telling them what they wish to hear or to annoy others by endowing them with characteristics the reverse of pleasant a good deal of information will be found in this volume. It is written entirely in the form of question and answer, which makes it easy of reference but not pleasant to read. Regarded, however, as a "scientific" work, as it pretends to be—"the sciences of chirognomy and chiromancy explained"—it is simply absurd. Scraps of truth are mixed up with ridiculous ignorance. The following is an example: Q. "What is the cause of lines being produced in the palm of the hand?" A. "Its extreme sensitiveness, for in the hand the nerves are far more numerous than in any other part of the body except the tongue, and in the palm the nerves are more in number than in any other part of the hand; this accounts for the very keen sense of touch which the palm possesses and it also accounts for the readiness of the palm to register the internal heat of the body, for in a fever the hand becomes very hot though the rest of the body may be cold. There are proofs that the nervous fluid from the brain acts directly upon the hand," &c. The writer would have been wiser to confine herself to a description of the "lines of the hand" and their supposed significance than to talk such nonsense about physiology. Our readers may know whether or not they have mistaken their profession by the following question and answer: "What is the appearance of a successful doctor's hand?" "The mount of Mercury should be full and three clear, upright lines upon it, the line of Fortune clearly traced, the mount of Moon well developed to show love of discovery, and for a surgeon the hand should also be rather hard and the fingers square or spatulate."

LIBRARY TABLE.

Lehmann's Medicinische Hand-Atlanten. Band VI., Zweite Ausgabe. *Atlas der Syphilis und der Venerischen Krankheiten.* Von Professor Dr. FRANZ MRACEK. München: J. F. Lehmann. (*Lehmann's Medical Handy Atlases.* Vol. VI. Second edition. *Atlas of Syphilis and Venereal Diseases.* By Professor F. MRACEK. Munich: J. F. Lehmann.) 1898. Price 14*s.*—The series of manuals which is being issued by the firm of J. F. Lehmann of Munich has already received a favour which has been thoroughly well deserved. More than one of these handy atlases have been issued in a second edition and as five additional volumes are announced to be in preparation, giving a total of twenty-two, it will be seen that the ground covered by them is considerable. Each volume contains a large number of coloured plates and in several there are also additional figures in the text, but the text is here subordinate to the main purpose of the book, which is that of an atlas. The present volume constitutes a fairly compendious and useful guide to the lesions of syphilis in its various stages, there being no fewer than seventy-one plates. Most of these are well executed and characteristic, their value being enhanced by the appended descriptions giving the clinical history of each case from which the drawing was made.

Le Phénomène de l'Agglutination des Microbes et ses Applications à la Pathologie. Par le Dr. RAOUL BENSAUDE. (*The Phenomenon of Agglutination of Microbes and its Applications to Pathology.* By Dr. R. BENSAUDE.) Paris: G. Carré et C. Naud. 1897.—That a monograph of nearly 300 pages could be based upon the single fact of microbic "agglutination" bears eloquent testimony to the extent to which bacteriology at present holds the field. The work is not merely historical; it is also well furnished with personal observations by the author, Dr. Bensaude. The infective diseases in which this property of blood serum has been established are of considerable number and its application to diagnosis has been employed in several. It is, however, in typhoid fever that it is most reliable. In the majority of cases the reaction can be obtained early in the disease; in a few it may not appear until defervescence or later, when, of course, its clinical utility is small. Dr. Bensaude, whilst stating that a negative result of the test does not necessarily exclude typhoid fever, considers that it yet affords strong probability against it, and he particularly mentions that the test has been of undoubted value in the early diagnosis of typhoid fever from the typhoid condition that may accompany other disorders, such as tuberculosis and influenza.

Recent Materia Medica. By F. HARWOOD LESCHER, F.C.S., Pereira Medallist, &c. Fifth edition. London: J. & A. Churchill. Pp. 219. 1897.—This is a useful volume for reference, containing as it does all the drugs and preparations recently introduced and also a description of "drugs occasionally prescribed." A considerable quantity of new matter has been introduced into this edition. Modern chemical synthesis has given us many new drugs and bacteriological investigations have produced serum cultures and antitoxins, whilst physiological research has furnished many organic animal extracts. The work is very well brought out and the type is good and clear. Under each preparation will be found its chemical formula (when known), its synonyms, its physical properties, its therapeutical properties, and the dosage.

JOURNALS AND REVIEWS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. London: J. and A. Churchill. 1898. Vol. XLI. Part I. Price 10*s.*—This part contains five memoirs which are: 1. The Habits and Structure of Arenicola Marina, by F. W. Gamble, M.Sc., and J. H. Ashworth, B.Sc., of Owens College, Manchester, with five plates. Although this animal has been well described by various observers the carefully and accurately drawn up description given by Mr. Gamble and Mr. Ashworth is not the less acceptable. They find that there are two forms or varieties, one of which is the "lug" or common shore lugworm, whilst the other is found on the Lancashire coast—at least, at the upper part of the Laminarian zone—and is large and better-developed than the former. They constitute the scavengers of the sands and the authors of the article quote from Mr. Davison who finds that on Holy Island sands the entire layer of sand to a depth of two feet passes once in twenty-two months through the bodies of the lugworms which live in it, and that in a year the average volume of sand per acre which is brought to the surface in the form of castings is 1911 tons. The drawings which accompany this memoir are very carefully made from dissections. 2. The Aseptic Cultivation of Mycetozoa, by Caspar O. Miller, M.D., with two plates. The forms of the mycetozoa which are here dealt with are physarum cinereum and stemonitis and illustrations are given of the spores of Chondrioderma and Ceratium porioides. 3. On the Development of Tubulipora and on some British and Northern Species of this Genus, by Sidney F. Harmer, Sc.D. It is here shown that a process of embryonic fission is of normal occurrence in Cyclostomatous Polyzoa; with two plates. The memoir treats of the structure of the colony and of the ovicell; the history of the species and genus; the diagnosis of the species; the nature of certain vesicles found in the tentacles; an account of the development; and, finally, the morphology of the internal parts of the ovicell. 4. The Molluska of the Great African Lakes, by J. E. S. Moore. The author finds that there are twenty-four genera. Lake Nyassa, which is about 340 miles in length, and from 20 to 40 miles across, is of unknown depth, no bottom being found through a great part of its area, with soundings of 300 fathoms. The coast is swept in many parts with a heavy surf and the molluscan portion of the population thins out quickly beyond 100 feet of depth. Many parts are uninhabited. Lake Tanganyika is much shallower and thirteen genera were found. 5. In a second memoir, Mr. Moore gives the Anatomy of the Typhobias with a description of the new genus Bathanalia, with two plates.

The Journal of Anatomy and Physiology. Conducted by Professor Sir WILLIAM TURNER, Professor D. J. CUNNINGHAM, Professor A. MACALISTER, Professor J. G. M'KENDRICK, and Professor G. D. THANE. Vol. XXXII. Part III. 1898. London: Charles Griffin. Price 6*s.*—The articles contained in this part are both numerous and valuable. They are as follows. 1. Sir William Turner, F.R.S.: An Account of a Decorated Sculptured Human Skull from New Guinea. The form of the skull was hyperdolichocephalic, its length-breadth index was very low, not exceeding 68. The sculpture was a rude resemblance to the human face carved on the frontal bone. 2. Richard Assheton, M.A.: An account of a Blastodermic Vesicle of the Sheep of the Seventh Day with Twin Germinal Areas, with a plate. 3. Sir William Turner, F.R.S.: Moderator Band in Left Ventricle and Tricuspid left Auriculo-ventricular Valve. 4. Gordon Sharp, M.D. Edin.: Spontaneous Cure and Torsion of Aneurysm in a Sheep. 5. D. A. Welsh, M.A., M.D. Edin.: Concerning the Parathyroid Glands: a critical, anatomical and experimental study, with a plate. The importance of these glands is shown by the serious or fatal results which follow their complete ablation. 6. N. Bishop Harman, B.A., M.B.: The Caudal Limit of the Lumbar Visceral Efferent Nerves in Man. This he finds to be at the level of the twenty-second spinal nerve, which is usually the second lumbar. Many drawings accompany and illustrate his article and show that much labour has been spent on the requisite dissections. 7. Wakelin Barratt, M.D. Lond: On the Anatomical Structure

of the Vagus Nerve, with five plates. The plates show the appearances presented by sections of the vagus at different heights. 8. F. G. Parsons, F.R.C.S.Eng.: The Muscles of Mammals with Special Relation to Human Myology. This article is the first lecture of a course of lectures delivered at the Royal College of Surgeons of England. 9. Arthur Keith, M.D. Aberd.: A Preliminary Investigation of the Influence of Body Posture on the Position and Shape of Abdominal and Thoracic Organs—an interesting article, which contains many details that are of importance to the clinical observer. 10. A. Birmingham, M.D. R.U.I.: The Shape and Position of the Bladder in the Child. 11. R. Tait Mackenzie, B.A., M.D.: Natural Selection as Shown in the Typical Speed Skater—a very instructive article, showing the influence of special kinds of exercise on thews and sinews. 12. R. Broom, M.D. Glasg.: On the Arterial Arches and Great Veins in the Fœtal Marsupial. 13. Edward J. Bles, B.Sc.: The Correlated Distribution of Abdominal Pores and Nephrostomes in Fishes. 14. Walter H. Gaskell, M.D. Cantab.: On the Origin of Vertebrates deduced from the Study of Ammocœtes, with a plate. In this article Dr. Gaskell supplies a large amount of additional evidence in favour of his view of the origin of vertebrata from arthropods through the larval form of the lamprey. 15. A. M. Paterson, M.D. Edin.: The Genito-urinary Organs of the Female Indian Elephant, with two plates. 16. Alfred Young, M.B. Edin., and Arthur Robinson, M.D. Edin.: On the Development and Morphology of the Vascular System in Mammals, the Posterior End of the Aorta and the Iliac Arteries. In an editorial note it is stated that the editors intend to effect certain improvements, especially in the matter of illustration, and they earnestly desire that the journal may be placed on the list of books to be purchased by many public libraries in universities and other scientific institutions which are at present non-subscribers. The value of the communications made to this journal render such a request quite reasonable and legitimate and it is to be hoped that the librarians and library committees will see that the proposal is carried out.

Scottish Medical and Surgical Journal.—In a lengthy paper on the Occurrence of a Non-allantoic or Vitelline Placenta in the Human Subject Dr. J. W. Ballantyne (Edinburgh) gives an illustrated description of a sireniform fœtus—i.e., one in which the legs and feet are fused in a single lower limb. Dr. G. Halley (Dundee) writes on Perforating Ulcers of the Foot; and Dr. R. O. Adamson (Glasgow) on the Symptoms of Perforated Gastric Ulcer. Dr. Alexander Johnston (Methven) contributes a short report of two cases of Puerperal Fever treated with anti-streptococcus serum. There are four other original communications.

Edinburgh Medical Journal.—The opening paper is a Clinical Lecture on Pleural Effusion, by Dr. T. Lauder Brunton. Dr. G. A. Sutherland describes four cases of Fragilitas Ossium Scorbutica in Young Children; the pathology of the disease is that scorbutic extravasation of blood under the peritoneum leads to its detachment from the bone. Dr. A. Logan Turner writes on the Illumination of the Air Sinuses of the Skull. He used a five-candle electric lamp mounted on a tongue depressor and inserted in the mouth. If the person under examination closes his eyes the perception of light may become obvious to him in one or both of them. Altogether there are eight original articles.

Dublin Journal of Medical Science.—The titles and authors of the original communications are as follows: Recurrent Idiopathic Pneumothorax, by Dr. J. Magee Finny; a Study in the Surgery of Joints, by Mr. J. S. McArdle; the Housing of the Poor in Dublin, by Dr. H. C. Tweedy; and the first portion of the Clinical Report of the Rotunda Lying-in Hospital for Three Years, from Oct. 1st, 1893, to Oct. 1st, 1896, by Dr. W. J. Smyly. During this period 4006 women were confined in the hospital, with 14 deaths, and 8273 were confined at their own homes.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary Comitia of the College was held on April 28th, the President, Sir SAMUEL WILKS, Bart., being in the chair.

The following gentlemen were admitted to the Membership of the College: E. G. E. Arnold, M.B. Durh., G. B. Hunt, M.D. Lond., W. Lamb, M.D. Edin., E. Playfair, M.B Lond., and H. B. Shaw, M.D. Lond.

Licences were granted to the 93 candidates who had passed the recent examinations.

A letter was read from the family of the late Sir Richard Quain thanking the College for their sympathy.

A letter was read from Dr. G. V. Poore offering for the acceptance of the College a manuscript copy of the letter-book of Dr. Thomas Wharton, comprising letters to his son when at college in 1673, the transcript having been made by permission of Mr. Wharton, M.P.—Dr. GEE, the Senior Censor, moved a vote of thanks to Dr. Poore, and in seconding the motion Dr. PAYNE remarked that he had had an opportunity of reading the letters which threw an important light on the condition of the medical profession at that period.

A communication from the secretary of the Royal College of Surgeons of England was read reporting the proceedings of its Council.

A communication from the General Medical Council was read calling attention to the results of a competition in November last for appointments in the Medical Service of the Navy and to deficiencies shown in general education.

Communications were read concerning the subject of legislation for midwives from the secretary to the "Midwives Bill Committee" and from the secretary of the British Medical Association, who forwarded a copy of a proposed "Midwifery Nurses Bill" with an explanatory statement and memorandum. These communications were referred to the committee of the College appointed to deal with this question, the members of which were nominated by the President as follows: Sir W. Priestley, M.P., Dr. Playfair, Dr. Champneys, Dr. Black, Sir R. Douglas Powell, Dr. Dickinson, Dr. F. Taylor, and Dr. Duffin.

Dr. Poore and Dr. Corfield were nominated delegates to the Congress of the Sanitary Institute at Birmingham in September.

A communication from the Dean of the medical school of Guy's Hospital was read conveying a resolution adopted by a meeting of teachers to the effect that it is undesirable for any changes to be made in the regulations of the first examination without previous consultation with examiners and teachers. It was explained by the President and the Registrar that this was the course which was followed when any changes were in contemplation.

The ballot was then taken for the election of Fellows and the following Members proposed by the Council were declared elected and will be admitted at the next meeting of the College: William Richard Huggard, M.D. R.U.I., Switzerland; Oswald Auchinleck Browne, M.D. Cantab.; Charles Joseph Arkle, M.D. Lond.; Joseph Wiglesworth, M.D. Lond., Prescot; William Bramwell Ransom, M.D. Lond., Nottingham; Frederick Parkes Weber, M.D. Cantab.; Harry Johnstone Campbell, M.D. Lond., Bradford; Horace George Turney, M.D. Oxon.; George Redmayne Murray, M.D. Cantab., Newcastle-on-Tyne; Arthur Newsholme, M.D. Lond., Brighton; Benjamin Arthur Whitelegge, M.D. Lond.; and John Francis Walkingame Tatham, M.D. Dub.

Dr. NORMAN MOORE presented two reports from the Committee of Management dated March 7th and April 1st and moved their adoption, reserving recommendation No. 4 in the first report for separate consideration. The reports with that exception being adopted Dr. Moore next proposed the adoption of the clause in question. In this section of their report the committee point out that although students were encouraged to complete their studies in chemistry, physics, practical chemistry and biology before entrance on the professional course proper, and although certain institutions had been recognised as suitable places of instruction in these subjects, there was little gained by the student, who was still required by the regulations to go through a course of five years at a medical school, no matter whether he had been registered previously or not. In the case of students who enter at a recognised medical school

immediately after passing their preliminary examination the five years of study commence to count at once, although the first of those years may be spent solely in receiving instruction in chemistry, physics, practical chemistry, and biology.

The committee suggest that the regulation should be altered so that "the first of the five years of the curriculum may be spent in obtaining instruction in chemistry, physics, practical chemistry, and biology, either at a recognised institution or at a recognised medical school, and that the candidate be required to spend four winter and four summer sessions from the date of passing Parts I. and III. of the first examination at a recognised medical school and hospital before entrance to the examinations in medicine and surgery. In relation to this suggestion the committee would remind the Royal Colleges that great care has been taken in selecting the institutions placed on the recognised list, some being recognised for chemistry, physics, and practical chemistry only and others for biology as well. In the case of students attending the former class of institution the committee propose that not more than six months of the curriculum shall be allowed to count, but in those cases where biology is also taught the full period of a year should be recognised."

Dr. NORMAN MOORE pointed out that a similar practice was in vogue at the Universities of Edinburgh, Glasgow, and St. Andrews, whilst the University of London did not require of candidates for the preliminary scientific examination that they should study at any recognised institution, and that having passed that examination they could take the medical degree after four years' study in a medical school. The motion was seconded by the Senior Censor.

Dr. PAYNE pointed out the importance of the question, which amounted to granting permission for the first year of "medical study" to be passed at school. He did not mean to say that it should be obligatory on the student to receive his instruction in these subjects at a medical school, but he deprecated the inclusion in institutions for this "first year of professional study" of places such as technical schools and higher grade board schools, which although recognised as science schools by the Science and Art Department of South Kensington could hardly be regarded as places of liberal education suitable for the preliminary studies which gave entrance to the medical profession. He would move that institutions of the class he had referred to be excluded from the proposed recognition as places of professional study.

The REGISTRAR said that the committee's recommendation was quite in accordance with the regulations of the General Medical Council. He would be very sorry to see the chances for distinction being removed from scholars of technical and higher grade schools and mentioned an instance where one whose career commenced at such a school had graduated in medicine at the London University and obtained the Membership of the College.

Dr. NORMAN MOORE, in reply to Dr. Payne's criticisms, said that no institution was recognised until it had been thoroughly investigated and he claimed that many of the schools in question were far better equipped in laboratories than most medical schools. The medical schools had been consulted upon the desirability of the proposed change and had practically concurred in it.

On the motion of Dr. CHURCH, seconded by Dr. LEE, the debate was adjourned to the next meeting of the College.

New Inventions.

THE DÉCHERY AUTOMATIC CAUTERY.

THIS apparatus resembles other cauteries only in that it utilises the incandescent properties of platinum. The bellows and benzoline reservoir of the ordinary thermo-cautery are rendered unnecessary, as the instrument works automatically, a minute stream of ether, projected into the previously heated platinum knife or point, supporting incandescence, which may be sustained for a period of from thirty to forty minutes, the consumption of ether meanwhile being only half an ounce. The cautery should be absolutely safe in use, being made throughout of metal, with an insulating cover to protect the operator's hand from heat, and in manufacture, we are informed, each instrument is tested by being subjected to an internal pressure equal to ten atmospheres, that occurring in actual use not exceeding three.

FIG. 1.

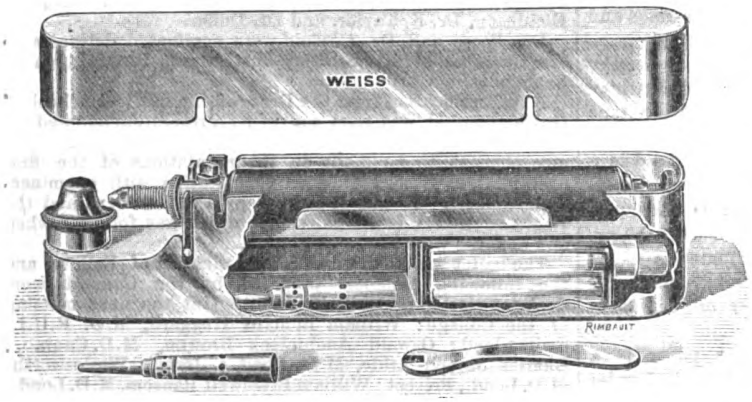
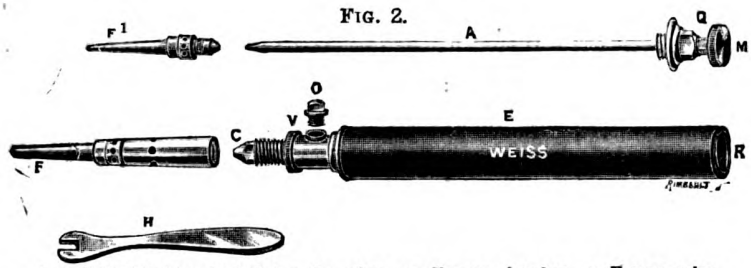


FIG. 2.



R E, Cylindrical handle holding the ether. V, Vapour chamber. C, Escape valve. F, F1, Platinum knife and point. H, Steel key. A, Metallic rod traversing handle, with M, regulating screw, &c.

FIG. 3.



The apparatus as submitted to us is very portable, being contained in a metal case 10 in. by 1½ in. by 2 in. deep.

To use the cautery the screw-stopper marked O is removed by means of the key H and the reservoir is filled with ether or a mixture of ether and alcohol, an ether bottle with a curved nozzle being supplied with the instrument. The stopper must be firmly replaced. The milled head M being firmly screwed home, the instrument is held with the point obliquely downwards and that part containing the vapour chamber V is placed in the flame of a spirit lamp for about two minutes (or less—according to the season), when small flames will be observed to issue from the air-holes below the platinum part. The valve is opened by slightly turning the milled head M to the left, the point being held in the flame until a sound of rushing air is heard. Should any flame now remain it may be blown out and the instrument should be reversed a few times in order to equally distribute the heat internally. It may at this stage be necessary to again heat the vapour chamber portion. By manipulation of the regulating screw M the desired degree of heat at the point may now be sustained. Following the above directions we have tested the Déchery Automatic Cautery and consider it a valuable instrument, being strong, neat, and portable, while its use certainly minimises the risk of accidents. The inclusive price of the apparatus is £5 5s. and the makers are Messrs. John Weiss and Son, 287, Oxford-street, W.

THE LANCET.

LONDON: SATURDAY, MAY 7, 1898.

PUBLIC honour is but rarely done to the medical profession, so that it is with particular pleasure that we record the fact that the dinner given by Colonel H. D. DAVIES, M.P., the Lord Mayor of London, "to meet the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, and other members of the medical profession," was an unqualified success. The dinner was carried out in the true spirit of great civic hospitality, wherefore all the guests were happy as well as honoured, a conjugation of events by no means necessarily present in all semi-public functions, although a conjugation which may be looked forward to with certainty when the host is the Lord Mayor of London. We desire to congratulate his Lordship and his able secretary, Mr. W. J. SOULSBY, C.B., on having given to a representative assembly of medical men a very pleasant evening; while on the wise and graceful sentiments that prompted his Lordship thus publicly to honour the Presidents of the two Royal Colleges, of which so large a proportion of English medical men are diplomates, we must say more than a few words of perfunctory praise.

We members of the profession of medicine stand at the present moment in need of conspicuous support. In all directions our calling has enlarged its boundaries and in all directions it is seeking further to enlarge them. Take one example only. The medical work of the Local Government Board, enormous as it is, is the growth of comparatively few years and assuredly will develop at an even greater rate than it has hitherto developed. But this sturdiness of growth, this irresistible tendency to annexation, has not been, and will not be, regarded complacently by all. Every extension of the work of State medicine means an invasion of provinces where private or, at any rate, non-sanitary interests have previously been paramount. Therefore every extension is and must be regarded by a certain section of the population as an act of raiding and as a consequence provokes a spirit of opposition to those entrusted with the duty of carrying it out. The bitter and unworthy comments which certain of our lay contemporaries do not hesitate to make, and to make with wearisome reiteration, concerning the profession of medicine is the outward expression of this spirit of opposition; and although a wise majority of our fellow citizens can detect in the strictures of those whose policy is always to be "agin the doctor" an ignorance that should detract wholly from the force of the criticisms, yet it undoubtedly does harm to the profession as a whole that it should be perpetually reviled. A dinner such as that given by Colonel DAVIES on Wednesday evening is therefore particularly opportune. The leaders of commerce do not take much upon trust, for if they did they would not long remain leaders of commerce. Looking upon the Lord Mayor of London—in virtue of his office as the Chief Magistrate of the largest city that the world has ever known—as the type and figure-head of honourable and shrewd business achievement we may regard his public desire to honour our profession as a proof that we enjoy the confidence of commercial England, and that while they recognise in this or that great man a discoverer, an operator, a writer, or a thinker whom they may single out by name for particular respect, they recognise also in the medical profession as a whole a body of men who do arduous work of a value to the nation which cannot be commercially estimated and much of which is not in the least adequately rewarded from a business point of view. Colonel DAVIES'S splendid compliment to the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England constitutes a pledge of the trust which is reposed in the medical profession by responsible citizens.

It is nearly seventeen years since the medical profession received the hospitality of the Mansion House. The occasion then was the dinner given by Sir WILLIAM MCARTHUR to 300 members of the Seventh International Medical Congress which met in London in 1881 under the presidency of Sir JAMES PAGET. The guests on that occasion included such world-wide celebrities as PASTEUR, VON LANGENBECK, DONDERS, KLEBS, CORNIL, CHARCOT, ESMARCH, BILLINGS, BIGELOW, BROWN-SÉQUARD, and TARNIER—to mention a few of the names which crowd in on our memory and which, alas, in several instances, bring with them feelings of respectful regret that death has set a limit to their owners' achievements. Colonel DAVIES may not have been able to secure at his board a company quite so brilliantly representative of the highest flights of medical science as were the guests of the late Sir WILLIAM MCARTHUR, for there was no international collection of talent upon which to draw; but the assembly of last Wednesday night was one of which the medical profession may justly feel proud, comprising as it did many men the value of whose services to the State cannot be priced. And for another reason, apart from the facts that this was the first public dinner ever given by a Lord Mayor to MEDICINE and that the guests were so truly representative of medicine in all its many sides, the dinner of May 4th will be a memorable one. For, as will be seen in another column, the Marquis of LANSDOWNE, the Secretary of State for War, made of his speech, in reply to the usual complimentary toast "The Army," an occasion to formulate the concessions which his department are prepared to make to the Army Medical Staff. The Lord Mayor's dinner will, indeed, be a feast of great and fortunate outcome if the words spoken at it by Lord LANSDOWNE should prove, as to our thinking they must prove, the exposition of a scheme for the immediate and practical redress of the grievances of the Army Medical Staff.

THE question of the teaching of the preliminary sciences to intending medical students during their school curriculum is once more under discussion at the Royal College

of Physicians of London, and it is one that cannot be easily settled without acting unequally on various classes of pupils. If a student leaves all his science subjects until he enters a medical school and is then registered as a medical student he has a five years' curriculum before him, and the various stages in his career are laid down with precision and exactness by the examining bodies. In such cases the courses must be taken in the same order practically for the licences of the corporations as for a university degree, although the examinations may differ in severity. In other cases the pupil may be at a school of a first-class grade, where he can be taught the medical preliminary sciences—chemistry, physics, and biology—as thoroughly as at a medical school. He will have efficient masters and completely equipped laboratories, and can be instructed under a more stringent routine and with less distraction than in a medical school. There are many such science schools where these three subjects are taught thoroughly and they are recognised by the authorities of the Conjoint Examining Board in England. The pupils in these schools are registered as medical students and the year's work in these sciences reckons as the first year of the medical curriculum. We understand that all the schools of science in which the three preliminary sciences of chemistry, physics, and biology are now taught register their science pupils as medical students.

But in addition to the schools in which the whole of the scientific curriculum preliminary to a medical career is taught there are a number and a far larger number in which the teaching of chemistry and physics only are recognised by the Conjoint Examining Board. It is obvious that many schools and institutions can give efficient teaching in chemistry and physics, whilst proper instruction with demonstrations of laboratory work in biology would be impossible. Those students, however, who have been instructed in chemistry and physics only—or perhaps but one of these subjects—before entering at a medical school are also registrable as medical students under varying conditions and the work which they may have done at school will relieve them from the full period of a five years' curriculum provided such work has been done at one of the schools or institutions recognised by the authorities of the Conjoint Examining Board and that they have passed the necessary examinations in chemistry and physics. Both the Royal College of Physicians of London and the Royal College of Surgeons of England are evidently very anxious to assist science teaching in schools and consequently are recognising more and more science schools and scientific institutions in all parts of England. During 1897 students were registered not only from university colleges and medical schools but from public schools, grammar schools, schools of science, scientific institutions, and even from polytechnic classes and technical colleges. Such a system introduces much confusion in the first year's teaching at the medical schools and makes the exact status of the individual student a very perplexing question for the medical school authorities as well as for all parents and tutors. A compulsory four years' curriculum after the student had passed these preliminary sciences would be a clearer and better solution of the difficulty than the regulations which are now in force.

ON the fifth day of her trial at the Central Criminal Court CAMILLA NICHOLLS was on May 2nd convicted of the manslaughter of her servant EMILY JANE POPEJOY by prolonged ill-treatment and starvation and sentenced to seven years' penal servitude. Some fourteen months prior to her death the deceased entered the service of Mrs. NICHOLLS at Pitt-street, Kensington; she was then, according to the evidence of several witnesses, well nourished and apparently healthy. At the end of that time she was sent home in a dying condition and within a few days passed away. An inquest was held and a post-mortem examination was made by two medical men. At the necropsy it was found that the body was extremely emaciated, while the lungs were affected by chronic tuberculous disease, to which was added pneumonia of about ten days' standing. The wasting was considered by Mr. H. B. OSBURN and Mr. CREASY to be greater than would be accounted for by the disease and could only be explained by "long and constant withholding of food." It must be conceded that such an opinion carrying as it ought such weighty consequences would only be formed and expressed after a searching examination and the most careful consideration. It is certain that Mrs. NICHOLLS was responsible for supplying the deceased with food of proper quality and in sufficient quantity and it remained to be proved whether she had failed in her statutory duty. There was evidence forthcoming from several sources that she had for a long period deprived the girl of proper nourishment. To habitual under-feeding was added further neglect as a punitive measure. Not only was there direct testimony to this effect but it was proved that deceased on more than one occasion was seen to pick up crusts in the street and eat them. Moreover, she spoke of abiding hunger to a witness who supplied her with food. It will naturally be asked why she did not complain to her parents. To this the reply is that her mistress forbade her writing home except at her dictation and then the facts were falsified. In his summing up Mr. Justice PHILLIMORE directed the jury that the one issue for them to determine was whether the deceased had the means of escaping from her distressing circumstances. They answered that she had not. Whether this was from the direct and overpowering influence of Mrs. NICHOLLS alone or partly from fear of punishment at home for leaving her situation is not clear. To the omission of her duty the prisoner was proved to have added a serious aggravation in that she not only held the girl in thraldom and terror, but treated her repeatedly with physical violence, on one occasion breaking her nose and on another striking her foot with a hammer. A strenuous attempt was made by counsel for the defence to show that the prosecution had failed to prove that death was not due to natural causes and that the evidence of more than one witness as to cruelty—and notably that of a fellow servant—was unworthy of credence. As regards the latter, whilst allowing a wide margin in favour of the prisoner, it was impossible for the jury to assume that one and all were wilfully forswearing

themselves. There was far too much consistent corroborative testimony to warrant such a conclusion.

The medico-legal aspects of the case are most engrossing. The Society for the Prevention of Cruelty to Children could tell of the extreme difficulty which they have experienced in establishing charges of starvation, and investigations held on coroners' inquisitions confirm the same. The difficulty is rendered greater and sometimes insuperable in cases where grave organic disease—and notably tuberculosis—exists, whether diagnosed during life or discovered after death. Starvation and disease act reciprocally and intensify each the other, so that the utmost care in observation and discretion in forming an opinion are required and the obligation becomes paramount where the life or liberty of a fellow being is at stake. Without challenging the conclusions of the medical men who made the post-mortem examination we may acknowledge the gravity and extreme complexity of their task. *Primâ facie* we should have inclined to the view that even pronounced general wasting might be explained by advanced tuberculous disease of the lungs and that death might follow as a consequence of such disease supplemented by recent pneumonia. The nature and degree of the chronic pathological process can be duly appreciated only by those who have the facts under direct observation; mere academic opinion of those facts as reported by others is very properly received with philosophic doubt. Counsel for the defence must have felt their powers of advocacy severely tasked to nullify the proposition of the prosecution that the lung disease was insufficient to explain the emaciation and to combat the non-professional testimony as to the frequent appearance of bruises on the body of JANE POPEJOY. Diabetes was advanced as possibly existing—a disorder capable at once of answering for general emaciation, and of substituting purpuric patches for hæmorrhages caused by external violence; but there were no convincing facts that the deceased suffered from this malady.

Whilst strongly protesting against the popular indignation expressed whilst the convict was awaiting her trial, we feel constrained to subscribe to the finding of the jury. Much of the evidence was certainly open to suspicion and many statements were probably exaggerated if not demonstrably contrary to fact, yet an impartial consideration could not well have led to any other conclusion than that NICHOLLS through criminal omission of duty and commission of illegal acts was justly convicted of having contributed to the death of the unfortunate girl. She must have noticed the gradual wasting and failing strength of her servant and yet not until within a few days of her death did she take any steps to acquaint the parents with the serious condition of their child.

IF we are not of the number of those who see no urgency in the need for measures to protect poor lying-in women from the risks of being attended by ignorant and untrained midwives we are none the less of opinion that the present Bill before Parliament is not one which is likely to diminish such risks. These risks are so obvious and have been so often illustrated in our columns and at coroners' inquests that we should think ourselves blameworthy not to recognise them and to approve means for their mitigation. If all modern teaching on the origin of puerperal fever is not a delusion that disease must be fostered on a large scale by dirtiness and ignorance in a midwife. Parturition may be "a natural process," but if so it is the only natural function that we know of which is attended with much pain and suffering and, we might add, liability to be followed by very unnatural processes of disease, including the risk of permanent injury and even death. But this only makes it the more desirable to act with caution and to preserve the practice of midwifery as an essential part of the art and science of medicine.

The recent discussion of the question in the General Medical Council and an admirable letter by Mrs. GARRETT ANDERSON in the *Times* of April 30th have tended much to clarify the subject and to define what is really wanted and what is not wanted in any legislation. Mrs. GARRETT ANDERSON points out in her letter that the Bill now before Parliament seems more calculated to improve the status of midwives and to raise them into a semi-medical position than to benefit the parturient poor. We trust we shall not be considered uncharitable if we say that this Bill is mainly meant by its promoters to improve the status of the midwife. It is promoted by the Midwives' Institute and this particular object is admitted by the promoters. There can be no objection to any reasonable improvement in the status of midwives; but that is certainly not the object of the public in upholding the movement. The object of the public and of the medical profession is the protection of lying-in women. So far as an improvement in the status of midwives is necessary to advance this object so far will it be conceded. But the contention of those who have studied the question deeply is that the Bill will advance the status of some midwives while leaving the poor parturient woman still in the hands of the ignorant midwife. It will do so in two ways. It will place on the midwives' register thousands of women who are untrained and unfit and give them a new lease of life and a rise in status, and in its present form it will give to all midwives a status which they have not at present and on the strength of which it will be easy for them to assume medical functions with great disaster to the public interest. Mrs. GARRETT ANDERSON makes these points very clear. She shows that without precautions which have not been taken in this Bill the midwife to be created by it will soon develop into a practitioner who will despise practice among the classes for whose benefit the Bill is designed and will aim wholly at competing for the midwifery practice of the medical profession. It is a notorious fact that the improvement in midwifery practice dates from the time when it largely ceased to be carried on by midwives and came to be regarded as a very serious and onerous part of medical work. The Medical Act of 1886 very properly recognised this great and beneficent change and placed the practice of midwifery on a level with that of medicine and surgery. If a Midwives Bill is to create a pretentious class of practitioners in midwifery it will tend to degrade the art of midwifery and to defeat the ends of the Act of 1886. Medical men

can only guide the art of midwifery to greater perfection and efficiency by still having the bulk of it in their hands. They cannot be responsible for the difficulties arising in midwifery practice if deprived of the practice; hence it is essential in any legislation on the subject of midwives to emphasise the fact that midwives are to have no strictly medical functions and that in all unnatural or unusual conditions they are to apply and appeal to the medical professional for assistance or advice. Any Bill which imperils the position of midwifery as a part of the great art of medicine and weakens the Act of 1886 is no friend of poor lying-in women, a view which the General Medical Council have taken in their response to the invitation of the Privy Council for advice.

We cannot doubt that the House of Commons will see the gravity of the question with which it is asked to deal and the inadequacy of the Bill which it is asked to pass. In addition to the considerations which we have already advanced and which are enough to justify the rejection of the Bill there is another more convincing still. The Bill proposes only to render illegal the assumption of the title of midwife. It leaves any woman who likes to do so to discharge the duties and to carry on the practice of a midwife. Amongst the poor a title does not need to be assumed; it is given. A woman need only give herself out as ready to do the duty of a midwife and her neighbours will give her the duty and the title too. And the same mortality and morbidity as at present will go on. If the intention of Parliament is to stop these evils and to make the lives of women safer it must stop the practice of ignorant and untrained women altogether and place that of the future midwife, with a modest training, strictly under the effective supervision of the medical profession. We look confidently to Parliament to do this service, and after the speech of the Lord President of the Council to a deputation in favour of the Bill on Monday last which was marked by the speaker's usual practical wisdom, we may reasonably hope that Parliament will take our view. The Duke of DEVONSHIRE advised the promoters of the Bill to come to terms with the General Medical Council and with the medical profession rather than to press the existing Bill forward. He did not think that he could advise the Government to support the Bill against the medical profession. In addition to their objections he had received a memorandum from the Local Government Board suggesting difficulties in the form of protests from the local sanitary authorities upon whom and whose officers serious and costly duties were laid by the Bill. This objection may be overcome and should be overcome if an effective and acceptable Bill can be devised grappling with the great evils of a class of ignorant and untrained midwives. But the present is not such a measure.

IT was a happy thought o the Marquis of LANSDOWNE to select the unique occasion of a dinner at the Mansion House in honour of the medical profession to narrate the plans of the War Office for redressing the present grievances of the Army Medical Officers. In no way could the Secretary of State for War have more entirely coöperated with the Lord Mayor in giving a public voice to the high estimate in which members of our profession are held by their fellow citizens than by choosing his seat at the Lord Mayor's table from which to deliver his ringing words in approbation of the services rendered by the Army Medical Staff and the desire of his Department to remove all causes of disagreement between the army and the medical officers of the army. "The army is proud," said Lord LANSDOWNE, "that it contains a number of officers who belong to the medical profession, but who are none the less soldiers in the fullest sense of the word, wearing the QUEEN'S uniform, holding her commission, ready to take their share—aye, and more than their share—of the risks and hardships of warfare. We are determined that there shall be no failure, either in theory or in practice, to treat them with the respect to which they are entitled." Following these words of promise his lordship said that the Army Medical Staff and the Medical Staff Corps would be consolidated into a corps with the same military titles as other officers of the army up to the rank of "Colonel"—the titles of course not conferring any right of command outside the corps; and that HER MAJESTY THE QUEEN had signified her intention of bestowing upon the newly formed corps the title of the Royal Army Medical Corps. This clear statement seems to us to redeem the happy promise. An officer in such a Royal corps called by a familiar military title and enjoying within his corps the position of other officers in the army of his own rank can no longer be regarded, or suspect that he is regarded, as other than an integral part of the army, for his military and medical status are alike defined and certain. There is here no question of relative rank or of substantive rank whatever. He will enjoy actual rank. The fact that the title of "General" will not be granted save in the compound expression of "Surgeon-General" appears to us to be a reasonable reservation in view of Lord LANSDOWNE'S declaration that the present policy of the War Office is to restrict the number of officers bearing the title of General to those officers who may be required to fill one of a limited number of appointments, all of which will involve general command in the army and fitness to command troops in the field. Under such a restriction no departmental officer will be able to reach the rank of general officer. But surely the title of Surgeon-General is an honourable and well-sounding appellation, conveying the high rank, both military and special, which is held by its bearer. We congratulate the Army Medical Staff on the successful issue of their claims for redress. With a definite military status the service should again become popular, while with the gaps in its ranks adequately filled other grievances—for example, the difficulty of obtaining leave and facilities for pursuing scientific investigation — must disappear. Finally, to Lord LANSDOWNE the whole profession owes a debt for his outspoken words in appreciation of the medical men of the army. It was impossible to hear them, and we know that it will be impossible to read these words, without feeling that they must exercise a vast influence for good in serving to heal the breach of many years.

Annotations.

"Ne quid nimis."

EXEMPTION OF CROWN PROPERTY FROM SANITARY CONTROL.

THE exclusion of the agents of the local authority from all buildings, premises, and vessels belonging to or used for the time by the Government, and the exemption of such property from the provisions of the Public Health and kindred Acts, though recognised as a part of the prerogative of the Sovereign, must be considered an anachronism. It is, indeed, necessary in the interests of the nation that the Crown should possess powers of an arbitrary character and occasionally acting hardly on individuals, as that of appropriating patents, which is, however, rarely exercised save in respect of the appliances of war and national defence, and that the persons of members of the diplomatic service should be held sacred. But we are unable to conceive on what pretext of expediency the exemption of post-offices and police-stations from provisions enjoined or approved by the central authority for the preservation of the public health and the prevention of loss of life by fire can be pleaded. It is not long since the person in charge of a house used as a branch post-office in the E.C. district was severely reprimanded by his superiors for having admitted the sanitary inspector, and the intimation and statutory notices served by the local authority for the abatement of the nuisance—i.e., the removal of serious sanitary defects endangering the health of the inmates of the house and probably of those adjoining—having been ignored the vestry applied for a summons. The magistrate in declining to grant it expressed his great regret and, in no hesitating manner, his disapproval of a law or custom under which grave abuses could be permitted. Since the great fire in Cripplegate the local authorities and the Building and Licensing Committees of the London County Council have been redoubling their exertions, not infrequently requiring the reconstruction of arrangements for escape which they had previously sanctioned, and putting some City firms to expenses amounting to £2000 or £3000. Yet we are told by those who ought to know best that the sole means of entrance to and exit from the principal room at the Central Telegraph Office is a winding stair-case, only wide enough for two persons, by which at 8 P.M. 900 men pass out and 250 in, the crush being indescribable. We fear the consequences of a fire as sudden as that in Hamsell-street or even of a mere alarm would not, like those of the Cripplegate disaster, be confined to loss of property. Again, while the medical attendant in an ordinary case is bound under a penalty to notify all cases of infectious disease he may be called to see, and the patients or persons in charge are bound to avoid exposure or other means of spreading the infection, in the case of a Government building there is nothing to prevent the concealment of cases of small-pox or diphtheria and the establishment of centres of diffusion in the families of the resident staff at such places as post-offices, police-stations, or, for the matter of that, in the offices of the Local Government Board itself. All the other privileges are based on unwritten custom and precedent, the exemption from notification alone being statutory. We are, however, informed that one of Her Majesty's Secretaries of State has relaxed the prohibition, temporarily and as a matter of favour, not of right.

THE SPEAKER ON HOSPITAL WORK.

THE Speaker has been kindly presiding at a dinner held in aid of the Building Fund of the Royal Westminster Ophthalmic Hospital, Charing-cross, and was worthily surrounded by honourable Members of the House over which he so ably presides. Between the Speaker's eloquence and what he called the eloquence of the figures of the growth of the number of patients using the hospital the result was considerable. A subscription of over £2000 was raised, of which more than £1500 was on the chairman's list. In the last fourteen years there had been an increase of 126 per cent. in the patients. The out-patients had increased from 4954 in 1850 to 10,588 in 1897. £50 000 were asked for, one-fifth of which would probably be required for the site in the neighbourhood of Charing-cross and the rest for building and endowment. The great increase of knowledge in recent years in regard to the treatment of special diseases necessitated new appliances, new remedies, and larger space. Mr. Cowell, the treasurer, in responding for the executive staff, alluded to some of the causes of the great difficulty which hospitals had in obtaining the money they required, and especially mentioned the unchecked multiplication of small hospitals which added greatly to the total amount spent on administration and to the diminution in the receipts of many of the smaller hospitals caused by the establishment of the Prince of Wales's Fund. He did not wish in the least to disparage that fund, but he could not help saying that in his opinion it would have been more equitable to include some of the older small hospitals, such as this, with the large hospitals for some proportional additional grant. We trust that the pressing appeal of the Speaker will have its legitimate effect and that those who generously respond to it will do so with some effective conditions providing against the demoralising abuse of such charities. Hospitals do not need, and are not the better for, a huge and excrescent out-patient department. So fair an advocate as the Speaker will apply another test to the hospital system by which it will ultimately be judged—its indirect effect in so educating the medical profession as to make it efficient and humane. The number of persons receiving the direct charitable assistance of hospitals is very much greater than the number needing it. It says little for the hospital system of the present day if the men whom it trains cannot meet the needs of a large number of the patients now attending hospitals but having little claim on charity. We shall not be misunderstood in thus qualifying the eloquence of the Speaker and his statistics. We are the more compelled to be critical as the right honourable gentleman entirely overlooked the question of hospital abuse. We assure him of our entire concurrence in his essential purpose.

THE DANGER OF VEHICLES WITHOUT LIGHTS.

THE enormous advances which have been made of late in the methods of highway locomotion have rendered the regulations in regard to the vehicular traffic on the public roads in many districts quite obsolete. The advent of the bicycle with practically silent gear and rubber tyres soon showed that in the absence of the clatter of wheels and hoofs some other indication of approach should be enforced and a bell and lamp were properly insisted upon as necessary accessories of these vehicles. It was not long, however, before those using ordinary carriages saw the advantages of a rubber or noiseless tyre and when these advantages came to be applied the same regulation obtained. To this day, however, there is no regulation—except in a few districts—providing for the carrying of a lighted lamp on the ordinary cart, the only reason for this somewhat extraordinary exception being apparently because it is thought that the existence and position of a cart can be fairly gauged from the combined noise of the wheels of the cart and the horse's hoofs. In districts where a regulation does exist it is very seldom acted upon. As every cyclist knows it is most difficult to tell on

dark nights the exact whereabouts of a lightless vehicle and to decide whether it is approaching or receding. The risk of collision would, of course, be completely avoided if all vehicles were compelled to carry a light on the "off" side. Why cannot such a regulation be carried into effect and be universal? The danger is no imaginary one. With the greatest care a cyclist, for example, may be proceeding at night down-hill, aware that there is something ahead, but by no means sure in what direction it is going, with the result that he may suddenly find himself in contact with a powerful horse. The horse is probably startled, rears up and bolts, or kicks out and causes considerable fright if not actual injury on both sides. We know of instances of this kind where that particular offender the market-cart has been the cause of disaster. It too often happens that the carter is fast asleep. There is daily a stream of this sort of traffic to and from the vegetable markets of London within a twenty-mile radius. In consequence of carrying no lights or of a regulation to this effect not being properly enforced this is a source of constant danger to the riders of noiseless vehicles, bicycles, &c., upon the road. A regulation should be enforced and made to apply to all vehicles in every part of the country. It is quite absurd in this respect to attempt to classify vehicles using the public road; all without exception should be compelled to carry visible signals which will point the proper course to steer and thus ensure the safety of the public both on foot and on wheels.

THE PLAGUE IN INDIA AND CHINA.

WHILE the plague is declining at Bombay we regret to say that it is extending in other parts of India, as in the Nizam's dominions and at Karrachi and elsewhere; some cases have occurred also in the Punjab, at Jullundur, and what may have a more serious significance, many cases of bubonic plague have made their appearance at Calcutta. Calcutta is, we need scarcely say, a large and densely populated city and, like all large Eastern cities, not in a satisfactory sanitary condition. It is estimated that owing to the alarm occasioned by the reported appearance of plague, some 250,000 of the inhabitants have made their exodus from Calcutta. Intelligence has also been received at the Colonial Office from Hong-Kong regarding a recrudescence of the disease there. The latest telegraphic report, dated the 2nd inst., shows a slight decrease in the numbers compared with those of the previous week, but there were nevertheless 119 cases of plague with 114 deaths during the past week. Bubonic plague and small-pox have likewise been prevailing for some time among the Chinese in the colony of Macao, although not to an epidemic extent apparently. We have always and from the first regarded the occurrence of plague in India as a most serious matter, compared with which the famine and the Indian frontier war were much less important, because a plague epidemic was likely to have its recurring periods of seasonal activity and comparative dormancy and to last for a long time and because of its liability to be widely spread by the exodus of alarmed people from infected localities. It is quite probable that the infection would not gain any foothold in wholesome situations where the sanitary surroundings were good, but these conditions do not commonly obtain in the East. The disease-cause or micro-organism seems to depend greatly upon some localising influences and fostering conditions and, under such circumstances, to retain its vitality and renew its manifestations over considerable periods of time. Apart from the grave trade and commercial losses and inconveniences as well as the loss of life which the disease causes, the preventive measures which have had to be adopted have given rise to very serious discontent and opposition on the part of the native population. The authorities in India have had to grapple with a very hard and difficult problem; but they seem to be earnestly taking all reasonable precautions in dealing with it, and bad as the plague has been in India its effects and proportions have been on a very different scale in that country to those of which we have historical records elsewhere.

"THE LANCET" OF LAST WEEK.

A LARGE portion of the issue of THE LANCET of April 30th was destroyed in consequence of a fire which broke out early on Friday morning the 29th in premises adjoining those in which THE LANCET is printed, but which unfortunately was not got under until it had attacked the building where THE LANCET was undergoing the final process of being machined and bound. Work was necessarily suspended for many hours, printing- and folding-machines were flooded with water, hundreds of sheets already printed were ruined, and much delay resulted. The proprietors of THE LANCET regret the inconvenience caused to many readers by the non-receipt of their copies at the usual time and also the great trouble to which newsagents were put by making repeated applications for their supplies.

BLOOD PARASITES.

AN interesting paper by Dr. E. W. von Tunzelmann appears in the Medical Reports of the Imperial Maritime Customs for China for the half year ending Sept. 30th, 1896, which have only been recently published. He describes "a non-malarial remittant fever" which has to be discriminated from typhoid fever, with which, he believes, it has been confounded, for it appears to be a common enough disease. On examining the blood of patients suffering from the fever Dr. Tunzelmann found parasites which have hitherto escaped detection. He first observed them in a very complex case, the non-malarial remittent fever to which the fatal issue was due being mixed with a malignant form of malarial quotidian. Excellent plates accompany the article showing the various forms of the parasite. The first figure shows various stages in the development of the pigmented quotidian plasmodium of the so-called "summer-autumn" fever of the Italian observers. This form rapidly decreased in number, while at the same time infested red corpuscles became more and more abundant. The most striking of these novel appearances was that of a brilliant, double-contoured crescent, varying in size from a barely perceptible dot up to two-thirds of the size of a red corpuscle. When the focus was lowered the crescent became clearly defined, while the outline of the red corpuscle was still indistinct, as if it were external to the latter. This Dr. Tunzelmann believes to be only an optical appearance due to the high refrangibility of the parasite. The second form of organism was found on diluting a drop of fresh blood with an equal volume of normal salt solution. A couple of flagellated bodies in active movement were first seen (malarial parasites), then an object in active internal movement came into view. The greater part of it was occupied by two very clearly defined tentacle-like objects, each bent on itself, its free end swollen into a knob and attached at the other end to an ill-defined, reddish-brown body. These two were in constant motion. After two hours the field of the microscope was occupied by some twenty large objects, some of which are represented in the plates. They were in such continuous and active movement that they were difficult to sketch. These bodies are not easy to describe and vary so in appearance that without referring to the drawings no accurate idea of the parasite can be obtained. Dr. Tunzelmann proposes to call these organisms the "medusa

sanguinis hominis." He then proceeds to describe a third form of parasite which he has found associated with the medusa. These parasites are simpler in form, being usually reniform. A most notable fact about them is the enormous number which the blood may contain without producing any obvious symptoms—sometimes none at all—a point on which they differ entirely from the medusa sanguinis hominis. He has found the medusa in 4 adults and in 4 children; in every case there was pyrexia which only ceased when the medusa had completely disappeared from the blood. The other parasite he found in 21 adults and in 10 children, or, excluding those who also had the medusa, in 17 adults and 6 children. Of these, 4 adults only and 2 children had fever lasting in each case from two to four days; it was never high, 103°F. being the maximum in the adult cases, nor were the other symptoms severe. 3 of the infected adults had never had malarial fever and 4 of the children. These observations are very valuable. No doubt Dr. Tunzelmann's work will receive due attention from other workers and it promises to be of aid to treatment. Methylene blue produced better results than quinine.

THE DWELLINGS OF THE POOR.

AFTER fourteen years' work the Mansion House Council on the Dwellings of the Poor are able to take a more optimistic view of the future than hitherto. The population of the metropolis increases so rapidly that the task of attempting to guard the poor of London against disease and death in consequence of the ignorance or criminal negligence of landlords in allowing dwellings to exist in an insanitary state is a prodigious one, but the persistence and patience of the council is at last bringing its reward. The council, which works in conjunction with the London County Council and the various local authorities, has during the year 1897 made 8002 inspections, dealing with 4908 houses. Of these the council was able to get defects remedied in 2042 cases, 1335 were dismissed as trivial, &c., and 1531 were still under consideration at the close of the year. A feature of the year's work was the organisation of popular lectures on hygiene in various districts. These lectures were given merely as an experiment, but as they seem to have been successful it is probable that this new branch of work will be continued. Applied sanitary science has made and is making great progress, but until the public are taught to properly understand the meaning and benefit of hygienic laws this progress must be to a great extent retarded.

OMNIBUS CALLING-STATIONS.

THERE are certain points in the busy thoroughfares of London at which the omnibuses stop to take up or set down passengers. These were commonly situated at the intersection of two great streets. Piccadilly-circus, Ludgate-circus, and Wellington-street, where it crosses the Strand, are examples. But as the traffic increased the police found that it was expedient to prohibit the omnibuses stopping immediately at the corners, inasmuch as vehicles, including other omnibuses, frequently accumulated behind the stopping omnibus, thus blocking the traffic on the cross road, besides that going in the same direction. So that now the omnibuses are compelled to stop at a point 50 yards or so further on, and much of the previous obstruction is thus avoided. An omnibus-driver pulling up at such busy corners as we allude to would now be summoned as he is officially warned not to do so. But there are not a few people who do not know this and they wonder why an omnibus does not stop close to these points in response to their signals. Accidents sometimes arise from this misunderstanding. Persons may be constantly seen following an omnibus and attempting to enter it when it is moving under the impression that it is soon going to stop in obedience to their indications. They may manage to get in safely or they may not, or they may be left in the middle of the road in the centre of a most bewildering mass of vehicles. What we should like to suggest is that the London County Council should put up posts at the usual stopping places with an announcement intimating that the spot is an omnibus calling-station. This would save considerable annoyance, inconvenience, and exhibition of temper, not to say risks, to those persons who do not know where the omnibuses are authorised to stop.

KING'S COLLEGE HOSPITAL.

THE festival dinner of King's College Hospital was held on Tuesday last at the Whitehall Rooms, Hôtel Métropole, Lord Lister being in the chair. A large number of the supporters and friends of the hospital were present and more than a hundred letters of regret at inability to attend were received. Donations and subscriptions amounting to £3025 were announced, including one of £1000. This is the largest sum which has been collected at any festival dinner of the hospital, except on the occasion when the Prince of Wales presided.

A WEST LONDON HOSPITAL DINNER.

AT the suggestion of several past members of the visiting and resident staff of the West London Hospital it has been arranged that the past and present members of the staff, residents, post-graduates, and dressers of the West London Hospital should dine together at the Trocadero Restaurant on Tuesday, May 31st, at 7.30 P.M. The chair will be taken by Mr. Alfred Cooper, consulting surgeon to the hospital. Mr. L. A. Bidwell, 59, Wimpole-street, is acting as honorary secretary to the executive committee, and he will be glad to hear at their earliest convenience from all qualified to attend the dinner.

LEPROSY IN HAWAII.

DR. J. ASHBURTON THOMPSON, Chief Medical Officer of the Government of New South Wales, has recently published a pamphlet on the results of a critical inquiry which he made into the etiology and spread of leprosy in Hawaii. The paper appeared in an abbreviated and uncorrected form in the third volume of the Transactions of the Leprosy Conference, Berlin, 1897. After describing the geographical position, meteorology, population, and foreign relations of the group of islands Dr. Thompson considers the question of imported labour from leprosy areas, but finds little evidence in support of the theory that the disease was introduced in that way. The first reliable observations on the occurrence of leprosy in Hawaii were made between 1855 and 1863, but the rate of its diffusion is very uncertain. Dr. Thompson remarks: "All competent witnesses hold the following opinion—that there is no record or distinct tradition of the invasion of the disease. When attention was first attracted to it cases existed in every island of the group; it is not known or suggested either that any island was attacked long before the rest or that any remained free after the rest were known to suffer." It is thought at the present date by those at Honolulu who are in the best position to judge that the outbreak is now declining. The evidence that this is so is not as yet such as can be easily apprehended by the foreign visitor, and it is the case that during the last thirty years a similar opinion has been expressed from time to time only to be contradicted a little later by acknowledged facts. Great difficulties have been experienced in carrying out a policy of isolation. In 1865 the necessary land was acquired, which thenceforward became known as the Settlement, but for many years constant communication was carried on between the lepers and

their friends on the other islands. Consequently, the author says, no account of the fluctuations of this endemic can be written; all that can be furnished is a statement of the number of persons annually removed to the settlement, and this is given for the term of years from 1866 to 1895 in a table. But these numbers stand in no known relation to the total affected in the whole group and fluctuate largely, if not exclusively, in correspondence with terms of greater or less executive energy, and are hence of little scientific value. In fact, as Dr. Thompson himself observes, the value to etiology of the present case must be classed scientifically as "unobserved," as no records were kept of the original inhabitants of the islands who became lepers, but the vast majority of cases were observed in those families whose ancestors had been imported into the islands.

MEASLES AND THE PUBLIC HEALTH ACT.

AT the meeting of the Vestry of Chelsea, held on May 3rd, Dr. Louis C. Parkes, the medical officer of health, stated in his report that during the past five months an epidemic of measles had been in progress in Chelsea and other parts of London which up to date had caused some 70 deaths, in Chelsea chiefly, of infants under the age of five years. These epidemics recur with great regularity every other year. In the past major epidemics had recurred every fourth year with a minor one midway between them. The disease, though a very fatal one, is not notifiable under Section 55 of the Public Health Act, neither is it one of the "dangerous infectious diseases" under Section 58 to which the "prevention clauses" apply. Dr. Parkes thought that it would be no good notifying measles under Section 55, but he advised the vestry to concur in the action suggested by the London School Board to the County Council that the latter body should order measles to be scheduled under Section 58 so that the "prevention clauses" would apply. Thus some measures towards avoiding the spread of infection could be taken. It would also, Dr. Parkes thought, be very advisable to exclude all children under the age of five years from public elementary schools during the progress of an epidemic of measles.

THE HEATING OF RAILWAY CARRIAGES.

WE have received from a correspondent a long memorandum embodying sundry complaints in reference to the above matter, which is evidently a serious one to him. He specially objects to the system adopted on some lines of heating carriages by allowing steam to pass through iron pipes fixed under the seats of the carriages, for, according to him, they produce pathological effects of the most varied and pernicious kind. Our correspondent's zeal on this matter is, however, not according to knowledge, so we shall say no more on these points. With one complaint of his we are in accord, and that is with regard to the fusty smell produced by the slow combustion of dust and organic particles which settle on the pipes. This defect might be easily got rid of, though, by some slight alteration in the ventilating arrangements of the carriage or even by opening the window, a procedure not always fraught with such disastrous consequences as our correspondent implies is the case. He is all for a return to the old system of foot-warmers which, he says, the passenger could get if he wanted and do without if he did not. In our experience the passenger who got in a train at an intermediate station other than a place such as Swindon or Crewe could never get a foot-warmer, and the same was the case with the unhappy suburban traveller, who was frequently boxed up in a wooden case called by courtesy a carriage for some two hours while performing a journey of fourteen miles or so. So far as we know most of the steam-heated trains at present are "corridors" and there is no difficulty in opening the inner doors or the outer windows and so getting air without draughts. Another complaint our correspondent makes is that the handle which is supposed to shut off the steam will never work. This of course should be altered. The system works perfectly well on the Russian and German railways and there is no reason why it should not work equally well in this country.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE CORPORATION DUTY.

THE Customs and Inland Revenue Act of 1885 enacted that all corporate or incorporate bodies should pay a duty of 5 per cent. on the annual value of all their real or personal property unless the property was applied for the promotion of education, literature, science, or the fine arts. Relying on this last clause the Council of the Royal College of Surgeons of England have claimed complete exemption from the duty and the Commissioners of Inland Revenue allowed the claim so far as it related to the museum, but maintained the assessment on the remainder of the property of the College. Altogether they assessed the College at £3161 and required £158 1*s.* as duty. Against this assessment the College has appealed and the Court reduced the assessment by £250, the annual value of the curator's house, but declined to exempt the library from the tax because "it had not been shown that the library was applied for purposes of science." We acknowledge that there seems to be some reason for the non-exemption of those portions of the College which are used for examinations, though it may very well be maintained that they are employed "for the advancement of science," but we must confess we are much surprised at the refusal of the Court to exempt the library. It is probably one of the most valuable scientific libraries in this country and admission is more easily obtained to it than to the library of the British Museum. It can hardly be said that special privileges are granted to the Members of the College, though this seemed to be the ground on which it was held that the library was not applied for the advancement of science.

THE SUPPLY OF MILK OF PRESCRIBED COMPOSITION.

IN the artificial feeding of infants it is well known that the requirements vary with different individuals. This fact has led to the preparation of humanised milk of two different strengths, their composition differing chiefly in regard to the proportion of proteids, the other constituents being kept at about the average found in human milk. This idea has recently been extended by the Aylesbury Dairy Company, who now prepare humanised milk of a composition in accordance with that upon which the physician may see fit to decide. Thus milk may be obtained containing any prescribed percentage of fat, milk, sugar and proteids. The proteids may be either those normal to cow's milk (i.e., casein and albumen in the proportion of seven to one) or modified by a special proteolysing (not peptonising) process so as to be more digestible and to give a more finely divided curd when acted on by the milk-curdling enzyme of the stomach. The reaction to litmus paper may be either the normal amphoteric one of cow's milk or the faintly alkaline one of human milk. Another important step in advance consists in supplying separately (1) a small bottle containing cream in which the total amount of fat is ½ oz. (or any definite amount); (2) a bottle containing separated milk or proteolysed milk (as prescribed); and (3) a bottle containing a solution of milk sugar in distilled water, together with any alkali, &c., prescribed. This system obviates the changes which occur in milk in transit, especially in hot weather, and chiefly in regard to the churning and separation of the cream into butter. The quantities in (2) and (3) can

be adjusted so that on mixing the entire contents of the three bottles one pint of humanised milk will be obtained; or bottles containing 10 oz. can be supplied, so that the medical man can vary the composition by directing that the contents of (1) be mixed with measured quantities of (2) and (3). Directions as to the quantities to be mixed in order to obtain milk of definite composition are issued. Analyses are made free of cost by the company of any samples of human milk submitted by medical men, who may thus be guided as to the proper course to adopt. It must be recognised that important departures of this kind could not be undertaken without an excellent equipment at the farm and dairy. That this is so is obvious from the fact that the farms are periodically inspected by the medical officer of health for the district. The water-supplies are under similar supervision and every precaution is taken to draw milk from none but healthy cows.

A DINNER TO DR. W. S. PLAYFAIR.

WE have already announced that a complimentary dinner will be given to Dr. Playfair on his retirement (after thirty-five years' service) from hospital work by his colleagues, former residents, and friends, and that Lord Lister will take the chair on the occasion. The dinner, it is now arranged, will be held in the "Walnut" Rooms at the Grand Hotel on Saturday, June 4th, at 7.15 P.M. The following gentlemen, in addition to the staff of King's College Hospital, have expressed a wish to be present on the occasion:—Right Rev. Bishop Barry, Sir Samuel Wilks, Sir Joseph Fayrer, Sir William Broadbent, Sir William Priestley, M.P., Sir Walter Foster, M.P., Sir Dyce Duckworth, Sir Felix Semon, Dr. Farquharson, M.P., the Rev. Dr. Robertson (Principal of King's College), Professor Clifford Allbutt, Dr. Cullingworth, Dr. Buzzard, and many others. No special invitations have been issued, but any gentleman wishing to be present can obtain a dinner ticket by applying to Dr. John Phillips, 68, Brook-street, Grosvenor-square, W.

STREPTOCOCCIC PNEUMONIA.

BESIDES the pneumococcus of Fraenkel other organisms have been found in the sputum and lungs of the subjects of pneumonia; for example, Friedländer's bacillus, the influenza, the typhoid, and the diphtheria bacillus, the staphylococcus pyogenes, and the streptococcus. It has therefore been suggested that when a case of pneumonia runs an atypical course some other infection than the pneumococcus may be present. But no attempt has been made in this country to differentiate what is ordinarily called "pneumonia," which is the name of a lesion and not of a disease, into the various diseases of which it may be a manifestation. In the *Boston Medical and Surgical Journal* of April 14th, 1898, Dr. F. P. Denny calls attention to a type of pneumonia depending on streptococcus infection, described by German writers, of which he saw two cases in Vienna. The onset may be like that of ordinary pneumonia, often it is less sudden. The sputum is more purulent and is less often "rusty"; besides the streptococci pneumococci are often found. The appearance of the patient is characteristic: there are less flushing of the face and a peculiar septic look. The temperature is irregular. There is often no crisis, but the temperature comes down by lysis, often after a course of three or four weeks. The physical signs usually appear late and the upper lobes are more frequently involved than in the ordinary form. The local process has a tendency to wander. So marked is this that it has been called "erysipelas of the lungs." The most characteristic feature of all is the long duration of the physical signs. Dulness, bronchial breathing, and moist râles may often be heard six or seven weeks after the onset of the disease. There may be great prostration and it is often months before the patient has recovered from the severe sepsis. A series of 39 cases of croupous pneumonia reported by Weismayr well illustrates these points. In 34 pneumococci were found alone; in 5 there were streptococci, twice with pneumococci and three times alone. In all the pneumococcus cases with one exception resolution took place by the twelfth day, whilst in not a single streptococcus case did this occur before the nineteenth and in one not until the fortieth day. According to some writers the original infection may always be with pneumococci, but it is the streptococci which modify the disease and give the characteristic features. Pneumococci are very short-lived, whether growing in animals or on media, and if an active process goes on in the lung for more than two weeks it is fairly certain that some other organism than the pneumococcus, probably the streptococcus, is present. The diagnosis of streptococcic pneumonia must be based on the presence of the streptococcus in the sputum; typhoid fever, influenza and tuberculosis have to be excluded. The prognosis is better as regards life than in ordinary pneumonia, but, as stated, a longer course is to be expected. Treatment by anti-streptococcic serum suggests itself, but no information on this point is at present available.

A STILL UNCHECKED FRAUD.

THE prospects of a new Adulteration Bill being introduced and passed are remoter every day. We have expressed again and again the opinion that thus it would be. It was not difficult to foresee that such would be the case, there are so many interests implicated one way and another. The new Bill should, of course, embody what is perfectly fair to both the trader and the public, and he will be an astute statesman who is able to successfully establish a satisfactory balance between the two. Mr. Chaplin was asked last week in the House of Commons when he would introduce a new Adulteration Bill and the answer was, "As soon as he saw any prospect of making progress with the measure." On Tuesday last the answer was much the same and just as comfortless to a large and influential deputation representing the agricultural interests of the country. The members of this body urged upon the Government the necessity of legislative aid in order to suppress the adulteration of dairy products. They agreed with the recommendations drawn up by the Select Committee. Mr. Chaplin held out no shadow of hope; on the contrary, he admitted a divergence of opinion with the views expressed by the deputation. Meanwhile adulteration proceeds apace; the customer asks for and expects to be supplied with butter, but gets an article consisting probably of one-tenth butter and nine-tenths margarine or not unlikely ten-tenths margarine. We do not question the wholesome and nutritive value of margarine, but it is not butter. And the producers of pure butter are thus most severely and unfairly handicapped in the struggle for existence and in attempting to provide the community with a genuine article. How long is this iniquitous procedure to be tolerated?

"TRAUMATIC RUPTURE OF THE INTESTINES."

WITH reference to an annotation on this subject in our last issue we learn that there is now in St. George's Hospital, under the care of Mr. G. R. Turner, a man, fifty-eight years of age, who was operated upon for traumatic rupture of the intestine some four weeks ago, a radical cure for hernia being performed at the same time. The rupture was caused by a blow on the abdomen from a roll of sheet lead weighing 2 cwt. The ruptured bowel was not in, nor had it been in, the hernial sac. It was free in the abdominal cavity, the hernial sac being unoccupied except by a small portion of

uninjured adherent small intestine. The radical cure for the hernia promises at the time of writing to be successful; and with the exception of some bronchitis, which was present before the operation, the patient recovered without a ad symptom.

THE DANGERS OF CHEMICALS IN TRANSIT.

WE ventured to call attention in a leading article in our issue of March 23rd, 1895, to the new risks to which the public were exposed by the increasing use of chemicals in the arts and industries and by the conveyance of the same along our highways both on land and sea. Our remarks were based on what were then recent events of the following description. The explosion of coal gas under the street pavements actuated by the sparking of defective electric mains, the bursting of a steel cylinder containing compressed oxygen at a railway station, and a disaster which occurred on board a steamer through the intermingling of certain chemicals, which was brought about by the constant shipping of heavy seas shattering the vessels in which the chemicals were contained on deck. In the first instance a horse was killed, in the second a man was blown to pieces, and in the third two lives were lost in consequence of suffocating fumes finding ingress into a sleeping compartment. Another occurrence very similar to the last is reported as having recently happened to a Liverpool steamer, but in this case there was a most extraordinary collection of corrosive, explosive and inflammable substances comprising part of the deck cargo. Thus there was sulphuric acid in company with potassium chlorate and phosphorus, materials of a highly and spontaneously explosive mixture. In close proximity to these were benzine, collodion, and spirits of wine. Of six men in the stokehold and engine-room one was suffocated and the other five were burned more or less severely in reaching the deck. The vessel had to be abandoned and in the attempt to put off three men were drowned, the rest after much privation being ultimately rescued by a passing vessel. We are glad to find that a Board of Trade inquiry has been opened, and we trust that something definite will be done to prevent the indiscriminate stowing of chemicals which are most dangerous when united. For the guidance of shippers, stevedores, and others we would suggest that a list should be drawn up and printed by the Board of Trade showing those chemicals which should not be placed in close proximity to each other.

AUDITORY HALLUCINATIONS IN OTITIS MEDIA.

AFFECTIONS of the ear may produce tinnitus in its various forms, but not elaborate sounds or hallucinations; the latter are symptoms of brain disease. The explanation is simple; there is no mechanism in the ear capable of generating the highly complex sounds of language. Though absolutely correct and requiring no qualification the preceding statement does not completely state the case. If the condition of the brain be abnormal the impulses generated by disease of the ear may be a factor, and a necessary one, in producing the derangement of the auditory centre which shows itself in hallucinations. The following case, published in the *Archives Générales de Médecine*, April, 1898, by Dr. L. Coronat, is a very interesting example of this complex causation. A young man, aged twenty-one years, in good health, engaged in dissipation and did not go to bed for two nights. On the following day he travelled by train, exposing his left ear to a draught. He perceived no noises in the ear, but gradually louder and louder he heard the voice of his mother (who was dead) reproaching him with his conduct. The voice was always heard in the left ear, which he thought singular. A few days afterwards as the symptoms persisted he sought advice. The right ear was normal. The left ear showed all the signs of otitis media, the membrane was retracted, and the handle of the malleus appeared to be red. Inflation of the tympanum was practised, which gave rise to numerous râles. Under treatment gradual recovery of the ear disease took place and with it the sounds gradually disappeared. The dependence of the hallucinations on the ear disease is very evident and the requisite brain condition was produced by the strain on the nervous system of a patient who appears to have been naturally of neurotic tendencies.

THE Medical Society of London will give a Conversazione at the rooms of the society, 11, Chandos-street, Cavendish-square, on Monday, May 16th. An Oration, the subject of which will be "The Moscow Congress—a Holiday—with Comments on Suggested Topics," will be delivered by Dr. Frederick T. Roberts at 8.45 P.M. Smoking and music by the "Bijou" Orchestra will form features of the entertainment.

ON May 12th the Duke and Duchess of Marlborough will pay a visit to the Epileptic Colony at Chalfont St. Peter for the purpose of laying the foundation-stone of a new home for boys and opening "Victoria House," a new home for men. Mrs. Passmore Edwards, the wife of the donor of all these three buildings, will also open a new house for girls. The ceremony will commence at 2.45 P.M.

AT the Brompton Hospital for Consumption on Wednesday, May 11th, at 4 P.M., Dr. C. Theodore Williams will give an address on the "Open-air Treatment of Consumption as Practised in German Sanatoria." We are requested to state that all medical men will be admitted on presentation of their cards.

THE annual conversazione of the Royal Society will be held on Wednesday next, May 11th, at Burlington House.

REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

II.—MEAT.[1]

ALTHOUGH, as was stated in the preceding article, the Commissioners consider that there has been a tendency to exaggerate the danger from the consumption of tuberculous meat, little fault will be found on the part of the medical profession and general public with their recommendations on the subject of meat inspection. Their recommendations, indeed, have the advantage on this point even more than in the case of milk of being applicable to the whole subject of meat inspection throughout the country. They had the advantage during their continental tour of seeing in the best appointed abattoirs the routine system of meat inspection as carried out in them by veterinary surgeons, which brought into relief the chaotic (the word is used by the Commissioners) equivalent existing at home. In this country there is no uniformity of practice. A carcase with an amount of tuberculosis in it which is considered by one medical officer of health sufficient to justify seizure will by another be readily passed as fit for food. Such a state of things has naturally led to very great friction between medical officers of health and meat traders. The Commissioners have considered that this question of the extent of tuberculosis in a carcass which should warrant seizure was one of the principal points which they were called upon to decide. They therefore recommend total seizure of the carcass in cases of (*a*) miliary tuberculosis of both lungs; (*b*) tuberculous lesions on the pleura and peritoneum; (*c*) tuberculous lesions of the muscular substance or of its

[1] No. I. was published in THE LANCET of April 30th, 1898.

lymphatic glands; (*d*) tuberculous lesions in an emaciated carcass; and condemnation of the tuberculous portions only in cases of (*a*) lesions confined to the lungs and thoracic lymph glands; (*b*) lesions confined to the liver; (*c*) lesions confined to the pharyngeal lymphatic glands; and (*d*) lesions confined to any combination of the foregoing, but collectively small in extent. These rules, if acted upon, as we have no doubt they will be, would remove much of the grievance of which butchers complain. The presence of miliary tuberculosis in the lungs or muscular substance points unmistakably to the generalisation of the disease and where the carcass is emaciated, quite apart from the presence of tuberculosis, the meat cannot be nutritious. There can be no question, therefore, that carcasses thus affected should be seized. Tuberculous lesions of the pleura and peritoneum, however, are generally mere extensions of the local process from the lungs or intestines and, striking though the appearance presented by them may be, expert opinion in Germany rather tends to disregard them in judging of the fitness of a carcass for food. The recommendations are not so liberal as are those issued in Prussia and Saxony, for instance, for the guidance of meat inspectors, but as in those states arrangements are made for cooking or sterilising meat affected to a certain degree with tuberculosis it is evident that with this additional safeguard much more meat may be allowed to come upon the market than is possible where, as in this country, no such arrangement exists. The Commissioners say that they were favourably impressed with what they saw in Germany of the institution known as the Freibank, a place where, under careful supervision, the sale of this cooked or sterilised meat is carried on. It is generally thought that there would be no market for the sale of such meat in England, but the same view was held by many in Germany before the experiment was tried. Now the demand for it exceeds the supply.

Closely associated with the subject of the extent of tuberculosis in a carcass which should justify seizure is that of the qualifications of meat inspectors. The butchers, we believe, would welcome inspection of their meat provided that they had confidence in the knowledge of the inspector; but they object to be at the mercy of persons who have had no training in the diseases of animals, and that such responsible work as meat inspection should be assigned to the ordinary sanitary inspector is ridiculous. In Hackney, for instance, the report states, quoting from a Parliamentary return, the office of meat inspector is discharged by persons whose previous occupation had been as follows: two had been plumbers, one a carpenter, one a compositor, one a bricklayer, one a florist, one a builder, one a surveyor, and one a stonemason. Only in isolated instances have either butchers or veterinary surgeons been appointed, with the result that the Commissioners have had to seek exact information as to the prevalence of disease among different classes of animals from the annual reports issued from Continental abattoirs, the management of which has been placed for years with great success in the hands of members of the veterinary profession. To secure the desired end of uniformity in the practice of meat inspection the Commissioners recommend that, wherever practicable, veterinary surgeons should be employed, but whether the inspectors appointed be veterinary surgeons or not, they should all pass an examination and receive a qualifying certificate from a central authority before appointment. Recent public health legislation is tending in this direction. Local authorities have not sufficiently recognised as yet the services which a competent veterinary surgeon can render to public health. The Public Health (Scotland) Act, 1897, introduces the name of a veterinary surgeon into the sanitary service by saying that in addition to "the medical officer or sanitary inspector a veterinary surgeon" may act as a meat inspector and that "in the case of any proceeding with regard to a living animal the medical officer or sanitary inspector, unless he is himself a qualified veterinary surgeon, shall be accompanied by a veterinary surgeon."

But the Commissioners consider that a necessary preliminary to a uniform and equitable system of meat inspection is the use of public slaughter-houses in populous places to the exclusion of all private ones. Their recommendations on this point, that power should be conferred on local authorities to declare, as soon as they have erected a public slaughter-house, "that no other place shall be used for slaughtering, except that a period of three years be allowed to the owners of existing registered private slaughter-houses to apply their premises to other purposes," will be regarded by medical officers of health who have fought this point for years as eminently satisfactory. Cases are cited in the report where the public slaughter-house, admirably equipped though it be, has proved itself a white elephant from the unreasonable prejudice on the part of butchers in favour of private over public slaughter-houses. They also recommend that all meat slaughtered elsewhere than in a public slaughter-house and brought into the district for sale should be taken to some place for inspection. It is to be hoped that these recommendations will before long lead to legislation so that no further obstacle will be placed in the way of the erection of public slaughter-houses in all large towns. The Commissioners are of opinion from the inspection which they made of the public slaughter-houses in Edinburgh, Glasgow, Belfast, and elsewhere in the United Kingdom that the separate chamber system on which they are constructed offers an obstacle to efficient inspection which is absent from the hall system now adopted in Germany.

In comparing the systems of meat inspection in this country with that on the continent it must not be forgotten that the conditions affecting them are very different. In addition to the fact that abattoirs are the rule in large towns abroad, home-fed cattle suffice for the meat-supply in Germany, whereas in this country we are dependent very largely on cattle imported from America to be slaughtered at the port of entry and on chilled or frozen imported dead meat, and butchers complain that this meat is not subjected to the same stringent inspection as is the case with that of home-grown cattle. The Commissioners agree that this is the case and suggest certain remedies, but the butchers overlook the fact that there is a general consensus of opinion among medical officers of health who are brought most into relation with these foreign supplies that from the open-air life the animals have lived and the fact that they are selected animals there is little tuberculosis among them. And it must not be forgotten that the animals imported from the United States and the dead meat from Australia and New Zealand have been inspected prior to shipment.

The Commissioners have been unable to agree on the subject of compensation demanded by the butchers for the seizure of the carcasses of animals which have been bought in open market for a fair price apparently quite healthy. The claim of the butchers is based on the fact that the seizure is made in the interests of the public health and they think the public therefore should pay for it; and, further, that an animal may have no sign of tuberculosis recognisable during life, but may nevertheless, after slaughter, be found badly affected with the disease. Many medical officers of health, it is well known, sympathise with the butchers in the loss which they thus at times sustain and have supported their claim for compensation. Four of the Commissioners, however—a majority of one—regard the risk of purchasing a tuberculous animal as well recognised in the trade and one that is taken account of in the purchase price. They think, moreover, that, like other trade risks, it might be easily met by some form of insurance such as has been adopted in a few towns in Great Britain and very widely in connexion either with abattoirs or butchers' societies in Germany. The memorandum signed by three of the Commissioners advocates compensation up to the full value of the animal provided that the magistrate ordering confiscation satisfies himself that the animal had a good appearance before slaughter and exhibited no visible signs of tuberculosis. The compensation is to be charged against, and paid by, the county council which shall be entitled to repayment of one-half the amount from Imperial funds. Such an arrangement would no doubt satisfy the butchers entirely, but there is a considerable danger that it would remove any incentive on his part to be careful in the purchase of his beasts, and it would be an easy means of relieving the farmer from the responsibility of taking all the measures in his power for eliminating the disease from his herd. The possibility of fraud on the part of low-class farmers and slink butchers must not be lost sight of and there can be no doubt that its prevention would be most easily effected by a mutual insurance scheme among farmers and butchers. As has been said, the hardship from losses by reason of tuberculosis has been met in Germany by insurance societies, the premiums charged being arranged so as to cover the losses. But we believe that the cattle dealer in Germany is the person who insures as he suffers the loss, payment not taking place by the butcher to him until the animal has been passed by the inspector. If

in this country the butcher were to demand a warranty from the farmer that his animals should pass the inspector the whole loss would be transferred to the farmer. Failing compensation, insurance either among the butchers or farmers alone, or both jointly, is the only alternative. Seeing that the interests of both farmers and butchers in the matter are very closely connected and that the success of an insurance scheme largely depends on securing the coöperation of all parties concerned a joint insurance fund offers the best means of meeting the difficulty. The loss from seizures of tuberculous carcasses has not been great, but being generally unexpected it has led meat traders, we think, to exaggerate the importance of the grievance.

THE BRITISH PHARMACOPŒIA.

III.[1]

OF the omissions in the new British Pharmacopœia the practitioner has little to complain. On analysing the formidable list of 188 it will be found to contain substances or preparations of practically no value or interest in daily medical work with a few notable exceptions. Everyone rejoices at the exclusion of the cataplasmata and the vapores, the enemata, and most of the decocta. Substances such as flour, breadcrumb, eggs, milk, lettuce, vinegar, cucumber, &c., which have long remained "superfluous on the stage" and which were intimately associated in the professional mind with the constituents of a salad or with the index to Mrs. Beeton's domestic pharmacopœia are now no longer stamped with the official brand.

The only regret which can be entertained concerning this part of the work is that the list is not at least twice as long and then all traces of senility would have been removed from our national Pharmacopœia.

All the infusions should have been omitted save digitalis and a single paragraph inserted in their stead directing in general terms that a fresh infusion of any vegetable drug could be prepared by infusing a given amount—say 1 oz.—of the comminuted substance for fifteen minutes in a pint of boiling water and straining, exceptions being made in a few cases—e.g., quassia and calumba.

We would also venture to suggest that the confectionery department might well have been entirely omitted or else seriously curtailed. The lozenge is a rather mediæval form and we find no less than 17 of them. However, we must be thankful that the lozenge of opium is omitted and that 4 of the old confections have disappeared—i.e., opium, hips, scammony, and turpentine. There is one omission which the practitioner will seriously regret and this is the liquor ferri dialysatus. Doubtless there is great difficulty presented to any revising committee which honestly attempts to cut out effete and worthless preparations. We believe that hardly a single preparation could be condemned without some champion entering the lists in its defence. This was well illustrated in a former revision when sumbul was suggested for the omission column. It was at once stated that the drug was much prized and sold in the West-end pharmacies and it still remains official. The case of the dialysed solution of iron is, however, very different; its place cannot be taken by any other preparation. It was non-astringent and did not blacken the teeth and could be swallowed by those who could not manage to take the reduced iron in pill form. There were doubtless reasons which influenced the revisers when they came to the decision that it should be omitted and these probably were points in connexion with its tests and strength. The drug will continue to be prescribed till a better liquid non-astringent preparation can be found and the practitioner must remember that when he now orders it he must be careful of the patient's interests by directing him to get his prescription made up at a chemist's of known repute as the old official safeguards, such as they were, are now removed. The unstable mess known as mistura ferri aromat. or Heberden's ink is wisely omitted, but the venerable mistura ferri co. with all its proneness to decomposition and unsightliness is still honoured.

But whilst deploring the omission of the dialysed liquor we must direct attention to the absurdity of retaining the vinum ferri still prepared by partially immersing 1 ounce of iron wire for thirty days in 1 pint of sherry. It is a most variable preparation, the amount of iron (which is always fractional) depending entirely upon the amount of acid present in the sherry and in the new British Pharmacopœia there is no test or standard for this acidity, hence no two samples of the wine will agree in strength. The preparation should have been omitted and the name transferred to the vinum ferri citratis. It is a strange fact that this representative of the middle ages should have appeared in Martindale's list of the analysis of 12,000 prescriptions as having been prescribed fifteen times whilst vinum quininæ was not once ordered. In the same number of prescriptions the vinum ferri citratis was prescribed also just fifteen times, but it is possible that when vinum ferri was ordered sometimes the prescriber meant or intended that the citrate should have been dispensed; at any rate it is clear that this is no justification for its retention when we have another wine of iron of definite strength and recognised elegance.

The two essences—anise and peppermint—will be missed. The former especially was much employed in the colic of infancy, though it was seldom prescribed formally by the physician. The dose of the new spiritus which now takes its place is given as from 5 to 20 mins.—i.e., from ½ to 2 mins. of the oleum—a dose which is obviously useless in the majority of cases except when the patient is an infant, and then the amount of strong alcohol present in the maximum dose would represent more than a proper dose of ordinary whisky which is now always sold of the strength 20 under proof. We would therefore recommend the prescriber in such cases to order the anise oil to be given upon moist sugar in a teaspoon.

Of the Extracts the omissions are 17. In the case of 15 of these the physician will have little cause for regret, but the alcoholic extract of gelsemium will be missed, especially as there is now nothing to take its place when he wishes to treat a case of neuralgia of the fifth nerve by a recipe in the pilular form. Many will also regret the exclusion of the extract of logwood. It gave results in the diarrhœa of tuberculous peritonitis—in the pilular or cachet form especially—which justified its retention in preference to the decoction. A dose of 2 fluid ounces of a dye-stuff is not to be regarded as an advance in elegant pharmacy. We would suggest that always the dry extract of rhatany which "is still with us" should be preferred. We could have better spared the wholly inert extract of dandelion, the extracts of gentian, rhubarb, and liquorice, especially the first and the last of these, since they have also each a liquid extract. The attention of the prescriber must be called to the case of belladonna; this drug has now three extracts and the revisers have shown wisdom in arranging that the doses of the two semi-solid ones should be identical—i.e., ¼ to 1 gr. The verdict would probably have been unanimous had they seen their way to reject the old green one, especially as it now is the only preparation of belladonna which is not standardised or made to contain a definite percentage of alkaloids except in the case of the natural succus from the leaves and fresh young branches. All the other preparations of belladonna, numbering no fewer than seven, are standardised.

The omissions in the Infusions number 7; 2 of these were household remedies — viz., anthemidis and lini, but though in constant or daily use they were seldom prescribed in a recipe and the authorities are justified in their rejection, still we part with old friends with some reluctance. Our regret is, however, greater that several others were not sent to keep them company, notably serpentary, which also now has a concentrated infusion or liquor. For the same reason that linseed and chamomile were rejected ergot should disappear; it is seldom if ever ordered in a recipe, though often administered fresh, thus in Martindale's 12,000 prescriptions it was only prescribed once. We shall refer to the substitutes for infusions when treating of the new introductions to the British Pharmacopœia in a later article.

Of the 15 omissions in the Liquors the revisers have shown their judgment to be correct, in our opinion, in the great majority of cases—indeed, we may say in all except the iron preparation previously referred to which, owing to its importance, we mentioned at the beginning of this article. The practitioner must notice that since the effervescing liquors of potash, soda, and lithia are now no longer official it will be necessary when ordering them to see that the manufacturer supplies them of a definite strength.

[1] Articles I. and II. were published in THE LANCET of April 16th and 23rd respectively.

The omissions in the Pills are removals of decided blots. Hemlock was inert and the carbonate of iron and the iodide were unstable and variable in composition.

The omission of the Suppositories containing soap removes another blot and, indeed, the Pharmacopœia does not now contain one of these unnecessary preparations. It is to be noted that suppository of mercury is also omitted. When required, which is seldom, the surgeon can easily prescribe the exact amount of the ointment or mercurial which the particular case requires.

No one will lament the omission of the syrups of mulberries, poppies, and subchloride of iron, the last being one of the most recent additions to the British Pharmacopœia.

Of the 11 Tinctures excluded all were of little value but the physician will often feel at a loss for a liquid preparation of valerian in combinations containing acid ingredients, since the only one now is the ammoniated tincture. Since the strong tincture of ginger is now omitted it would have been well had the Committee increased the strength of the ordinary tincture, which is now weaker than formerly, being only 2 oz. to the pint. A tincture of double this strength would have been an important improvement. The physician will note that tincture of veratrum viride is also omitted and this is an improvement; it had no action which aconite tincture does not possess. The tinctures in the old British Pharmacopœia numbered 75, they are now 67. It will thus be seen that they are by far the most important group in the volume, and nowhere is the good work done by the Committee more apparent. They found this group, which occupies a considerable proportion of the Pharmacopœia, consisting of a list of liquids of all strengths and doses without uniformity and containing in their processes errors and directions which were not creditable to British pharmacy; they have reduced them to comparative uniformity—brought order out of chaos. As mentioned in our second article the doses are now made either to be of from 5 to 15 mins. or of from ½ to 1 dr. with the one exception of iodine.

The physician should note the change in the tincture of aconite. It was formerly made with 2½ oz. of the root to the pint; it is now made with only 1 oz. and, strange to say, the dose remains exactly the same. This is quite right—the old British Pharmacopœia dose was dangerously high; indeed, the present dose of from 5 to 15 mins. is quite high enough, but it is qualified by the important statement: "If frequently repeated 2 to 5 mins." Many physicians will prefer to give only one quarter of this amount every fifteen minutes till an impression be made upon the skin, pulse, and temperature. The next change of vital importance appears in the tinctura chloroformi et morphinæ co. This preparation now contains *more than four times the amount of morphine* present in the corresponding old tincture and very remarkable is the fact that its dose is given as larger. The old preparation had a dose of from 5 to 10 mins., the dose of the new is given as from 5 to 15 mins. The tincture of colchicum seeds is now made with 4 oz. instead of with 2½ oz. to the pint and the dose of from 10 to 30 mins. is reduced to from 5 to 15 mins. We are glad to see the tincture of digitalis unchanged, though it is the only tincture in the Pharmacopœia now of the strength of 1 in 8, but it must be noted that its dose is reduced by one half—i.e. from 5 to 15 mins. Tincture of nux vomica now contains twice the amount of strychnine contained in the old tincture, but the dose is only slightly altered, its maximum being now 15 mins. as against 20 mins. Laudanum is practically unaltered except in the process of preparation. Squill, senega, senna, stramonium, valerian, rhatany, and several others have their strengths now made 1 in 5 instead of 1 in 8 and the dose is proportionally reduced.

A noteworthy change is made in strophanthus tincture. It now contains only ½ oz of the seeds to 1 pint; this is half the strength of the old tincture and the dose is exactly the same as that of tincture of digitalis which is five times its strength. Lobelia is now 1 in 5 and is a very active preparation with the maximum dose of 15 mins. The change in the Ointments is for the better in every case. Tartar emetic, calamina, elemi, potassa sulphurata, and savin, simple ointment and turpentine are excluded. There are none of these which will arouse any feelings of regret at their omission. Most of them are only known to the bulk of the profession as items which had to be remembered at the examiner's table. The older members will perhaps be sorry to part with the ancient Turner's cerate but they may console themselves with the reflection that there are now numerous others much more suitable and reliable for the same purpose. The exclusion of the wines of aloes, opium, and rhubarb is also an advance.

In dealing with the omissions we have hitherto dealt mainly with Galenical preparations, because it has been chiefly with these that the revisers have been busy. It is a most gratifying reflection that there is not a single omission of any drug or remedial agent of even third-rate importance. Yeast, canella, animal charcoal, cetraria, nitrate of copper, elemi, guttapercha, barley, manna, kamala, mastich, matico, savin, sabadilla, treacle, raisins, marble, as well as about a dozen of crude drugs the purified representatives of which still remain, give a good general idea of the nature of the revision in this direction. The only active drug of any pretence to importance which has been omitted is green hellebore and its tincture, but veratrine obtained from cevadilla is still official and it is practically identical with the active principle of green hellebore.

Chemicals such as nitrate of lead, sulphate of mercury, cyanide and ferro-cyanide of potassium, valerianate of soda and nitrate of soda, which were only official because they were used in the preparation of other drugs, are now wisely omitted. The cinchonine and cinchonidine salts were of great importance as substitutes for quinine when this drug was from 15 to 20 times its present market value. Like many of the veterans already mentioned they have fallen honourably and must make way for valuable substances like the soluble acid quinine hydrochloride.

Tobacco is omitted, notwithstanding all that has quite recently in high quarters been done in its favour, but it was certainly an anachronism and its retention was a mistake by the 1885 revisers after its Galenical preparation had then been omitted.

By this brief summary of the omissions made in the 1898 British Pharmacopœia the practitioner will see that he has little to alter in his daily practice, and we can safely say that what little change the new volume will necessitate in his prescribing will be an advantage both to himself and to his patients.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twentieth sitting of the Royal Commissioners was held in the Council Chamber of the Westminster Town Hall on Monday last, May 2nd. All the Commissioners were present. Sir Arthur Arnold completed his evidence and Mr. Shirley Murphy, medical officer of health for the Administrative County of London, was then examined. Towards the end of the sitting Mr. G. F. Deacon gave evidence on behalf of the London County Council with regard to the scheme for bringing water from Wales and with regard to the cost of carrying out the Staines reservoir scheme. The witness exhibited large tables showing the daily flow of water down the Thames for a series of years and contended that the storage capacity of the Staines reservoirs would have to be very great in order to ensure a sufficient amount of reserve water during periods of drought.

Sir ARTHUR ARNOLD gave evidence with regard to the payments made to the labourers employed by the Parks Committee of the London County Council. In the year 1891 the wages of the gardeners, constables, and labourers were 24*s.* a week during the winter months and 25*s.* a week during the summer months. At the present time the wages were 27*s.* a week for a week of 54 hours, that is at the rate of 6*d.* an hour. Lately the Parks Committee had decided that their employés should be paid at the same rate during the winter months although the hours of labour were 48 instead of 54 as in summer. Sir Arthur Arnold thought that the raising of the wages was a proper and reasonable course.

In answer to Sir GEORGE BARCLAY BRUCE the witness said that he did not know how the rate of wages compared with that paid by other employers of labour and remarked that the "heaviest domestic expenses" occurred to the workmen during the winter months, which was a reason for giving them the recent rise in their wages. The witness thought that the London County Council were not overworked. They had at present no arrears; there was no "obstruction." He did not consider the Council were a political and partisan body and he thought that they should be allowed

to control the water-supplies. With regard to purchase he repeated that the undertakings should be bought by arbitration, which should be "full, free, and open." He objected to purchase under the Land Clauses Act because of "technical rules" which, he said, he understood were in force when the clauses of the Act came into operation.

Mr. CRIPPS, Q.C., asked the witness to refer the Commissioners to any clause in the Act which had the significance which the witness suggested.

In answer to Mr. MELLOR he said that he understood that practices had grown up during the time in which the Act had been in force.

In answer to the CHAIRMAN he said that in the arbitration for purchase it would be quite right to consider whether any allowance should be made for compulsory purchase and that no material contention should be excluded on either side.

In answer to Mr. CRIPPS the witness said that he did not agree with Sir John Lubbock that it would be of advantage to add to the boards of directors of the water companies representatives elected by the water consumers.

In answer to Mr. MELLOR the witness said that he did not think it would be possible to compel the companies to amalgamate.

In answer to Mr. CRIPPS the witness said that he considered that the bargains made by the New River Company with their City customers were not fair. It was very unfair to have a bargain. The witness did not explain to whom the bargain was unfair—whether the New River Company were acting unfairly to themselves in not charging their full statutory prices, or whether, on the other hand, the citizens were acting unfairly in not paying to the company a larger sum than the company was satisfied to receive.

In answer to Mr. BAGGALLAY the witness said that he was not aware that the London County Council had opposed "tooth and nail" the proposition that the mains of the East London Waterworks Company and the New River Company should communicate. With regard to the interview which the witness had with the chairmen of the water companies Mr. Baggallay said he could not accept the interpretation which the witness put on the interviews which he had had with them. The chairmen had, the witness said, received him with courtesy and he had afterwards made public the opinion which he had formed, but he would not give any account of the interviews from which he had formed the opinion.

Mr. BAGGALLAY therefore asked the Chairman of the Commission what should be done to clear the matter up. The Chairman suggested that a notice should be given to Sir Arthur Arnold and that afterwards Mr. Baggallay should call as witnesses the chairmen of the water companies.

Mr. MELLOR thought that the interviews were confidential and that it would be better not to call evidence on the matter. What value, he asked, could the Commission attach to Sir Arthur Arnold's expression of opinion? and did the learned counsel suppose that such evidence would have any effect whatever on the Commissioners?

Mr. BAGGALLAY was satisfied with this expression of opinion and asked the witness no more questions.

Mr. SHIRLEY MURPHY said he thought the present system of examining the water-supply was inadequate. In his opinion the same authority ought to be the water-owning authority and the disease-preventing authority. He would have no hesitation in allowing the London County Council to have the management of the water-supply and to be free from external control in respect to its management. He did not think that those who drank water from the Thames were less healthy than those who drank water from the chalk. The death-rate from typhoid fever in London was low. At the present time there was a "feeble virus" of typhoid fever. It might be more difficult to deal with when the virus was of greater intensity.

In answer to Mr. BAGGALLAY the witness said that he believed there was an increase of typhoid fever in 1894 as a result of the quality of the water supplied from the river Lee when it was in flood, but he said it was impossible to trace typhoid fever to the water supplied either from the Thames or from the Lee. The death-rate from typhoid fever in London was less than that in any of the other large towns in England with the exception of Brighton, Bristol, Huddersfield, and Bradford. At the time of the late outbreak of typhoid fever at Maidstone the London County Council asked the London water companies to allow their medical officer and their chief engineer to inspect the companies' works. The London water companies would not allow the visits to be made.

Mr. G. F. DRACON, in answer to the CHAIRMAN, said that he was a civil engineer, that he formerly had charge of the Liverpool Waterworks, and that he had been employed by the London County Council to report on the scheme for supplying London with water from Wales. He put in a "private and confidential" report on which it was suggested that the Commissioners should examine him. His evidence dealt with the cost of the Welsh scheme and with the outlay which would be necessary to make at Staines reservoirs of sufficient capacity to last over periods of drought on the conditions suggested by the Balfour report that water should not be taken from the reservoirs during and immediately after flood or during periods of drought. The witness referred to some diagrams which he had prepared, but it appeared that these were made on the supposition that the London water companies would not draw the amount of water they do at present at the various inlets now in use.

In answer to Major-General SCOTT the witness said that if a system of control were adopted it would be necessary that storage capacity should be increased coincidently with the increase of population, that works should be added as occasion required, that the storage capacity could not be considered satisfactory if there were no reserve, and that for efficient control it was necessary that the controlling authority should have power to compel a company to have a sufficient amount of storage capacity.

In answer to further questions the witness said that there was undoubtedly a tendency to economy in the case of companies which were not rich, and that it was reasonable that the storage capacity should be sufficient to ensure a supply during periods of drought. It was desirable that the controlling authority should have a power of inquisition and a power of entry to see whether there was any falling off in the storage capacity having reference to the increase of population and the authority should have statutory power to get the necessary information; the inspectors of the authority should not be in the pay of the companies. The regulations affecting filter beds required especial care, and actual inspection was absolutely necessary to ensure efficient control.

In answer to Mr. PEMBER the witness said that the nature of the soil on which it was proposed to make the reservoirs in Wales had not been specially examined.

The next sitting of the Commissioners will take place on Monday, May 9th, at the Council Chamber of the Westminster Town Hall.

THE VACCINATION BILL AND THE MEDICAL GUILD.

WE have been asked to publish the following reasons which have been urged by a committee of the Medical Guild against certain provisions in the Vaccination Bill together with a protest concerning certain omissions:—

I.—*Against the extension of the age period.* (Section 1—(1) of the Bill).

(1) The longer period (nine months) during which the child would be unprotected.

(2) Vaccination should be well over before the commencement of teething. If it be delayed until the time of teething or of weaning the troubles incidental to those periods would by many parents be regarded as the direct effects of vaccination and would naturally develop in their minds a prejudice against the operation, which would make vaccination more unpopular than it now is.

(3) As children grow older they become more vigorous and active; consequently the movements of the vaccinated arm would be more energetic and the risk of injury and of erysipelas and blood-poisoning would be correspondingly increased.

(4) In manufacturing towns the extension of the time limit would to a great extent render the Act inoperative on account of the frequent changes of residence which occur among the working classes; many children would be lost sight of by the vaccination officers and would thus remain unvaccinated, partly owing to the difficulty and cost of tracing them and partly to the indifference of the parents.

(5) The extension of the age period is unnecessary because the existing law empowers any medical practitioner to postpone vaccination when the operation is undesirable on account of the state of the child's health.

II.—*Against the abolition of public vaccination stations.*—The retention of public vaccination stations would conduce to the greater safety and efficiency of the operation and avoid needless expense to the ratepayers.

III.—*The provision against repeated penalties* would, it is believed, render compulsory vaccination null and void and would seriously endanger the public health.

IV.—*Two omissions from the bill* are noteworthy and call for protest—

viz., (1) the absence of provision for efficient revaccination, and (2) the absence of a definition of "successful vaccination."

In order to make vaccination by both public and private practitioners more efficient and uniform than it is at the present time the form of certificate for successful vaccination should specify that not less than three vesicles have resulted from the operation.

JOHN DIXON MANN, M.D. St. And., F.R.C.P. Lond., Chairman of the Medical Guild.
R. H. WOLSTENHOLME, M.R.C.S. Eng., Vice-Chairman.
CHARLES G. L. SKINNER, M.D. Aberd., Treasurer.
ALEXANDER STEWART, M.D. Glasg., Hon. Secretary.
Manchester, April 29th, 1898.

THE SPANISH-AMERICAN WAR.

THERE can be no longer any doubt about the extent of the disaster which has befallen Spain. At the battle of Manila the ships of the Spanish Pacific Squadron have either been destroyed by the American fleet or they have been sunk to avoid being captured. The admiral commanding the United States squadron has so irretrievably defeated the naval forces in the Philippines as to have destroyed any hope of success that might have existed on the part of the Spanish Government in this direction. The work of destruction, too, has rarely been accomplished with greater thoroughness and rapidity—a rapidity which in its dramatic effect resembles the transformation scene of a spectacular play. It furnishes the strongest testimony to the dash, courage, and naval skill displayed by Admiral Dewey and his seamen that he was enabled to carry out his brilliant piece of work with such disastrous results to his enemy and with seemingly such very little injury to himself and the fleet under his command. The news of the collapse of the Spanish defence came, too, with something like dramatic surprise, for although it was well known that the preponderance of strength—in size, armament and construction—was greatly in favour of the American ships, it was thought that, what with mines and torpedoes and the guns of the Cavite forts as supplementary aids to their ships, the Spanish authorities might, at any rate, have made the task a far more dangerous and difficult one than it has proved.

The main interest of the war has now been suddenly transferred from the Pacific to the Atlantic Ocean, for the next great naval engagement—if it takes place—between the American and Spanish fleets will, if the result be adverse to Spain, be decisive. That section of the Spanish navy which has not yet been engaged is altogether the stronger portion as it comprises ships of the best construction, armament, and power in the Spanish fleet, and the United States will, if victorious, have undisputed command of the sea and the war will be virtually over. America can then afford to wait and to select the best and most healthy season for her land operations in Cuba and elsewhere.

Putting aside for the moment the effect which the attack on Manila may, indeed must, have on the course of the war, we may ask, Will the United States invade Cuba and strive to drive the Spaniards out? The embarkation and disembarkation of a large military force, such as has been contemplated by the United States, is a difficult and even formidable undertaking for an unprepared country however powerful, especially where the force has to be suddenly thrown on the lowlands of an unhealthy coast at the commencement of the worst season, to say nothing of the fact that the volunteer soldiers are undrilled and unprepared for war and that the naval victory gained by the United States at Manila does not give them command of the sea. No one who realises the nature of the task which the American Government has undertaken can disguise its difficulties; and we may be quite sure that, however much the Jingo element and the impulsive uncalculating section which exists in every population may shut their eyes to these, the President of the United States and his responsible naval, military, and medical authorities do not. Years ago this country, for pressing political reasons, equipped and disembarked a small force for the occupation of Cyprus, which is now one of the most healthy of our foreign stations. What with an exceptionally unhealthy season and the temporary want of adequate preparations a large amount of sickness from climatic fever followed for a time in the regiments encamped there; and it is only to be expected that a force landed in Cuba will undergo a similar but far worse experience. Cuba has an area of some 43,000 square miles. Its length is about 800 miles and its greatest breadth is 125 miles, but in places it does not exceed 25 miles. It consists of a low-lying country and of a rugged mountainous region, with ravines and valleys, some of the mountains having considerable altitude. Havana is about 100 miles distant from Key West and the Bay of Florida. From all we know of the island it has a very unhealthy climate during the hot and wet season, from May to October; its marsh lands are fed by underground streams. The longest river of the island, the Cauto, is only navigable for a short course. The low-lying districts are very malarious and, as we have previously said, in addition to climatic and malarious fevers yellow fever may be said to be endemic there. The country is also, in a military sense, a difficult one for campaigning, the uplands and mountainous regions offering facilities for guerilla warfare. It is obvious that a blockade, if it can only be effectively maintained, offers many strategical advantages, but its effect on the already starving insurgents, for whose sakes the United States are fighting, is likely to be disastrous. Supposing the United States to succeed in landing a force and establishing a base of operations somewhere on the seaboard of Cuba, it will, of course, have to be furnished with commissariat and warlike stores and supplies of all kinds and for this purpose, whether the force be large, or small at the first and gradually augmented, America must have and retain command of the sea. Little or nothing is really known as yet of the proposed designs and course of action of the two belligerent Powers; but, as our experience has already shown, there will, in the meantime, be no end of war rumours in order to supply pabulum for the keen appetite which exists for news. The number of medical officers and nurses will have to be large on both the Spanish and American sides, and volunteers for hospital service will, no doubt, be forthcoming now that the war has begun in real earnest. The difficulty is to obtain them of the right stamp in sufficient numbers and to select men with the requisite organising power and experience of medical administration in the field for filling responsible posts.

That the United States are fully alive to the necessity of having an efficient medical service is proved by the fact that quite recently a Bill was introduced into the House of Representatives which provided for the appointment of additional surgeons for the army and authorised the Surgeon-General to appoint as many assistants as he should deem necessary in case of war with Spain. Hitherto the age limit for entrance has been between the ages of twenty-four and twenty-eight years, but the necessity of getting competent medical men to fill naval posts at any cost has been fully recognised, and men up to the age of forty who are willing to attend to the wounded in the Spanish-American War will be received as assistant surgeons. In passing it may be noticed that the preference shown for the army over the navy has nothing to do with the rate of pay, because the naval surgeon gets a far larger salary than his army *confrère*.

On each of the American warships there is a small hospital, and the sick beds are placed between decks. Usually a man is attended to on the spot and then hoisted up or lowered down to the hospital according to where the accident takes place. After an engagement the men whose wounds require long treatment will be transferred to a hospital ambulance ship which is now being rapidly completed. Provision for 150 patients or more is to be made and there will be four surgeons, four apothecaries, and eight trained nurses (men).

At Key West a convent and some school buildings have been offered to the United States Government to be used as a hospital. The sisters of the convent have offered their services as nurses.

It may be mentioned that during the succeeding months the climate of Manila is hot and humid and relatively unhealthy, and much sickness may probably be expected to occur in any army of occupation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6462 births and 3965 deaths were registered during the week ending April 30th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 21·5 to 18·1 per 1000, rose again last week to 18·4. In London

the rate was 17·2 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest rates in these towns were 10·3 in Cardiff, 13·0 in Wolverhampton, 13·9 in Nottingham, and 14·7 in Croydon; the highest rates were 22·4 in Newcastle-upon-Tyne, 26 6 in Gateshead, 26·8 in Sunderland, and 30 0 in Liverpool. The 3965 deaths included 467 which were referred to the principal zymotic diseases, against 488 and 472 in the two preceding weeks; of these, 177 resulted from measles, 140 from whooping-cough, 66 from diphtheria, 29 from "fever" (principally enteric), 28 from scarlet fever, and 27 from diarrhœa. No death from any of these diseases was recorded last week in Brighton or in Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Plymouth, and Swansea; and the highest rates in Derby, Halifax, Leicester, and Sunderland. The greatest mortality from measles occurred in Sunderland, London, Oldham, Bristol, Halifax, and Leicester; from whooping-cough in Liverpool, Newcastle-upon-Tyne, Gateshead, and Bolton; and from "fever" in Sunderland and Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. No death from small-pox was registered in any of the thirty-three large towns; and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in those hospitals and in the London Fever Hospital on Saturday last, was 2302, against 2421, 2384, and 2334 at the end of the three preceding weeks; 205 new cases were admitted during the week, against 234, 217, and 241 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 305 and 283 in the two preceding weeks, further declined to 274 last week and were 83 below the corrected average. The causes of 54, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Manchester, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Blackburn, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·5 and 22·0 per 1000 in the two preceding weeks, further declined to 21·8 during the week ending April 30th, but exceeded by 3·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·2 in Edinburgh and 21·1 in Leith to 26·4 in Greenock and 27·2 in Perth. The 657 deaths in these towns included 35 which were referred to measles, 34 to whooping-cough, 17 to diarrhœa, 6 to scarlet fever, 2 to "fever," 1 to diphtheria, and 1 to small-pox. In all, 96 deaths resulted from these principal zymotic diseases, against 79 and 88 in the two preceding weeks. These 96 deaths were equal to an annual rate of 3·2 per 1000, which was 1·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 14 and 26 in the two preceding weeks, further rose to 35 last week, of which 30 occurred in Glasgow. The deaths referred to whooping-cough, which had declined from 44 to 25 in the three preceding weeks, rose again to 34 last week, of which 16 were registered in Glasgow, 5 in Dundee, 4 in Edinburgh, and 4 in Aberdeen. The 6 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 4 in Glasgow. The two deaths from "fever" occurred in Edinburgh, and the fatal case of small-pox was recorded in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 164 and 151 in the two preceding weeks, further declined to 137 last week, but slightly exceeded the number in the corresponding period of last year. The causes of 33, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·1 and 23·3 per 1000 in the two preceding weeks, rose again to 25·4 during the week ending April 30th. During the past four weeks the death-rate in the city has averaged 25·0 per 1000, the rate during the same period being 18·5 in London and 19·4 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed an increase of 14 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 10 and 13 in the two preceding weeks; of these, 3 resulted from whooping-cough, 2 from diphtheria, 2 from "fever," 1 from scarlet fever, and 1 from diarrhœa. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 2·8 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough, which had been 3 and 2 in the two preceding weeks, rose again to 3 last week. The 2 deaths referred to "fever," corresponded with the number registered in the preceding week, while the mortality from scarlet fever and from diarrhœa showed a decline. The 170 deaths in Dublin last week included 29 of infants under one year of age, and 53 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Five inquest cases and 3 deaths from violence were registered; and 65, or more than a third of the deaths occurred in public institutions. The causes of 15, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

DEPUTY-INSPECTOR OF HOSPITALS R. GRANT, M.B., to Chatham Hospital. Fleet-Surgeon W. R. White, C.B., to the *Hannibal*. Staff-Surgeons: J. B. B. Triggs to the *Alexandra* and J. L. Aherne to the *Caledonia*. Surgeons: P. K. Nix to the *Hannibal*; W. Jackson to the *Rodney*; A. H. Jeremy to the *Australia*; A. Gaskell to the *Victory*; J. D. Hughes to the *Tartar*; G. Ley to the *St. Vincent*; J. K. Robinson to Bermuda Hospital; and T. E. Honey to the *Defiance*.

ARMY MEDICAL STAFF.

Surgeon-Captain Davoren is under orders for embarkation for India. Surgeon-Lieutenant E. Brodribb proceeds to Worthing for medical charge of troops stationed at Cissbury Camp.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel Hunt, Madras, retires from the service, as does also Surgeon-Captain Hall, temporary half-pay, Madras. Surgeon-Lieutenant-Colonel Bovill, Civil Surgeon of Darjeeling, is appointed to be Civil Surgeon of Murshidabad, but will continue to act as Civil Surgeon of Howrah. Surgeon-Major Drury, officiating Civil Surgeon of Chittagong, is confirmed in that appointment, vice Surgeon-Lieutenant-Colonel Lewtas, transferred. The services of Surgeon-Captain W. Henvey (Bengal) are replaced at the disposal of the Military Department on his return from furlough.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Major William Collingridge, M.D., to be Surgeon-Lieutenant-Colonel on increase of Establishment.

VOLUNTEER CORPS.

Rifle: 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Lieutenant E. A. Malcolmson resigns his commission. 1st Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant L. A. Morgan, M.D., resigns his commission. 1st Volunteer Battalion the Hampshire Regiment: William Brooks Colquhoun, to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Durham Light Infantry: Surgeon-Major T. A. McCullagh to be Surgeon-Lieutenant-Colonel. 1st Dumbartonshire: Surgeon-Captain J. Wylie, M.B., resigns his commission.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*Home District: Rifle:* 2nd Volunteer Battalion the East Surrey Regiment: Surgeon-Major William Gandy. *North-Eastern District: Rifle:* 1st Volunteer Battalion the Lincolnshire Regiment: Captain and Honorary Major Frederic Riggall, Surgeon-Lieutenant-Colonel Henry Wright and Surgeon-Captain George May Lowe, M.D. *Scottish District: Rifle:* 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry: Surgeon-Lieutenant-Colonel David Cowie, M.B. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant-Colonel Robert Shand Turner, M.D.

MEDICAL HEROISM IN CUBA.

There seems to be no doubt that in many respects the Cubans have received cruel, not to say barbarous, treatment at the hands of their Spanish masters, but happily this grave charge is not of universal application. The medical officers of the Spanish army, as befits men practising the art of healing, have in many instances acted noble parts and at least one of their number has exhibited heroism of the very highest order. In the course of a sanguinary engagement with the insurgents Dr. Duran proceeded to the front line with the intention of affording aid to the Spanish soldiers who were falling rapidly under a hot fire; but scarcely had he reached the scene of action when he was struck by a Mauser bullet which shattered his knee-joint. In this piteous condition Dr. Duran managed, with the help of his orderlies, to bind up his own wound and then forthwith commenced a series of no fewer than twenty major operations on others, inclusive of reduction of protruding intestine with suture of abdominal opening, extraction of bullets in various situations, adjustment of compound fracture of the leg, &c. Many of Dr. Duran's colleagues have been killed in the course of this lamentable campaign and others have died from disease; while several more, having been unfortunate enough to fall into the hands of the insurgents who do not respect the Geneva convention, have undergone the most barbarous treatment. One of the latter, a young and promising surgeon, was taken prisoner and subsequently set at liberty, but not until both his hands had been severed at the wrists with a hatchet.

THE FRENCH ARMY MEDICAL SERVICE.

The Minister of War's Bill for the reorganisation of the French Army Medical Service, of which our Paris correspondent gave some details in a recent letter,[1] has been adopted by the Chamber of Deputies without discussion as an urgent measure. According to *La Semaine Médicale* the number of officers in each grade is as follows:—

	Old Cadre.	New Cadre.
Inspector-General	1	1
Inspectors	9	11
Principal Medical Officers, 1st class	45	45
" " " 2nd "	45	60
Surgeon-Majors, 1st class	320	340
" " 2nd "	480	500
Surgeons, 1st class	300	400
" 2nd "	100	50
Assistant Surgeons	—	50
Totals	1300	1457

THE WEST AFRICAN TROUBLE.

The mail-steamer *Accra*, which arrived at Liverpool on May 1st, brought some wounded officers who had been in the fighting at Sierra Leone, and among them Surgeon-Captain Scott, A.M.S. This officer, who had previously seen service with the Chitral relief expedition, is reported to have behaved with great gallantry whilst accompanying Major Norris's force in their march between Karene and Port Lokko. Surgeon-Captain Scott, after having been severely wounded in the thigh and elsewhere, ignoring his own injuries and sufferings, attended with the greatest devotion to the wounds of several natives of the company who had been shot in the same engagement.

OPERATIONS IN THE SOUDAN.

It is believed that the Anglo-Egyptian force will be strengthened by the addition of four British regiments before the final advance is made on Khartoum. It is not quite certain yet whether the advance will take place in August or October. In spite of the severe defeat which the Dervishes have received it is highly probable that the Khalifa's force will make a strong resistance at the last. The Anglo-Egyptian troops in the field and at Berber are healthy, but the heat is beginning to be great and, as might be expected, some cases of fever and dysentery have occurred.

MORTALITY IN THE NAVY AND ARMY.

Mr. James J. McLauchlan recently quoted some interesting statistics in a lecture which he delivered before the Institute of Actuaries. The conditions under which the sailor and soldier live are far more sanitary now than in the past, and it is not surprising to find that longevity in the services should have considerably improved within the last three decades. In 1865 over 11 deaths occurred in every 1000 men afloat, while ten years later the number fell to 6·8, in 1885 to 5·4, and in 1895 to 4·4. In the army the figures are not quite so satisfactory.

[1] THE LANCET, April 2nd, 1898, p. 966.

LEAN'S ROYAL NAVY LIST.

The April issue of this valuable publication revised up to March 25th is now ready and can be obtained from Messrs. Witherby and Co., 326, High Holborn and 4, Newman's-court, Cornhill. The publication is so well known and widely used that it would be superfluous to describe its contents. Suffice it to say that this almost encyclopædic work of reference on all official matters connected with the Royal Navy and the officers of that service and the Royal Marines has been brought up to date.

DEATHS IN THE SERVICES.

Brigade-Surgeon George Monorieff Govan, M.D. (retired), late Bengal Medical Service (3rd Goorkhas), at Almera, North-West Provinces, India, on April 1st, in his sixty-seventh year. He served in the Burmese War, 1852–53, including the capture of Rangoon and storming of the blockades of the Dragon Pagoda (medal and clasp), and in the Bhootan expedition, 1864–66, including the capture of Buxa and Tazagaon, attack on the Bala Stockade, &c. (clasp).

Correspondence.

"Audi alteram partem."

"THE DIPLOMA OF THE APOTHECARIES. SOCIETY."

To the Editors of THE LANCET.

SIRS,—I have been somewhat surprised that until the letter of "L.S.A." no correspondence has appeared in the leading medical paper with reference to the action of the General Medical Council and the L.S.A. qualification. It appears to me that—observing the personalities of this august body—it is the outcome of the not very remote action of the general practitioners themselves. They were called upon to elect to the Council a gentleman to safeguard and promote their own interests. Did they do so? Instead of electing a gentleman engaged directly in general practice, cognisant of its worries, cares, and responsibilities, they return a gentleman who, holding a high position in the scientific world, with absolutely nothing in common with the general practitioner and holding views of things appertaining to the profession peculiarly his own, feels called upon to show contempt for the Society of Apothecaries and its Licence. Mark what is the result: an unwarrantable attack on a gentleman holding the L.S.A. and who has passed a creditable examination in surgery, in medicine, and in midwifery, approved and sanctioned by the General Medical Council itself. I am not myself a L.S.A., but I respect all men who hold the diploma and if a gentleman so qualified is not to be styled a surgeon and a physician, what word must be coined to designate this Licentiate? But worse, far worse, is the unnecessary persecution of this properly qualified practitioner, who holding the degree of M.D. is not allowed by this almighty council of men to style himself "Doctor" because, forsooth, they refuse to register this degree, not being a British one.

What about the M.D. Brussels? What about the bastard M.D.—viz., the M.B.? Is a LL.D. or a D.D. holding the M.R.C.S. to be debarred from being addressed as "Doctor" because certain persons might be led to believe his title implied he was a doctor of medicine? If so let the general practitioners take steps to prevent certain of those who sit in high places in our profession who hold the F.R.C.S. Eng. and LL.D. (Hon. Caus.) from being addressed as and using the title of "Doctor." I am acquainted with a gentleman, a M.D., who is a practising barrister-at-law. As well might the Incorporated Law Society restrain him from using the title of "Doctor" implying (to some minds) that he is a doctor of law.

Evidently in this sudden accession of stimulation applied to the General Medical Council, the general practitioner is to be persecuted, whilst as your correspondent "L.S.A.", rightly states "the ignorant quack may practise with impunity"—and so may the prescribing chemist—and so

may certain gentlemen holding the M.D. of a British university who countenance canvassing touts and are sweated by one penny per week friendly societies. Truly the General Medical Council is a quaint body.

I am, Sirs, yours faithfully,

Mortimer-street, W., May 2nd, 1898. PERCY POPE, M.R.C.S.

"COLLAPSE FOLLOWING LAPAROTOMY."

To the Editors of THE LANCET.

SIRS,—In reference to the error in THE LANCET of April 23rd as to the amount of brandy injected intravenously, corrected by Dr. Bolton in THE LANCET of April 30th, the following case may be of interest, especially as it was due to Dr. Bolton's first note that we injected the larger quantity. An unmarried woman, aged twenty-three years, was admitted into this hospital on April 25th, under the care of Mr. Whipple, with a large, hard, solid tumour of the left ovary, sarcomatous in nature, and reaching as high as the umbilicus.

On April 26th an examination under chloroform was made and on the 28th the abdomen was opened in the middle line by Mr. Whipple, who removed the whole growth, though with great difficulty. The omentum and bowel were intimately connected with the tumour, the adhesions being extremely vascular, with omental veins as large as a No. 12 catheter, constantly requiring ligature. The growth was so adherent to the uterus and had so infiltrated the broad ligament that it was necessary to remove the uterus with the right appendages. The uterus was amputated at the internal os, flaps of peritoneum being raised from the fundus and sutured over the stump with Lembert's stitches. Finally, a secondary growth was removed from the omentum close to the great curvature of the stomach. After filling the abdominal cavity with warm, sterilised saline solution the wound was closed without drainage. The operation lasted two and three-quarter hours and at the end of the first hour the bleeding, which was very profuse, had so told upon the patient that her pulse was almost imperceptible at the wrist and at one time it was feared that she would not leave the table alive. The right basilic vein was therefore opened and 3 pints of saline solution (100° F.) with 4 oz. (*sic*) of brandy were injected. After a pint had been introduced the result was marked, the pulse becoming of good force and tension, the normal colour of the lips returned, and the eyes, which before were glazed and staring, resumed their natural appearance; the injection of the remaining 2 pints was continued during the rest of the operation, so that with the addition of 5 minims of strychnine hypodermically and a nutrient enema on leaving the table she had a temperature of 99·6°, her pulse was 84, and her respirations were 28. For the next few hours the temperature varied about 100°, the pulse was 140, and the respirations 34. Since then (now the fourth day) the temperature has been 98°, the pulse 86, and the respirations 20. She has had absolutely no pain, only once been sick, and apparently suffered not at all from shock. I have, I think, rarely seen a patient suffer less from an abdominal operation, and this, as the foregoing shows, was an exceedingly severe one, and certainly have never seen any abdominal patient after ordinary saline injection (of which we have had several lately) do so well.

My best thanks are due to Mr. Whipple for his kindness in permitting me to publish the case and he desires me to state that he is firmly convinced that the patient's excellent condition immediately after and since the operation was entirely due to the brandy.

I am, Sirs, yours faithfully,

J. DILL RUSSELL, B.S. Lond.,

Senior House Surgeon, South Devon and East Cornwall Hospital.

Plymouth, May 1st, 1898.

*** We have received a confirmatory letter from Mr. Whipple, and also a note from Mr. Dill Russell, informing us that only 3 ounces of brandy were ordered, but that the solution received by error an additional ounce of brandy. By a somewhat singular coincidence we find in a paper published in the *Practitioner* for May the following. The author, Dr. D. J. Leech, is writing on the treatment of bronchitis, and says: "I advised drachm doses of ipecacuanha wine every four hours. Next day I found the patient much relieved and charmed with the medicine, which had caused sickness, but not much. I found, however, that by mistake the wine had been administered in ounce doses."—ED. L.

"IMPORTANT VERDICT AS TO MEDICAL FEES IN HOSPITALS."

To the Editors of THE LANCET.

SIRS,—With reference to the case alluded to by you of Dr. Cranny *v* Mr. T. J. Lee for fees for surgical attendance[1] allow me to place before you the following letter which I received about 10 P.M. on the night of the occurrence. It is from the house surgeon of the hospital.

Jervis-street Hospital,
17 xi. 1896.

DEAR DR. CRANNY,—There is a gentleman of the name of Lee (Alexander and Co., Mary's Abbey) who has just come in here with a compound fracture of leg. He is most anxious to see you and asked me to send for you at once if you would be kind enough to come.

Yours, &c.,
MORE CARAHER."

From this letter, which, owing to the rules of evidence, was not allowed to be placed before the jury, it appears to me that I was justified in the position which I assumed, and which position was endorsed by the learned judge and by the jury—viz., that I was under the impression that I was specifically retained at the request of the defendant to take charge of his case. The law as laid down, and no doubt correctly, by the learned judge has decided otherwise. The important question remains as to whether a person of independent means suffering from an accident or injury, and being admitted to a hospital and being cared for and treated as the necessities of his case demanded (of which no question arises), but being in the rank of life capable of paying for surgical treatment, he should have a claim for the services of any hospital surgeon without paying for them because this surgeon is expected to attend the poor without fee or reward and because the patient has paid for his private ward a sum of 3 guineas a week to cover his maintenance and nursing. I submit that no hospital authority has the right to farm out the services of surgeons, nor, indeed, in my case do the managing committee of my hospital assert any such right. It would, in my opinion, be extremely detrimental to private practice were such a claim made. Need I add that had a plea of inability to pay been made nothing further would have been heard of the case. It will be a warning to the profession to safeguard themselves.

I am, Sirs, yours faithfully,

Merrion-square, Dublin, April 30th, 1898. JOHN J. CRANNY.

*** Dr. Cranny has enclosed a copy of the following letter from the defendant:—

[ENCLOSURE.]

Geo. Alexander and Co.
Telegraphic Address: Alexander and Co., Dublin.

2, 3, 4, and 5, Mary's Abbey, Dublin,
16 June, 1897.

Dear Dr. Cranny,—I do not know how to apologise to you for my neglect in not calling upon you to thank you for all your kindness to me and to settle my indebtedness. Please let me know amount and I shall send you cheque with sincere thankfulness. Trusting you will overlook delay, Believe me, yours truly,

(Signed) THOMAS J. LEE.

J. J. Cranny, Esq., M.D., 17, Merrion-square.

"A GRAVE PUBLIC DANGER."

To the Editors of THE LANCET.

SIRS,—With regard to the injury from combustion of a celluloid comb, reference to which has been made in your columns, I beg to say that the young lady was sitting on the hearthrug near the fire when she became suddenly aware that her head was on fire, and if it had not been for the presence of mind displayed by a friend who happened to be in the room the injuries must have been much more serious than they were. The actual injury was a burn of the third degree (Dupuytren's classification) over the right parietal region, surface extent 3½ × 1½ in., and there was considerable shock to the nervous system, which happily was soon overcome. I am glad you are taking up this matter, as I am sure ladies using these combs have no idea of the danger they are carrying in their heads.

I am, Sirs, yours faithfully,

Gravesend, April 23rd, 1898. C. J. W. PINCHING.

[1] THE LANCET, April 30th, 1898, p. 1222.

MEDICAL POLITICS.

To the Editors of THE LANCET.

SIRS,—All medical men must admire Mr. Victor Horsley's attempt to make registration the narrow way through which alone the right to practise for gain can be obtained. But if the right to sell drugs remains the privilege not only of the chemist but also of the man in the street, of what value is the assertion of the law as regards registration? The chemist can still prescribe *sub rosa*, and the quack can still blow his brazen trumpet in the market and the press. I fully sympathise with Mr. Horsley's effort, but these loopholes seem to me still open. These avenues to unqualified practice can never be wholly closed; perhaps it is not desirable that they should. A compromise is all that is possible and most practical legislation is compromise. If we were a prescribing instead of a dispensing profession it would no longer be the chemist's interest to evade the law; compulsory publication of the active ingredients of proprietary medicines would do much to lessen the evils of quackery. We no longer keep apothecaries' shops, but the spirit of trade, of cutting and underselling still exists; and if we take our stand as professional men, not as tradesmen, we must minimise that spirit.

I remain, Sirs, yours faithfully,

Loughborough, April 23rd, 1898. J. B. PIKE.

THE LIMITS OF PROFESSIONAL SECRECY.

To the Editors of THE LANCET.

SIRS,—I am anxious to know the law with regard to the divulgence of professional secrets, other than criminal, arising in the case of a servant in the employ of the payer of the fee. Should the servant have a disease (say drink or pregnancy) which would entail dismissal from service if known to the employer, is the medical man, paid by such employer, at liberty to divulge on inquiry by the employer such confidence of the servant? Can any damage be claimed in such a case by the servant so dismissed from the medical man who has caused dismissal by divulgence of professional secrets to the employer who is responsible for services to such servant? Is it a matter of contract between the employer (who pays for) and the attending practitioner? or is the monetary consideration overridden by the law of professional secrecy? I am, Sirs, yours truly,

Cheniston-gardens, W., April 26th, 1889. E. A. BARTON.

TINCTURA BELLADONNÆ B.P. 1898.

To the Editors of THE LANCET.

SIRS,—The increase in strength of this preparation is so marked that we think it desirable to call the attention of prescribers to the fact. It is now required to contain about 0·05 per cent. of alkaloid. The tincture prepared according to B.P. 1885 rarely contained more than 0·025 per cent. of alkaloid, so that for all practical purposes the new tincture is double the strength of the old, while the official dose remains almost the same. We hear from Messrs. Spottiswoode and Co., the publishers of the Pharmacopœia, that that work will not be obtainable till May 11th, although by its advertisement in the *Gazette* on Friday last it became binding on all dispensers. It would therefore be a great benefit if for the present prescribers would indicate by which Pharmacopœia they desire their prescriptions to be made up, as the above is not the only preparation of which the strength has been materially altered.

We are, Sirs, yours faithfully,

Oxford-street, W., May 3rd, 1898. JOHN BELL AND CO.

"A NEW OPERATION TABLE."

To the Editors of THE LANCET.

SIRS,—In your description of an operation table in THE LANCET of April 30th you state it is said to be the first table ever made whereon the patient can be placed in the Trendelenburg position without loss of heat. We venture to point out that this surmise is not correct as there are several operation tables of our manufacture in use at institutions in London and the provinces in which this provision is made, and one of these tables was on view during the whole of last summer in the Aseptic Operation Theatre at the Victorian Era Exhibition at Earl's-court. Trusting you will kindly insert this correction,

We are, Sirs, yours faithfully,

St. Thomas's-street, London, S.E., May 4th, 1898. DOWN BROS.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague in India.—Lessened Mortality in Bombay.—Outbreak at Kurrachee.

THE steady and marked decline in the number of plague deaths in Bombay almost day by day for the past three weeks has reassured the public mind and the almost complete relaxation of repressive sanitary measures has also contributed to a more contented state of the people. There is reason to believe that the number of deaths from other diseases than plague is considerably less than normal, so that except for the outbreak of a fresh epidemic of some other disease the average mortality may soon be anticipated. There are districts on the outskirts of the city where the disease is languidly spreading, but among the thickly populated quarters it is rapidly dying out.

The lesson to be learnt from these facts is that once an epidemic of plague has passed its point of highest intensity and has begun to show unmistakeable signs of decline it will not revive again, but will continue its course of abatement notwithstanding the abandonment of all sanitary precautions against its spread. The conditions for its survival and spread exist just as before, but the organisms of plague would seem to have what may be called a national life-history of which we know nothing, as well as an individual life-history about which we are only just beginning to collect a few facts. The native committees and other native organisations for detecting cases of plague do not seem to be more successful than their European predecessors. There still continue to be recorded daily about the same proportion of undetected cases of plague. Kurrachee has now become attacked—the totals to date being 77 cases and 42 deaths—and the town has been declared an infected port within the meaning of the Venice Convention. At Simla considerable opposition is being raised by the Hindus and Mohammedans regarding the proposed plague precautionary measures. The Hindus suggest that certain men of each sect should report when plague cases occur and that only then should the medical authorities act. House visitation and segregation are opposed. Should these suggestions be acquiesced in by the Government it is obvious that the sanitary measures will merely follow the plague and will not be ahead of it. Such a course has already proved in other places almost useless.

Arrangements are being made for a congress of the profession to be held in Bombay next December having for its chief object to consider the most appropriate means of dealing with plague epidemics in Indian cities, towns, and villages. What with the great improvement trust scheme and the reorganisation and elaboration of the health department, Bombay is actively preparing not only to wipe out its evil sanitary reputation but to establish an enlarged and beautified city.

April 15th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Sewage Treatment and the Local Government Board.

THE discussion as to the treatment of the Manchester sewage, adjourned from the previous meeting of the City Council, was resumed at an adjourned special meeting held on April 20th. One of the objections urged against the adoption of the "bacterial system" was that, unlike that of such a place as Sutton, the sewage of Manchester was destructive to bacterial life, being charged with the effluents from chemical and other works, and that therefore the system must fail. It was pointed out, however, that it had been tried for some years and had succeeded at Oldham, where the sewage was of much the same character as at Manchester, and further that the report of the chemist of the corporation, mentioned in my last letter, "had shown conclusively

that the sewage of Manchester was practically purified by the passage through the bacteria beds." An amendment to the resolution mentioned below was moved, but rejected, to defer all action till the report of the Royal Commission on the subject of sewage disposal had been received. But not only was delay advised; some wished the discarded culvert scheme to be revived, while others objected to the purchase of the 200 acres of land at present insisted on by the Local Government Board. The gist of the resolution adopted was that the recommendations of the rivers committee be adopted so far as they advised "the construction of bacteria beds upon 37 acres of land at the Davyhulme sewage works," and "the purchase of the necessary land for the aeration of the effluent after it has passed through the bacterial filter beds." The Local Government Board in accordance with ancient custom insist on the purchase of these 200 acres; but if as the result of further experience or of negotiations with the board the land should not be required for sewage purification it is believed that it will be a valuable asset to the corporation.

Proposed Extension of Monsall Hospital.

At the same meeting of the City Council a resolution was adopted in favour of seeking power to borrow £27,500 for the extension of Monsall Fever Hospital. The chairman of the sanitary committee explained that the extension was for the purpose of providing larger and better accommodation for nurses and servants and securing and laying out land for recreation and exercise. He said that no small-pox cases were to be taken to Monsall, but that in due time a scheme for a permanent small-pox hospital for the city would be laid before the Council.

Progress of Electric Lighting.

Mr. Alderman Higginbottom, chairman of the electricity committee of the City Council, brought forward at the same meeting the recommendation of the committee to apply to the Local Government Board for their sanction to the borrowing of the further sum of £150,000 for various extensions of the "electricity undertaking" of the corporation. The large scale on which this undertaking was first launched appeared to some to be rash and almost reckless, but the expectations of the committee have proved far too modest. Alderman Sir John Harwood said "it was ridiculous to come time after time for small sums"; he would have been in favour of £300,000, but he moved an amendment that £200,000 be asked. This was carried and is no doubt justified by the continuous and rapid development of the undertaking. The use of gas is also increasing instead of being lessened by its active competitor, as if the more artificial light the people have the more they want.

The Infirmary Board and the Spiritualists.

A matter was brought before the board of the Manchester Royal Infirmary on the 25th ult. which is outside the routine of their ordinary business. It was reported at a meeting of the house committee that a parade of the Spiritualists took place on the infirmary flags on the afternoon of Sunday, April 10th. Those responsible for the parade stated that permission had been given by the Watch Committee of the corporation. The house committee therefore decided to ask the town clerk of Manchester under what circumstances and conditions such permission was given as there had been no communication from the Watch Committee or the officials of the parade. We must fain hope that no serious consequences will ensue, but the question is evidently a grave one and cannot be answered offhand, for "the town clerk replied, stating that the matter would receive attention." At present no one seems any the worse from so many eccentrics having been collected together.

May 3rd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Pathological Diagnosis Society of Liverpool.

THE first annual report of the Pathological Diagnosis Society of Liverpool, founded by Professor Boyce in May, 1897, has just been issued. During the last twelve months 179 medical practitioners have become members of the society, to whom over 500 reports on specimens examined have been sent. These reports chiefly dealt with the bacteriological examination of sputum and suspected diphtheria cases, the serum reaction for typhoid fever, and the examination of urinary deposits and of tumours. The report deals with directions for the selection and transmission of sputum, laying stress upon the advisability of sending the more solid portion of the expectorated material, unmixed with any fluid, which should be transmitted in a clean, wide-mouthed bottle. The sputum has been examined chiefly for the tubercle bacillus, which was found in about one-half the number of cases sent, the method used being the ordinary staining with carbol-fuchsine, followed by decolourisation in 25 per cent. acid. 77 cases of suspected diphtheria have been sent to the laboratory, of which 38 were returned as containing the Löffler bacillus, 23 as growths of other organisms, chiefly staphylococci and the pseudo-bacillus of Roux and Yersin, whilst in 16 cases growths were absent. Useful directions are given under the heading of Diphtheria as to the mode of obtaining and transmitting the material to be examined. In the case of tumours 47 specimens were sent to be examined, only a few of which presented features of special interest. In the matter of typhoid serum reaction 140 specimens were examined and reported upon; the results obtained were in accordance with those of other observers and were very satisfactory. Dr. S. R. Christophers, who for the last six months has been investigating the agglutinative action of various sera, has inserted in the report a short but interesting account of the serum diagnosis. About 70 specimens of urine were sent and reported upon. As regards the presence of the tubercle bacillus in urine, which is diagnostic of tuberculosis of the urinary tract, a difficulty in recognition consists in the fact that the smegma bacillus stains in the manner which is also characteristic of the tubercle bacillus. It is therefore desirable that urine for examination should be drawn off by means of a catheter. Inoculation experiments have also been made for the recognition of rabies, tuberculosis, and anthrax.

Ladies' Charity and Lying in Hospital.

Dr. Alexander Stookes has been appointed to the vacancy in the honorary hospital medical staff. Dr. Stookes had been for some years one of the district medical officers of the charity.

Death of James Mercer Johnson, M.D. St. And.

The death occurred, on April 22nd, of Dr. James Mercer Johnson at the age of sixty-eight years. Dr. Johnson retired from practice a few years ago owing to failing health. The deceased at one time had an extensive practice in Everton and for many years was attached to one of the volunteer corps in the capacity of surgeon. He was also a prominent Freemason and was much esteemed by his numerous friends and former patients. Dr. Johnson graduated as M.D. at the University of St. Andrew in 1862.

Extension of the St. Helen's Borough Sanatorium.

The additions recently made to the St. Helen's Borough Sanatorium at Peasley Cross were opened on April 28th by the mayor of St. Helen's. The sanatorium was first opened in 1882 and consisted of an old house containing seven rooms with an average number of patients of twelve per annum. Extensions have taken place since the year 1886. Upon the Council deciding that the hospital should be free the number of patients rapidly increased. Two large pavilions were erected in 1894, but even then the accommodation was found to be inadequate. A further enlargement was decided upon last year when the new buildings recently opened were directed to be built. The total cost of the extensions has been £6389 Altogether the sanatorium or fever hospital has cost £14,120.

Mersey Volunteer Infantry Brigade.

Brigade-Surgeon-Lieutenant-Colonel W. J. Fleetwood has been promoted to the position of senior medical officer of the Mersey Volunteer Brigade. Brigade-Surgeon-Lieutenant-Colonel Fleetwood is known in Liverpool as a most enthusiastic and industrious volunteer medical officer and his promotion has given much satisfaction to the men of all ranks in the service. He took an active interest in the ambulance work of the 4th V.B. the King's Regiment, his own corps, and also in the work of the bearer company of the Mersey Volunteer Infantry Brigade. He also possesses the volunteer decoration. His promotion is due to the retirement after a long course of service of Brigade-Surgeon-Lieutenant-Colonel T. M. Wills, V.D.

May 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

A New Hospital for Phthisical Patients.

ON April 30th a numerous company of ladies and gentlemen, including several prominent members of the medical profession in Glasgow, visited the new Consumption Hospital established by Mr. Quarrier near his Orphan Homes at Bridge of Weir, Renfrewshire. The hospital contains forty beds, none of which are on the ground floor. The majority of the sleeping rooms have only one bed, but there are eight with two beds each. Lodgment of dust is carefully guarded against, all the windows are double with the exception of those for the staff and those of the two convalescent rooms, and all the rooms have hollow walls with air cushions so as to maintain a uniform temperature at all times. The propulsion system is employed for ventilation, the walls of each room being pierced with apertures for the purpose. The sewage is treated by a putrefaction system of purification, the arrangements for which have been designed by Mr. Copland, C.E., acting in consultation with Dr. A. C. Munro, medical officer of health of Renfrewshire. After the inspection Sir William Gairdner, K.C.B., delivered an address, in which he referred in very complimentary terms to the work accomplished by Mr. Quarrier, who, in his reply, said that £25,000 had been spent and that £35,000 more was being asked for with a view to the erection of five additional buildings, whereupon they would have 200 beds. He did not want paying patients, but he did not mean to imply that he would refuse them. If the hospital succeeded there might be a special one built for paying patients.

May 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The late Dr. Samuel Gordon.

DR. SAMUEL GORDON, who died on April 29th, in his eighty-second year, for a long time held a very prominent place among Dublin physicians. His various hospital appointments included that of consulting physician to the Coombe Lying-in Hospital. He was an ex-President of the Royal College of Physicians of Ireland and of the Royal Academy of Medicine of Ireland and up to the beginning of the present year he was President of the Royal Zoological Society of Ireland. His published works consisted of lectures on fever and clinical reports contributed to the medical journals.

The New Asylum for County Londonderry.

Matters have almost reached a deadlock in reference to this asylum. It would appear that the architect of the Board of Control in November last estimated the cost of the new asylum, to accommodate 600 inmates, as £90,000. The governors increased the amount to £110,000, but at a special meeting held on April 26th a letter was read from the architect announcing that as the estimate for the builders was £118,341 further reductions had been made by means of which the cost had been reduced to £114,370; but if this was too much the architect suggested further revisions to bring the sum down to £112,677. It is proposed to construct the building of brick in a plain and substantial manner, heated by hot water circulating at low pressure, and lighted by electricity. The governors seemed very dissatisfied that the sum they had proposed in November had been exceeded and the whole matter will have to be delayed another month to give time to rescind their former resolution. So much delay has been occasioned that the matter may as well be allowed to remain until the Board of Control is dismissed and county councils are established.

The Medical Staff of the Belfast Workhouse.

At an inquest held in Belfast on April 27th in reference to a child who while very ill had been removed from the Union Infirmary one of the intern medical officers of that institution stated that four medical men were expected to attend to 1900 patients. In the convalescent ward there were 387 patients and it was the duty of one medical man to attend to 400 patients in the infirmary. The jury in their verdict attached no blame to the medical man as it was impossible for him to attend to 700 patients daily. They strongly condemned a system which permitted this and requested the coroner to bring the matter before the Local Government Board.

The Belfast Corporation (Hospitals) Bill.

At a meeting of the Belfast Corporation, held in committee on April 20th, the Town Clerk read a letter from the Roman Catholic Bishop of Down and Connor, suggesting that instead of making the grant of £5500 at first asked for on behalf of the Mater Infirmorum Hospital the corporation should insert a clause in the Bill undertaking to pay £150 per annum to that institution. After some discussion the following resolution was adopted:—

That as the corporation, when considering the application for the grant of a site for the Royal Victoria Hospital, believed that in acceding to the request they were acting in conformity with the unanimous wish of the ratepayers, and were granting a site for a general hospital that would not only be open for the reception of all sections of the community, but be governed and managed by the representatives of all sections, and subject to the control of the subscribers of all denominations, the corporation cannot see their way to depart from these broad lines and are of opinion that if the claim of the Mater Infirmorum Hospital were acceded to much stronger claims could, and no doubt would, be presented by the several other hospitals in Belfast.

The Bill (one of the objects of which is to allow the city corporation to give five or six acres of, the lunatic asylum ground within the city as a site for the New Royal Victoria Hospital) came up for second reading in the House of Commons on April 26th. A special whip had been sent out in its favour by all the members for the city of Belfast. The second reading was carried by a large majority—175—and the amendment to refer it to a hybrid committee was also defeated. It was a very great mistake that any religious dispute should have arisen in connexion with this new non-sectarian hospital and it has given great satisfaction in Belfast that the House of Commons declined to consider a hospital question in such a light.

Irish University Education.

At a recent meeting of the archbishops and bishops of the Roman Catholic Church in Ireland resolutions were passed in which it was announced that statements recently made that they had been conducting private negotiations with the Government in reference to the Irish University question were denied. They also requested the Irish Members of Parliament to oppose by every means in their power the estimates for the Queen's colleges until the Government pledge themselves to bring in a measure to satisfy the demands of Irish Catholics in the matter of university education.

Belfast Dispensary Medical Officers.

The Belfast Dispensary Committee at their meeting on May 2nd showed their appreciation of their medical officers by deciding that each of the dispensary medical practitioners should get a fortnight's holiday and that their locum tenentes should be paid by the board of guardians.

Health of Belfast.

The report presented at the monthly meeting of the city council (May 2nd) of the health of Belfast from March 20th to April 23rd shows that in this period there were 1138 births registered and 765 deaths. There were 114 deaths from zymotic disease, 113 from phthisis, and 198 from diseases of the respiratory organs. The death-rate (annual) from all causes was 26·2. The deaths from chest diseases are in this period shown to be steadily decreasing. The number of cases of typhoid fever and the deaths therefrom are still high. Scarlet fever, though of a mild type, is on the increase, and deaths from measles are becoming more numerous.

The North Infirmary, Cork: Resignation of the Honorary Treasurer.

At the annual meeting of subscribers to the Cork North Infirmary held to-day it was announced that Mr. P. J. Forde, the honorary treasurer, had signified his intention of resigning owing to ill-health. During the twenty-two years that Mr. Forde has been in office he discharged his onerous and responsible duties with great assiduity and zeal and took more than a parental interest in the welfare of this important charity. He was ever ready to gratefully recognise the important services rendered by the medical staff of the institution and successive generations of physicians and surgeons have a lively recollection of his unvarying urbanity and courtesy. They could always count on the honorary treasurer to assist them in keeping their hospital thoroughly abreast with the progress of medical

science. A gentleman of broad and sympathetic views Mr. Forde was instrumental in procuring many improvements for the comfort and welfare of the patients. All regret the cause of his resignation and it is generally felt that it will be very difficult to find a worthy successor.

Appointment of Assistant Medical Superintendent at the Cork Lunatic Asylum.

The governors of the Cork District Lunatic Asylum decided on appointing a fourth assistant medical superintendent. Dr. Ross and Dr. John Fitzgerald were candidates for the appointment and on two occasions received an equal number of votes. At a meeting held to-day Dr. Ross withdrew and Dr. Fitzgerald was elected.

May 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Warty Growths on the Back of the Right Hand in the Tuberculous.

AT a recent meeting of the Hospitals Medical Society M. A. Béclère drew attention to the frequency of warty growths on the back of the right hand and also on the thumb and index finger of the same hand in patients suffering from pulmonary tuberculosis. Out of 24 cases under his care at the Tenon Hospital 4 exhibited these warts. In 1 case only were these growths on the left hand and that patient was a man left-handed from birth. A suggested explanation for the presence of the warts in the specified situation is the habit persons have of wiping the moustache and the lips with the back of the hand, especially with that portion of the metacarpus involving the thumb and index region. Infectious saliva is thus transferred to the hand and remains for a longer or shorter time on the skin, especially in the case of workmen who have not very frequent opportunities of washing their hands while at work. One of M. Béclère's patients was a mason who frequently wiped his mouth with the back of his hand to wipe off the dust from plaster, &c., which clung to his moustache. Another was troubled with itching of the upper lip and often rubbed it with the back of his thumb.

Functions of the Pituitary Body.

M. E. de Cyon laid before the Academy of Sciences at their meeting of April 5th the result of his researches on the functions of the pituitary body. He considered that from its situation the pituitary body is peculiarly prone to be affected by variations in pressure, whether that of the cerebro-spinal fluid or the blood. As a fact, excitation of this body manifests itself by a marked change in blood-pressure and by a considerable slowing of the beats of the heart, while at the same time the force of the heart-beat is considerably increased. This slowing of the heart-beat, which has been attributed up to now to the direct stimulation of the nerve-endings of the pneumogastric in the medulla, is only due as a fact to a reflex stimulation of these endings and the origin of the stimulus lies in the pituitary body. After ablation of the pituitary body occlusion of the abdominal aorta no longer brings about slowing of the heart-beat. After the pneumogastrics are excited the rate of the venous circulation in the thyroid body is increased to four times that of the normal rate and heavy pressure exerted on the pituitary body as a consequence brings into play the mechanism by which the thyroid body releases the brain from a dangerous influx of blood. Extracts of pituitary body injected into the veins of an animal produces identical effects of the heart and blood-pressure to those which are brought about by electrical or mechanical stimulation of that body. The active substance in the pituitary gland exercises upon the pneumogastrics an action analogous to that of iodothyrine.

On the Fatality of Koch's Bacillus when Mixed with Cow's Milk.

At the meeting of the Society of Biology held on April 23rd M. Sabrazès of Bordeaux showed that cow's milk very often contains the bacilli of Koch and plays a great part in the transmission of tuberculosis in animals to man. The important points to be noted are: (1) whether the bacillus of tuberculosis can form a colony in the milk under conditions of temperature and air-supply favourable to its growth; and (2) whether it preserves its virulence in this medium for a long time. Masses of a culture of the bacillus tuberculosis which had been grown in glycerinated bouillon were sown by M. Sabrazès upon the surface of a culture medium containing 250 c.c. of pure cow's milk such as is ordinarily exposed for sale two or three hours after milking. This milk was sterilised in an autoclave and after having been sown was placed in a stove with a temperature of 39° C. for two and a half months. At the end of this time no difference at all was evident between the milk used as a culture medium and a control specimen. The bacillus tuberculosis had not grown at all, neither had it brought about any notable change in its surroundings. The question remained of ascertaining whether the bacillus was still living in the milk. 1 c.c. of the tuberculous milk was therefore inoculated under the skin of a guinea-pig which died from tuberculosis 20 days afterwards. A second guinea-pig, inoculated with a potion of caseous gland taken from the first, also died from tuberculosis. M. Sabrazès considers that these experiments authorise him to say that although the bacillus of tubercle does not develop in milk even under favourable temperatures it will remain alive in this medium for a period of at least two and a half months and in all probability for a good deal longer.

May 3rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"Il Congresso pei Sordo-Muti" (Deaf-mutes).

THIS Congress has been the event of the week. Held in Milan and attended by delegates from all parts of Italy, including a large representation of physicians and surgeons, it attests the progress of which even a backward nationality is capable when philanthropy goes hand in hand with science and the healing art. Hitherto the fate of the deaf-mute, in continental Europe especially, has been a hard one. In antiquity he was put on the same level as the idiot simply because he lacked expression for the intelligence which was undoubtedly in him. S. Augustine stands alone among the Christian fathers in venturing to surmise that the deaf-mute can think and reason. But the man who first created a future for this "strangely-visited people" was Gerolamo Cardano, who boldly took up and defended the position that the reasoning faculty exists in the deaf-mute and that the difficulty he has to encounter is the finding of a channel other than that of sound through which the said faculty can have free course. To-day Italy can claim a foremost place among the countries which have succeeded in rehabilitating the victims of this too common affliction; she has, in fact, no fewer than forty-seven institutions, all of them able to afford living proof of the success with which the deaf-mute may be brought into touch and intercourse with his more favoured fellows—may indeed be converted into a bread-winner and into a useful, sometimes valuable, member of society. Statistics putting those results in evidence were adduced by the first of the experts in deaf-mute education to address the meeting—Professor Antonio Cipollini—and his discourse was followed by others full of interest, sometimes dramatic, sometimes touching in their tenour.

The Congress was noteworthy for the fusion of classes, creeds, and political parties represented at it, and for the enlightened unanimity—obtained after free and searching discussion—with which its practical resolutions were formulated and carried. To begin with, the hearts of all were touched by the object lessons in moral and intellectual reclamation submitted to them—reclamation in nearly every instance successful and secured after efforts on the teacher's part at once ingenious, kindly, and indefatigable. From the infant barely equal to emit a vowel-sound the ascent was very gradual, the next step being ability to pronounce a syllable, thereafter to articulate a word, then again a sentence, and so on till the series of illustrations culminated in the youth who, born deaf and dumb, was heard to express clearly and intelligibly his own thoughts and sentiments in a vote of thanks to the "Congressisti" for the humane impulse that had brought them together. In the discussions arising out of the agenda paper the Congress had the gratification of hearing the "sordo-muto redento" (the reclaimed deaf-mute) taking part opportunely and effectively; and this phenomenon—a real physiologico-educational triumph—seemed to put heart into the programme and to invest its details with an interest born of

hope and the assured prospect of final success. In harmony with this feeling attention was powerfully drawn and held by the *avvocato* Signor Natale Zucchi's report, "Sulla Condizione Giuridica del Sordo-Muto"—on his right, that is, to be treated like his normally-developed fellow citizens, having entire and perfect responsibility for his own acts. Tracing the legislative history of this "vexata quæstio" Signor Zucchi defined the present position of the deaf-mute as of one "*à priori inabilitato*" (disqualified). To acquire a "personalità civile" he must, according to Signor Zucchi, demand it at the risk of colliding with persons interested in leaving him in his condition of inferiority. Hence he finds himself in an abnormal situation—the law allowing him to marry, yet so treating him that "if the proscription of inability has not been removed" he cannot legitimise his own children, he cannot dispose of his possessions or give effect to his own wishes since he cannot dictate his last will and testament. Moreover, he cannot exercise political rights; nay, further, his inferiority in respect of "assistance publique" excludes him from the category of "cronici o gli inabili al lavoro" (chronic invalids and persons unfit for work). For the deaf-mute, added Signor Zucchi, instruction is not obligatory, although this would be peculiarly necessary for him since it cannot be given in the bosom of his family. Twenty years, concluded Signor Zucchi, have passed since the juridical and social reclamation of the deaf-mute and the "obbligatorietà dell' istruzione" (obligation to teach him) was first brought before the Italian legislature; but up till now nothing has been done for him in that quarter. The interesting discussion which ensued and flowed over into the following day led up to a unanimous resolution of which I give the text: "The Congress in behalf of Deaf-Mutes convened at Milan, considering in plenary assembly the report of the *avvocato*, Signor Natale Zucchi, on the juridical condition of deaf-mutes, accepts his proposals and expresses the wish that the Italian Legislature, in reparation for the neglect and abandonment in which it has left deaf-mutes before the law of social order and particularly before the law of obligatory instruction, should make urgent provision for the removal, in the domain of public and private right, of those restrictions and disqualifications which no longer apply to deaf-mutes who have learned *vivâ voce* to speak and who have been declared in that respect competent by the Commissione di Proscioglimento (Committee of Liberation) specially appointed." With this resolution the Congress rose, its members including Catholic priests and evangelical Protestants, freethinkers and agnostics, Conservatives, Radicals, and socialists—every shade, in fact, of creed and party—congratulating each other on good work harmoniously done, while all of them were touched (some even to tears) by the "sordo-muti redenti," drawn up 100 strong at the exit from the hall and going through a series of admirably executed evolutions, which ended with round after round of "evvivas" from lips congenitally sealed.

April 30th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The New Professor of Medicine.

THE Turkish Government lately asked for a professor of medicine from Germany. The German Emperor has now granted the necessary authorisation to Dr. Rider, professor at the Medical Faculty of Bonn, to fill a similar post at the Imperial Medical School of the Turkish capital. The newly appointed professor is to receive 30,000 francs a year. He is also to have an assistant, likewise a German, who is to receive a salary of 15,000 francs a year. Besides teaching in the school Dr. Rider is also charged to reorganise the medical school. He and his assistant will further have the duty of inspecting the military hospitals of this town.

The Plague.

The official bulletin issued by the Sanitary Administration here states that 46 cases of plague, of which 29 proved fatal, had occurred at Jiddah from March 22nd to April 11th. The Porte has already ordered precautionary measures and has despatched a medical commission to the plague-stricken districts of the Empire. News has reached this place of the arrival of the commission at Alexandria, where Dr. Bitter, Director of the Hygiene Institute of Cairo, has joined the Ottoman Commission. They are to make investigations concerning the bubonic plague.

April 15th.

BANQUET TO THE MEDICAL PROFESSION.

THE LORD MAYOR OF LONDON, Colonel H. D. Davies, M.P., gave a dinner to the medical profession on Wednesday evening last at the Mansion House. Invitations were issued "to meet the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, and other members of the medical profession," and as this was the first occasion upon which the hospitality of the Mansion House had been extended to the medical profession as such, a very large and distinguished company of guests assembled.

The following noblemen and gentlemen accepted the Lord Mayor's invitation:—Sir Samuel Wilks, F.R.S. (President of the Royal College of Physicians of London), Sir William MacCormac (President of the Royal College of Surgeons of England), the Marquis of Lansdowne, K.G. (Secretary of State for War), Lord Russell of Killowen, G.C.M.G. (Lord Chief Justice of England), Lord Shand, Sir William Turner, F.R.S. (President of the General Medical Council), Lord Lister (President of the Royal Society), the Right Hon. J. G. Talbot, M.P., Alderman Sir Whittaker Ellis, Bart., Professor Chiene (President of the Royal College of Surgeons of Edinburgh), Professor Clifford Allbutt, F.R.S., Sir George Duffey (President of the Royal College of Physicians of Ireland), Mr. T. McKinnon Wood (Chairman of the London County Council), Professor Burdon Sanderson, F.R.S., Dr. John Ogle, Alderman Sir H. E. Knight, Professor Sir T. Grainger Stewart, Sir Thomas Smith, Bart., Professor Sir George Stokes, Bart., F.R.S., Sir E. Maunde Thompson, K.C.B., Sir H. F. Norbury, K.C.B. (Director-General of the Medical Department of the Navy), the Master of the Society of Apothecaries (Dr. Griffith), Sir Alfred Garrod, F.R.S., Mr. Jonathan Hutchinson, F.R.S., Sir Charles Hall, K.C.M.G., Q.C., M.P. (Recorder of London), Sir Charles Cameron, Bart., M.P., Dr. Hermann Weber, Alderman Sir David Evans, K.C.M.G., Dr. Little (President of the Royal Academy of Medicine of Ireland), Mr. Thomas Bryant, Professor Michael Foster, F.R.S., Professor T. R. Fraser, F.R.S., Dr. Hill (Vice-Chancellor of the University of Cambridge), Sir Walter Foster, M.P., Sir Arthur Wells, Bart., Sir Dyce Duckworth, Sir J. R. Andrew Clark, Bart., Dr. H. C. Cameron (President of the Faculty of Physicians and Surgeons of Glasgow), the Rev. Sir Borrodaile Savory, Bart., Sir Benjamin Brodie, Bart., Mr. Christopher Heath, Surg.-General Jameson, C.B. (Director-General of the Army Medical Department), Surg.-Major-General Hooper, C.S.I. (President of India Medical Board), Professor Jebb, M.P., Mr. W. Christie, C.B., F.R.S. (Astronomer Royal), Sir W. Roberts, F.R.S., Sir W. Priestley, M.P., Sir Cameron Gull, Bart., M.P., Sir Arthur Watson, Bart., Q.C., Professor Annandale, Sir James Dick, K.C.B., Sir R. Douglas Powell, Bart., Sir Philip Smyly, Mr. Buckle, Sir Norman Lockyer, K.C.B., F.R.S., Dr. Farquharson, M.P., Sir William Broadbent, Bart., F.R.S., Sir Henry Thompson, Sir Francis Cruise, Dr. Pavy, F.R.S., Sir Paget Bowman, Bart., Dr. Playfair, Dr. Stevenson, Mr. H. Power, Dr. J. E. Pollock, Dr. Whipham, Mr. Timothy Holmes, Sir William Porter, Bart., Sir Halliday Macartney, K.C.M.G., Mr. Malcolm Morris, Sir J. Crichton Browne, F.R.S., Professor Dewar, F.R.S., Mr. Under-Sheriff Gardiner, Dr. Crosby, C.C., Colonel Eustace Burnaby, Mr. G. J. W. Wigzar, Mr. H. Gordon Davies, Mr. W. J. Soulsby, C.B., Sir Simeon Stuart, Bart., Dr. Sedgwick Saunders (Medical Officer of Health for the City), Mr. Under-Sheriff Halse, Mr. Alderman and Sheriff Green, Sir Henry Burdett, K.C.B., Sir G. S. Robertson, K.C.S.I., Professor Roberts-Austen, C.B., F.R.S., Deputy Inspector Woods, M.V.O., the Mayor of Hastings, Sir Felix Semon, Sir Thornley Stoker, Surgeon-Colonel Stevenson, Deputy Surgeon-General Tobin (Canadian Militia), Mr. W. A. Meredith, Dr. Macnaughten Jones, Dr. Cory, Mr. John Bowes, Professor Vivian Lewes, Mr. Noble Smith, Mr. C. N. Barton, Mr. Ryall, Dr. Foster MacGeagh, Dr. Ernest Clarke, Dr. Blandford, Dr. Symes Thompson, Professor Philipson, Dr. Long Fox, Dr. Glynn, Mr. O. E. Bulwer-Marsh, Dr. Claye Shaw, Dr. F. Warner, Dr. Dawson Williams, Mr. Shirley Murphy, Dr. J. G Glover, Mr. Howard Marsh, Mr. W. H. Bennett, Mr. Whitehead, Mr. Nicholson, Dr. Donald MacAlister, Professor Leech,

Dr. Theodore Williams, Dr. Bowles, Dr. Seaton, Dr. Jabez Thomas, Dr. Gilbart Smith, Dr. S. West, Mr. Butlin, Mr. Clinton Dent, Dr. W. Collingridge, Mr. C. Brook, Dr. Sheen, Dr. Orwin, Dr. G. D. Wilson, Dr. Cayley, Mr. Morgan, Dr. F. Taylor, Dr. Saundby, Mr. G. Brown, Dr. Savage, Dr. Oliver, Mr. Boyd, Mr. Critchett, Mr. Alfred Cooper, Mr. Burton (Warden Apothecaries' Society), Mr. Parker, Mr. Wheelhouse, Mr. Jessop, Dr. Dakin, Sir Peter Eade, Mr. Willett, Dr. Hensley, Dr. Dreschfeld, Dr. M. Skerritt, Dr. S. Mackenzie, Dr. Potter, Dr. Manson, Dr. Newsholme, Mr. Walsham, Mr. Pepper, Dr. Woodhead, Mr. T. Wakley, jun., Mr. Tomes, F.R.S., Sir R. M. Craven, Sir J. Sawyer, Mr. H. D. Erskine, Dr. Pye-Smith, F.R.S., Mr. J. Couper, Mr. Macnamara, Dr. W. J. Collins, L.C.C., Mr. Langdon, Mr. Davies-Colley, Dr. Henry Maudsley, Dr. Acland, Dr. Eddison, Dr. de H. Hall, Professor Ball, Mr. Clutton, Captain Sir A. Jephson, R.N., Mr. A. H. A. Morton, M.P., Dr. Clark, M.P., Mr. G. Lawson, Professor Stewart, F.R.S., Dr. Southey, Mr. W. Cheyne, F.R.S., Dr. Sansom, Dr. Barrs, Dr. Sharkey, Mr. C. Lucas, Professor E. H. Bennett, Mr. W. Anderson, Professor Mitchell Banks, Mr. Pitts, Sir W. Dalby, Dr. Ringer, F.R.S., Dr. E. Liveing, Mr. Teale, F.R.S., Mr. Howse, Dr. C. Bastian, F.R.S., Mr. E. Owen, Mr. Paget, Mr. H. Morris, Dr. Coupland, Dr. Black, Professor Redfern, Mr. Bond, Mr. Storr, Mr. Cotman, Mr. Gordon Brown, Sir W. Gowers, F.R.S., Dr. Church, Surgeon-Colonel Notter, Dr. Gee, Mr. Rose, Dr. Payne, Rev. Canon Edmonds, Mr. Croft, Professor Cuming, Dr. F. Roberts, Mr. Bloxam, Dr. Isambard Owen, Mr. Makins, Mr. Mayo Robson, Dr. Crawford Hayes, the Mayor of Ruthin (Dr. J. M. Hughes), Mr. Herbert Page, Dr. Burney Yeo, Dr. Lauder Brunton, F.R.S., Professor Halliburton, F.R.S., Dr. B. J. Anderson, C.I.E., Mr. Golding Bird, Dr. Luff, Mr. Barrow, Mr. Swanzy, Mr. Stonham, Mr. Felix Skene, Dr. Duffin, Mr. Barker, Dr. Ferrier, F.R.S., Dr. Norman Moore, Dr. Vintras, Dr. H. Green, Mr. Godlee, Dr. Poore, Professor McCall Anderson, Mr. Cadge, Dr. Champneys, Dr. Abercrombie, Dr. Tirard, Dr. Eustace Smith, Mr. McCarthy, Mr. Pollard, Mr. Spencer, Mr. Bennett May, Mr. Fairbank, Dr. W. Duncan, Dr. Barlow, Dr. Cavafy, Mr. Victor Horsley, F.R.S., Dr. Ewart, Dr. Ord, Dr. Goodhart, Dr. Curnow, Dr. Mapother, Mr. Treves, Professor Macewen, F.R.S., Mr. Tweedy, Mr. Barling, Dr. Manby, Dr. W. S. A. Griffith, Mr. Knowsley Thornton, Dr. Allchin, Fleet-Surgeon Mahon, C.B., Mr. George Cowell, Dr. Lees, Dr. Galabin, Dr. Charlewood Turner, Professor Corfield, Dr. Brodie, Mr. Pick, Mr. Pearce Gould, Dr. Arnison, Mr. Pye-Smith, Mr. Vincent Jackson, Dr. Clement Godson, Dr. Lediard, the Mayor of Henley (Mr. J. Lidderdale), the Mayor of Preston (Mr. J. E. Dunn), the Mayor of Devizes, Dr. Herman, Dr. Fowler, Dr. Spencer, Dr. Hollis, Professor Greenfield, F.R.S., Mr Haward, Dr. Page, Mr. Cross, Mr. Tindall, Mr. Cripps, Mr. Welland Mackenzie, Dr. R. Barlow, Dr. S. S. Sprigge, Mr. F. G. Hallett, Mr. Wherry, Professor Thomson, Dr. Ward Cousins, Mr. Swain, Mr. Bankart, Mr. Sibert Cowell, Dr. J. W. Fry, Mr. G. Stoker, Mr. Sheriff Dewar, Professor Bradbury, the Mayor of Cheltenham (Mr. R. Rogers), the Mayor of Carnarvon (Dr. R. Parry), the Mayor of Bootle (Dr. J. McMurray), Deputy Inspector-General Stanistreet, R.N., Sir H. T. Wood (Secretary of Society of Arts), Dr. Buzzard, Mr. Reginald Harrison, Dr. Donkin, Dr. Ernest White, Dr. Rutherford, Dr. Outterson Wood, Mr. A. W. Prichard, Mr. Eddowes, Mr. O. C. Maurice.

Dinner over and grace having been said, the loving-cup was passed round, and the Lord Mayor bade his guests a hearty welcome.

The LORD MAYOR, in proposing the health of Her Majesty, said: We are all glad to welcome back our beloved Queen to her own country. We are delighted to know that she has returned in such good health; may that good health long continue. I give you "The Health of the Queen," and may God bless her.

In proposing the toast "The Prince and Princess of Wales and the other Members of the Royal Family," the LORD MAYOR said: We all know the deep interest which every member of the Royal Family takes in the medical profession and the practical sympathy which they show in looking after the hospitals of London. We know how deeply they are interested in the welfare of the people and we are always delighted to greet them in the City. I ask you to drink to the health of the Prince and Princess of Wales and the other members of the Royal Family.

Lord RUSSELL of KILLOWEN, G.C.M.G., Lord Chief Justice of England, proposed the toast of "The Navy, Army, and Reserve Forces." He said: I think there is no section of the community that does not recognise the necessity for an adequate executive force by land and by sea. Differences of opinion indeed exist as to what is an adequate force, and those differences of opinion have been the cause of endless perplexities to successive Chancellors of the Exchequer and Secretaries of State for War. I think also that every section of the community agrees in this—that while it is necessary, looking to the greatly diversified and widely extended interests of this Empire, that there should be such adequate forces, yet the consensus of opinion is that such forces shall be forces of defence, not of defiance, forces which shall guarantee the peaceful exercise of our rights and not forces conceived or directed to purposes of aggression or of conquest. One thing we may truly say at all times of our army and navy: although frequently tried under circumstances of great difficulty they have never been found wanting when called upon to discharge their duty. Recent examples of this are before us both in India and in Egypt. I say nothing of the policy of the campaigns, but we are all entitled and glad to be able to recognise in the conduct of the officers and of the men the presence of fortitude, bravery, and endurance—characteristics which have always marked our soldiers. There is in connexion with those campaigns one circumstance which cannot but be regarded as most gratifying—namely, that the same qualities which have marked our home-bred soldiers have been manifest in the native forces both in India and in Egypt. With this toast two distinguished names are coupled. In respect of the navy there is an appropriateness peculiar to this occasion in coupling with that part of the toast the name of Sir Henry Norbury, the Director-General of the Medical Department of the Navy. There is a peculiar appropriateness on this occasion because, in the first place, he is a distinguished naval officer, and because it is relevant to this occasion to observe the great benefits that the distinguished profession which you, my Lord Mayor, have honoured and which has honoured you by its presence here to-night—the great benefits, I say, and distinguished services that this body has rendered in mitigating the horrors of war; I refer not merely to the qualities which characterise the medical profession, but the fact that in proportion to their numbers they show the largest number of any of Her Majesty's subjects who have received the Victoria Cross. Coupled with the part of the toast which relates to the army and reserve forces I have to mention the name of Lord Lansdowne, whose remarkable services to the Crown, first as Governor-General of Canada and afterwards as Governor-General of India, command the gratitude of the nation; and I am sure I am voicing your opinion and general public opinion when I say that the country has every confidence in the wisdom, caution, and administrative ability of the Secretary of State for War.

In responding Sir HENRY NORBURY said: It gives me very great pleasure to respond to this toast in the name of the officers and men of the Royal Navy, and I thank you most sincerely for the kind way in which you have received the toast. The navy is a service which, though always popular, is unable to attract the attention of the public because from its very nature it is unable to make the popular displays that the sister service can so readily do—except on occasions such as the Diamond Jubilee when people invaded Portsmouth to witness the naval review. At no time in our history has the navy been in a more efficient condition than it is now, not even in the time of that celebrated naval hero of whom as Englishmen we are all so proud, Nelson. I could not wish a more honourable or, I might say, pleasurable career for any man than one in the service of the navy. In the name of that service I thank you, my Lord Mayor, for the honour which you have bestowed upon us in asking us to accept your hospitality at the Mansion House this evening.

Responding on behalf of the Army Lord LANSDOWNE said: I see immediately before me the Director-General of the Army Medical Department and I cannot help feeling that on this occasion the duty which has been cast upon me might perhaps have been more appropriately placed in his hands. I have to thank you for the kind manner in which this toast has been received, and I am sure that the generous words of the Lord Chief Justice will be valued by all who are serving Her Majesty in the army and by all the friends of that service. It is said sometimes that in this country we are apt

to disparage our own institutions, and this applies sometimes perhaps when we are talking about the army; but it will scarcely be disputed that in the two campaigns which the Lord Chief Justice referred to British soldiers have shown that they are not unworthy to uphold the great traditions which belong to the British army. I think we must all of us have read with pride the farewell words of Sir William Lockhart, published in to-day's papers, when taking leave of the Tirah field forces. Both these campaigns had in them this feature—that British soldiers were serving under the same flag with men of races other than their own. The admirable performances of these native troops, their discipline and soldier-like qualities, may be without exaggeration to a great extent traced to the training which they have received from British officers. While we have in the British army leaders of men like Sir William Lockhart and Sir Herbert Kitchener—while such leaders are training up the younger race of officers to follow them, we need not despair of the British army. These campaigns are useful because they not only call attention to our strong points but also to our weak ones, and I am told that the Egyptian campaign has this one weak point which I ought not to ignore. I refer to the matter of the army boot. I am not going to admit that the army boot is a bad boot. I believe that it is a thoroughly serviceable article, but it appears that it does not resist the insidious effect of desert sands. In saying a word about the boots I must say a word about the wearers. General Gatacre in the march of his brigade to the front covered a distance of no less than 142 miles in five days, an average of over 28 miles a day. That as a feat of endurance, I think, is something for a British soldier to be proud of. In the future I hope we shall be able to discover a boot which even General Gatacre and the Egyptian desert will not be able to wear out. The army owes a very great debt to the profession you are honouring this evening. In peace the profession teaches us how to combat the diseases and the climatic influences to which in our ever-increasing Empire the British troops are exposed. When peace is broken medical men teach us how to mitigate the barbarity of warfare. Engines of destruction are now used more terrible in their effects and more deadly wounds can be inflicted in seconds now than in hours in times past. It is the medical profession which teaches us how to correct the effects of our own ruthlessness, and if we had to choose between the credit to the man who, say, invented a new Dum-Dum bullet and the credit to him who showed us how to extract it and save the shattered limb I do not think we should be long in deciding. I am using no idle phrase when I say that the army is proud that it contains a number of officers who belong to the medical profession, but who are none the less soldiers in the fullest sense of the word, wearing the Queen's uniform, holding her commission, ready to take their share—aye, and more than their share of the risks and hardships of warfare. We are determined that there shall be no failure either in theory or in practice to treat them with the respect to which they are entitled. It has been to me a source of very great regret that there have been of late years signs of a feeling of estrangement between the army and the medical profession which has been outwardly expressed by the abstention of candidates for commissions. In such cases it is, perhaps, not unfair to assume that there may have been faults on both sides. We on our side are determined that you shall have no cause to complain of us. In several minor matters to which I will not refer upon an occasion like this we have already shown our determination to meet you in a reasonable spirit. We are now about to deal with the large question in which I know the profession takes a deep interest—the question of the status and rank of the medical officers in the army. I have heard it said, Is not the title of "Doctor" or "Surgeon" a title by itself which anyone might be proud to wear? But in the army rank means a great deal. It is the outward and visible sign of that authority and consideration with which the place of a man is clearly defined and designated, and it is necessary in the military profession that a man should have a proper military stamp. Let me say in half-a-dozen words how it is that we intend to deal with this question. We have made in former years various attempts to solve this question of titles by means of ingenious expedients, but the results have not been very satisfactory. In some cases we have, I think, invented titles which for cumbrousness and cacophony would be hard to beat. We now propose that the Army Medical Staff and the Army Medical Corps should be formed into one corps. The titles used shall be the simple, short, intelligible titles to which we are all accustomed. We propose to give the corps military titles up to and inclusive of the rank of Colonel. I have received some forcible hints that our scheme will be unsuccessful unless we proceed to the rank of General. But we in future intend to limit the rank of General to a very restricted number of officers, all of whom will be required to hold certain specific appointments carrying with them general command in the army and they will be required to command troops, if necessary, in the field. I feel quite sure that it is not intended that any departmental officers shall be given the rank of General under this scheme. Her Majesty the Queen, whose goodwill towards the profession is well known, has signified her pleasure that the new corps shall be called the Royal Army Medical Corps. I cannot help hoping, my Lord Mayor, that your distinguished guests and their friends will give us credit for having made these proposals in a fair and reasonable spirit and that we shall find that they on their side will spare no pains to induce the best and most prominent recruits in their profession to join the Royal Medical Corps. I am sure that we must all desire to see improvement in the British army and that there may be found serving with it members of the medical profession who, by their ability and standing in their profession, are in every way worthy of those whom you, my Lord Mayor, are honouring this evening.

The LORD MAYOR: It now becomes my pleasing duty to propose the toast of "The Medical Profession." I feel a peculiar pleasure in proposing that toast because I think that this is the first occasion on which it has been proposed within these walls. I have heard various complaints from members of the medical profession serving in the army, but I little thought that this banquet would have been the medium of bringing forth such a satisfactory statement as that just made by the Noble Marquis the Secretary of State for War. We must admit that that statement is most satisfactory, and not only to those connected with the army. I am delighted to welcome you here to-night in the name of the citizens of London. I welcome you for more reasons than one. In the first place I welcome you because for many generations past you have been intimately associated with the City of London. I believe that the Royal College of Physicians commenced in the City of London in 1518. The Royal College of Surgeons was intimately associated with one of our ancient City guilds—I refer to the Barber-Surgeons Company. There is another company connected with your profession, also one of the livery companies, which has its residence in the City of London at the present time, and we members of the Corporation welcome you heartily as having some connexion with us both in times past and at the present time. But I welcome you on other grounds. I know the vast amount of good which you do to suffering humanity, and when I speak of suffering humanity I do not refer to it in the sense that you look to the comfort and health of the ordinary patient, but rather mean that you devote much of your valuable time to the amelioration of the sufferings of those poor creatures who are unable to help themselves. I see the names of those distinguished physicians and surgeons who devote their time to hospital work and know the immense amount of good they do and how instructive their work is also. They, as Lord Lansdowne has told us, train the young to take their places and we citizens are deeply grateful for the vast amount of good which is thus conferred upon poor humanity. I will not, my lords and gentlemen, occupy your time by making a longer speech. I am delighted to welcome you here to-night and to meet my two distinguished guests, the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England. Every man present to-night is a distinguished guest. We welcome you all; we trust that we may see you again—not medically, but hospitably. I welcome you as Lord Mayor of the chief city in the world, the healthiest city in the world, not rendered altogether healthy by the assistance which you give us, but by the joint assistance of the Corporation of London and the medical profession. I give you the toast which I ask you to drink standing—"The Medical Profession," coupled with the names of my distinguished guests, Sir Samuel Wilks and Sir William Mac Cormac.

Sir SAMUEL WILKS (President of the Royal College of Physicians of London) said: I thank you very much for your very kind words about myself and my profession,

but if we had only heard the speech of the Marquis of Lansdowne we should have been satisfied because it may afford a good solution of a question which has so long been before us. But the meeting here to-night is unique, and, therefore, in spite of what has been said by my neighbour, I consider that what I may have to say is really the toast of the evening. I cannot pretend to interpret the minds or opinions of the most illustrious and most learned men of my profession who are gathered here to-night from all parts of Great Britain, but I am quite sure that there is one sentiment that animates them all and that is a feeling of gratitude to you, my Lord Mayor, for having given us this token of your recognition. As you have said, this is the first time that a banquet has been given to the medical profession at the Mansion House. There may have been cases, such as congresses, when many distinguished foreigners have been present in London and when the *élite* of the profession have been joined with them, but in ordinary times of quiet without any exciting cause, to use a medical expression, you, my lord, have cast a kindly eye over us and cast your ægis over the whole profession. You have taken a new departure. This may have come about for many reasons. Nowadays there is a closer connexion between the corporations and the sanitary authorities. Medical men no longer give their whole time to the individual patient in a private capacity, but have regard for the masses and, with the motto that prevention is better than cure, the doctors have become the guardians of the public health. A good example of this was seen the other day during that frightful epidemic of typhoid fever. But although we approach one another more closely now, for a long time there has been a separation. It was not always so. As you have said, my lord, there was a time when the two Colleges were City companies and at that time they were under the jurisdiction of the City and of the Lord Mayor; the same, I believe, applied to the other cities of Dublin and Edinburgh. The Physicians and Surgeons existed nearly 500 years ago as distinct companies in the time of Henry VI. and at that time they were closely connected with the Corporation of London and I believe they had to get their Licence from the Lord Mayor. The Lord Mayor of that time had a supervision over the instruments of the Surgeons and also over another class of persons connected with the Surgeons whose names I will not mention, although the Lord Mayor has done so. One reads in books how often they had to fine these Members of the College in sums of 6*s.* 8*d.* and 3*s.* 4*d.* for shaving polls and trimming beards on a Sunday. Subsequently came the Charter of the College of Physicians which we obey at the present time, and twenty years after that came the Charter given by Henry VIII. to the Surgeons. The celebrated picture by Holbein hangs in a hall close by. In that picture the King is presenting the Charter to the Surgeons. On his right hand are the physicians, Dr. Chambers and Sir William Butts. Previously to this time I believe the two Colleges held an examination similar to the conjoint scheme at the present day. The men who founded the two Colleges were men of the highest worth and integrity. One of these great men was Caldwell, who was instrumental in founding the Lumleian Lectures, and he laid down a code of ethics which could not be surpassed. Then there was Vycary, who held that a surgeon should be as secret as any confessor and also said that it is meet that chirurgeons should love one another. After this time they gradually ceased their association with the City and although they remained in the neighbourhood some time they gradually went westward. The Surgeons lingered towards the City a long time, as it had a great interest in, and was very much associated with, another institution in the City—I mean Newgate. It is pleasing to see that a new *rapprochement* is gradually taking place amongst us not only for the reason I have given. But the City of London and all the Guilds belonging to us have made an approach of late years to all the seats of learning. Benevolence and hospitality have always been characteristic of the City of London and the Guilds. Now they are adding to these qualities by devoting their attention to matters of learning. I need say nothing about Guildhall, where there is a splendid library, museum, annual picture exhibition, &c.; but, beside all that, they have done much for science and learning, and in our own profession we have especially to thank them for the help they have given to the advancement of scientific medicine. The City have given great assistance in the study of bacteriology. The future citizens of London will be proud of the part taken by the City of London and its Guilds in the scientific work of the closing years of the nineteenth century. As a crowning act you have called us here to-night in person and in the name of those here assembled I thank you most heartily.

Sir WILLIAM MACCORMAC (President of the Royal College of Surgeons of England) said: It is now my duty, however imperfectly I may be able to discharge it, to convey to your lordship on behalf of my surgical brethren and myself our most cordial appreciation of the honour you have done us and how gladly we accept the compliment you have been good enough to pay our profession in thus inviting us to this banquet. We are very proud of our profession and of the great strides it has made in recent years. I think we have just reason to be proud of it, for never before has our profession occupied so large a place in the State, never previously has it been able to accompany so large a measure of good for the community. And this, I think, is fully recognised, and by no one, I am sure all present will agree, has it been more gracefully or handsomely recognised than on this memorable occasion by the Lord Mayor of London. Speaking for surgery it is difficult for anyone not in immediate contact with the work to realise the immense progress which has taken place in surgery in the last few decades. It is astounding—to me personally it is a source of never-ceasing wonder and admiration—that older surgeons used to regard an operation as a stigma on surgery—a confession of failure to cure by other and less radical methods. From time to time we were assured by great masters of our craft that surgery had reached such a pitch of perfection that no further improvement was possible, but events have constantly falsified this prediction, and I believe there is no finality in surgery any more than in other branches of science. And assuredly operations are no longer a stigma. Large classes of surgical cases are now capable of not only relief but cure by operations which never before came within the range of practical surgery. Many with otherwise fatal ailments may be absolutely restored to health; many with crippling conditions of different kinds can be restored to full activity. Two great factors have enormously contributed to this end. One the blessed discovery of anæsthesia whereby the ghastly terrors of an operation are dispelled and many operations otherwise impossible can be performed. The other and not less beneficent discovery is the antiseptic treatment of wounds, which has practically removed the risks and sufferings formerly attendant on operations. The author of this glorious gift to humanity is amongst us to-night. Surgeons and surgery throughout the civilised world owe to Lister a debt very inadequately acknowledged by our affectionate admiration of the man whose patient insistence, both by observation and experiment, clear perception, and bold scientific induction have realised for him a name and fame that shall never perish. My Lord Mayor, the presence amongst us of the noble Marquis the Secretary of State for War induces me to say a word in regard to the Medical Department of our army. No confidential communication on this subject has been made by anyone to me and therefore I betray no confidence when I say that I am sure the members of the profession outside the army and those within its ranks are grateful for what the noble Marquis has done for those who thus serve their country, and my lord, have served it well, in the Medical Department of the army. Lord Lansdowne is responsible for the affairs of the whole army, yet I tell no secret when I say that the affairs of its medical department must of late have occupied a large share of his attention. He has dealt with these matters in a most sympathetic, generous, and I would add most wise and statesmanlike spirit. He has granted reforms, revolutionary changes almost, in the department, in spite of very strenuous and persistent opposition on the part of some who we may suppose do not belong to it. He has agreed to grant the two great wishes which have been pressed upon him—army rank and the formation of an army medical corps. A comparatively small question about the titles of surgeon-generals has also, I think, been solved; and all this should, I consider, give great and general satisfaction. Very fitly it is but right and fair to judge a man by what he succeeds in accomplishing, and Lord Lansdowne has accomplished for the Army Medical Department what they have very earnestly desired, and has done very much it may be hoped to restore

its former prestige, and it will be restored if all concerned work loyally to obtain it. A very celebrated Scotch surgeon, John Bell, writing at the beginning of this century, when all Europe was at war and the qualities of a military surgeon could be more justly appreciated than in time of prolonged peace, says that he has been accustomed to regard the public service of the State as a great school of practical science affording opportunities which more than compensate for the hardships and dangers of that way of life. The situation of a military surgeon he considers more important than that of any other. While he is yet a young man he has the safety of thousands committed to him in unhealthy climates and in the midst of dangers. He has to act alone and unassisted in cases where prompt decision and perfect knowledge are required and duties difficult in all times are often to be performed amidst the hurry, confusion, and cries of battle. He forms the highest estimate of the qualities, both personal and professional, that a military surgeon should possess, as it is to him that his fellow soldiers look in moments of distress. It is remarkable how many distinguished men in our profession have served their country in the wars. Many of the foremost men in France, in Germany, and in England have done so. There are some in this room now who have thus greatly distinguished themselves, and it has always been so. In the history of the City of London one might recall the names of many. The Father of English Surgery, Richard Wiseman, surgeon to King Charles I. and Serjeant-Surgeon to King Charles II., had an eventful career during the Civil War. He was taken prisoner after the Battle of Worcester and again while practising his profession as a surgeon in the Old Bailey at the sign of the King's Head he was taken to the Tower and nearly lost his own head during the Commonwealth. About the same time John Woodhall, a surgeon at St. Bartholomew's Hospital, Surgeon-General to the East India Company, also a celebrated surgeon in this old City of London, who had served both in the army and in the navy, dedicates his curious work on surgery and the duties of the surgeon's mate to the "King's most excellent Majestie" Charles I. and also to the Right Hon. Sir Morris Abbot, Lord Mayior. "Your poor subject," he says, "has presumed to prostrate at the feet of your sacred majestie these his unworthy works in surgerie which contain in them the methods and scope of the military surgeon's chest with the 'viaticum' or pathway to the chest with all the necessary appurtenances which are useful in surgery for the warres either by sea or land." Woodhall speaks of himself as an ancient master of the mysterie of Barber Surgeons, an old City company which became transformed in lapse of time, let us hope improved, into the Royal College of Surgeons, while the Apothecaries, who did so much in their time for the profession of this country, and still do so, continue as one of the City companies. So there are points of contact between our profession and the City of London. And now, my lord, I would add a word as to one aspect of the great Corporation over which you so worthily preside, and that is its never-failing benevolence and charity. It is shown in the part, more immediately concerning us, that you and the Corporation take in the government of the great charities of the City of London. In your corporate capacity you are Governors of the Royal Foundations of St. Bartholomew, of St. Thomas, and of Bethlem, and also of Guy's Hospital. These institutions amongst many others have had the closest connexion with the City of London and owe much to its influence both in the past and in the present. To you, then, my Lord Mayor, as grand almoner of the never-failing and unstinting charity of this great city, of which many amongst us are administrators—as Chief Magistrate of this the greatest city of our empire and of the world, I return, on my own behalf and on that of the surgeons of the United Kingdom, our most sincere and appreciative acknowledgments for the honour you have this day done to our profession.

Sir WILLIAM TURNER (President of the General Medical Council) said: My duty is a very responsible one—namely, to propose the toast of "The Houses of Lords and Commons." I have been present at festive gatherings where the speaker whose duty it was to propose the House of Lords proposed it in an apologetic manner. I am sure, my Lord Mayor, that in this city and in this hall such an apologetic manner would be entirely out of place. The City of London has had ample opportunities of knowing what the House of Lords is—how eminent it is, how honourable is its antiquity, how illustrous are its traditions and how representative it is of such of the great historic families of the United Kingdom as still remain with us. But the House of Lords would not have retained the esteem of the citizens of this country if it had rested solely upon its great families. It is constantly receiving new acquisitions, acquisitions from without. Men are brought into it who have rendered great services to their native country, either in the public services or in the professions. Some of the professions have been in this respect more highly favoured than others. The law has furnished many additions to the House of Lords (we have here this evening one of the most illustrious representatives of the profession of the law) but it has been an extremely difficult matter for the profession of medicine to obtain an entry into the House of Lords. We have heard that it has been a very difficult matter for the medical profession as a profession to obtain an entry into this Mansion House, and we thank you, my Lord Mayor, for having accorded us this entry this evening. In the selection of Lord Lister for the Upper Chamber we all felt that our profession was honoured and that at last justice had been done to it, and from this point of view—that Joseph Lister represented not only the practitioner but the science of his profession; he represents the great fundamental principles of our profession and it gives me the greatest pleasure of associating with this toast the name of Lord Lister. But I haveto ask you also to drink the health of the House of Commons, a place not so difficult of access as the House of Lords for the medical profession. There are many members of the House of Commons present to-night and we all feel grateful to them for the work they do in connexion with matters pertaining to the profession, matters chiefly of public health. Questions are continually arising in which the special knowledge of the medical practitioner does great service in matters of legislation, such, for instance, as the subjects of vaccination and public health. I have been asked to couple with this toast the name of one who has done excellent service for the public from a professional point of view, that of Sir Charles Cameron, and I ask you to drink to the House of Lords coupled with the name of Lord Lister and to the House of Commons coupled with the name of Sir Charles Cameron.

Lord LISTER said: I feel that it is exceedingly inappropriate that this toast should be responded to by so recent and humble a member of the House of Lords as myself; yet as a member of the profession which has been so uniquely honoured by you, my Lord Mayor, this evening, I rejoice in the privilege of returning to you our most cordial thanks; and if I were to speak the sentiments of my heart they would be that whatever the shortcomings of ourselves individually may be our profession is that of the very highest nobility. At this late hour of the evening I can but express my unbounded satisfaction to the Marquis of Lansdowne for the statement which he has made in regard to the Army Medical Staff. He has cleared the way and in the future the army will be served by the best elements of our profession.

Sir CHARLES CAMERON said: Lord Lister is one of the greatest members in the House of Lords although he has alluded to himself as "humble." As for the House of Commons the policy laid down by Beaconsfield, *Sanitas, sanitatum, omnia sanitas*, has become more and more engrafted upon the policy of the people's house. In the name of the House of Commons I thank you heartily for the manner in which Sir William Turner has proposed the toast and the way in which it has been received by you.

Sir GEORGE DUFFEY proposed "The Health of the Right Hon. the Lord Mayor."

In his reply the LORD MAYOR said: It is indeed gratifying to me to find that my name should receive such a cordial reception as that which you have given. I have felt in entering upon my year of office that I am a novel man. I wished to inaugurate novelties and this is one of them. I hope I may have many more in store. I have inaugurated this dinner to-night in the hope but not with the assurance that my successors will follow on with it. I see no reason, looking to the facts that almost every other profession has been recognised in this hall, why the medical profession should not be included with them. I have done it knowing what an honourable profession it is and knowing the amount of good work which it does. At this late hour of the evening I will not take up any more of your time; but I welcome you most heartily on behalf of the citizens of London and thank you most sincerely for your most kind reception.

THE GERMAN SURGICAL CONGRESS.

(FROM OUR BERLIN CORRESPONDENT.)

THE twenty-seventh Congress of the German Surgical Association was opened as usual in Langenbeck House, Berlin, on the Wednesday after Easter. That day happened this year to fall on April 13th and the meetings were continued till April 16th. The chair was taken by Professor Trendelenburg of Leipsic, who in his inaugural address informed the meeting that the family of the late Professor von Langenbeck, the founder and honorary president of the association, had bestowed on the association an endowment of 50,000 marks (£2500) in order to enable German surgeons, civil and military, to study military surgery in countries which might be the theatre of wars in which Germany was not engaged. In time of general peace prizes payable out of the annual proceeds of the endowment would be awarded to the authors of the best theoretical works on military surgery. The first subject considered by the congress was

The Improvement of the Aseptic Method in Surgery.

Professor MIKULICZ (Breslau) said that in order to avoid infection of operation wounds by the hands of the surgeons and the assistants he recommended the wearing of gloves of white thread which must be sterilised before use. To protect the wounds from germs coming from the mouth he and his assistants cover their mouths with gauze bandages. He stated that this precaution was necessary owing to the fact that in 33 per cent. of 48 cases bacteriological examination showed that staphylococcus aureus was present in the mouths of healthy persons. Speaking during the course of an operation ought to be avoided as much as possible. To ensure the sterilisation of dressing materials he has devised some methods which are apparently very useful. The most simple and efficacious way of control is to put inside the dressing-box a piece of paper on which the word "sterilised" is printed, and the paper before being sterilised is made blue by a solution of iodine, so that the printing disappears. When a temperature sufficient for complete sterilisation is produced within the apparatus the iodine goes off and the word "sterilised" reappears on the paper.

Professor LANDERER (Stuttgart) recommended that bandages treated with a 1 per cent. solution of formalin should be applied to the skin from twelve to twenty-four hours before an operation.

Dr. DÖDERLEIN (Tübingen) said that he had found that gloves such as those worn by Professor Mikulicz became filled with bacteria during operations. Gloves of caoutchouc were less infected. He did not think that gloves were of any use and he advised that surgeons should wash their hands frequently during their operations.

Dr. FRIEDRICH (Leipsic) stated that the views of the late Dr. Schimmelbusch, although correct from a theoretical point of view, were not applicable in practice. Dr. Schimmelbusch found that the bacteria present in a traumatic lesion very quickly penetrated into the blood-stream, so that the local application of an antiseptic was according to him quite useless, but it must be remembered that he made his experiments with cultures of anthrax and not with the comparatively few and innocuous germs ordinarily present in wounds. Dr. Friedrich inserted small portions of earth in the muscles of rabbits and found that the bacilli of malignant œdema did not penetrate from the wound into the circulation in less than six hours, from which it is evident that infection may be avoided if an antiseptic is applied within six hours after an injury.

Local Anæsthesia.

Dr. HACKENBRUCH (Wiesbaden) recommended injections of cocaine and eucaine especially for operations on the fingers and toes.

Dr. BRAUN (Leipsic) said that the physical properties of the injected compound were very important for efficacious anæsthesia. Only fluids which have the same freezing point as the lymphatic fluid in the tissues produce anæsthesia without either irritation or paralysis; a solution consisting of cocaine and eucaine dissolved in 0·8 per cent. salt solution would be the best. To add morphia as recommended by Dr. Schleich would not be an improvement because of the production of œdema. Local anæsthesia might even be used in major operations when general anæsthesia was either too dangerous or not possible owing to the general state of the patient. In children it is, of course, not to be used. In operations on the fingers and toes circular anæsthesia as recommended by Dr. Oberst is preferable to Schleich's method.

Dr. GOTTSTEIN (Breslau) said that in the surgical clinic of that town 233 major operations had been performed under Schleich's local anæsthesia and he mentioned the interesting fact that affections of the lungs developed as frequently after local anæsthesia as after general anæsthesia produced by chloroform and ether. According to him this frequency of pulmonary affections is due, not to the anæsthetic compound, but to the pain which hinders the patient from expectorating.

Operations on the Stomach.

Professor KRÖNLEIN (Zürich) said that his assistant, Dr. Schlatter, had last year performed a total extirpation of the stomach for carcinoma and had united the œsophagus directly with the duodenum.[1] This operation, which had been very severely criticised by American surgeons, proved a complete success. The patient is now, five months after the operation, in a good state of health, has increased in weight, and is able to eat and drink like other people. Of 21 cases operated on according to Billroth's method 5 died within a fortnight after the operation. Of the 16 remaining patients 2 died from other diseases, 8 relapsed in from one to three years after the operation, and 6 are still alive, of whom 4 were operated on four years ago.

Dr. SCHUCHARDT (Stettin) said that three varieties of carcinoma of the stomach must be distinguished, the infiltrating, the nodular, and the cauliflower-like forms. The latter is moveable and is comparatively late in extending to surrounding structures. The first two varieties are very difficult to remove completely and as a rule the greater portion of the stomach has to be excised in these cases. The last variety is more easy to operate upon and gives the best results. Dr. Schuchardt showed a stomach the whole of which, with the exception of only a small portion, was removed three years ago for carcinoma. Death ultimately occurred from pleurisy and it was then found that the piece which was left had become dilated almost to the size of a normal stomach.

Dr. STENDEL (Heidelberg) gave an account of a series of 290 operations on the stomach performed by Professor Czerny during the last eight years. The average death-rate was 24·8 per cent.; in the first year it was 45 per cent., but decreased to 16 per cent. in the last year. Pylorectomy was but seldom performed, as pyloroplasty had proved to be preferable. Of 8 cases of pylorectomy 2 are still alive after seven and eight years respectively. Of 9 cases of pyloroplasty 4 were successful, but in one case gastro-enterostomy had to be performed subsequently. The operation of gastro-enterostomy has been very much improved by the employment of Murphy's button and the mortality has decreased by 12 per cent.; it was found that the button came away in the fæces and no ill effects followed its use. Dr. Stendel finally mentioned the fact that some cases of carcinoma were cured by mere laparotomy, in the same way as has been observed in tuberculous peritonitis.

Professor MIKULICZ (Breslau) strongly urged the removal of the surrounding structures, especially the lymphatic glands, in the neighbourhood of the stomach.

Dr. DOYEN (Paris) showed his new method of pyloric operation consisting in isolation and resection of the pylorus by the aid of a *pince* invented by him, ligature of the duodenum and the stomach, and gastro-enterostomy.

Calot's Treatment of Spondylitis.

Dr. HOFFA (Würzburg) stated that 6 deaths have been reported as a sequel of Calot's treatment of spondylitis. It is especially dangerous when the spinal curvature is of several years' standing, when many vertebræ are involved, and when suppuration is going on. In other cases the method may be tried cautiously. Paresis of the lower extremities is generally improved by it. Dr. Hoffa referred to 23 cases treated by Calot's method without fatal results, but in two instances abscesses developed. The operation is generally followed by an immediate improvement in the symptoms, but it is not yet possible to give a definite opinion as to the permanency of the result.

Professor LORENZ (Vienna) said that Dr. Calot undoubtedly had the merit of having proved that an angular

[1] A translation of Dr. Schlatter's paper recording this case was published in THE LANCET of Jan. 15th 1898.

curvature of the spine will bear rough handling, but his method of treatment is unfortunately wanting in precision. Professor Lorenz has devised an apparatus by which the amount of extension is brought more directly under control; he advises that the curvature should not be straightened abruptly and by force and he is strongly of opinion that the treatment should be applied only to cases in which the vertebral column is capable of relaxation. His views have been already reported in THE LANCET of Nov. 20th, 1897 (p. 1360).

Dr. WULLSTEIN (Halle) said that he had made observations on dead bodies in which the vertebral column had been broken in accordance with Calot's directions and he had found laceration of the pleura and the lungs, hæmorrhage of the dura mater, laceration of the spinal cord, &c. The curvature ought to be straightened gradually, as the application of great force is liable to produce the lesions just enumerated. New formation of bone in the space between the vertebral fragments was not possible, as has been alleged by Dr. Calot.

The majority of other speakers, such as Dr. SCHEDE, Dr. KÖNIG, Dr. KÜMMELL, &c., were of opinion that Calot's method was not universally applicable and that angular curvature of the spine could be successfully treated only in the early stage of the disease and by a less energetic procedure.

Operations for Empyema.

Dr. JORDAN (Heidelberg) said that Estlander's method of subperiosteal resection of the ribs had not given good results, for of 8 cases only 2 were successful. In protracted cases Schede's operation is preferable as all the fistulæ are made visible. The resection must be a radical one. Of Dr. Jordan's patients 9 were cured, 5 were improved, and 1 is still under treatment. In children the results are still better than in adults. The operation may be performed on tuberculous patients provided that their general state is not bad. On one occasion Dr. Jordan successfully carried out Delorme's method of removing fibrinous masses on the pulmonary pleura. Of 27 cases described in the medical press 11 were cured in this way.

Dr. PERTHES (Leipsic) recommended that a Bunsen's air-pump, which is worked by a column of falling water, should be connected with the cannula in the pleural cavity by means of a caoutchouc tube, so that the rarefaction of air produced by the pump might make the lung dilate.

Dr. KAREWSKI (Berlin) showed patients on whom he had operated for abscess of the lung as well as a patient suffering from actinomycosis who had been nearly cured by resection of the thoracic walls and cauterisation of the affected portion of the lungs by Dr. Paquelin's thermo-cautery.

The Serum Treatment of Diphtheria.

Professor KRÖNLEIN (Zürich) exhibited Statistical Tables, which showed (1) that the prevalence of diphtheria in the canton of Zürich had been nearly uniform during the past fifteen years; and (2) that the mortality rapidly decreased as soon as antitoxin serum was used on a somewhat large scale. In his clinic all the patients were examined bacteriologically and serum was administered in every case of diphtheria without exception. This was the only way of arriving at accurate statistical results. Of 1336 cases treated before the serum-period 554 (=39·4 per cent.) died, whilst during the serum-period there were 55 deaths among 437 cases (=12 per cent.). In cases of tracheotomy the death-rates before and during the serum period were 66 and 38·8 per cent. respectively; and, moreover, the operation is now performed much less frequently than before. The good effects of antitoxin serum were shown by rapid improvement of the patient's general state, decrease of temperature, loosening of the croupous membranes, decrease of glandular swelling, absence of tracheal croup and stenosis, and absence of diphtheritic infection of the tracheotomy wound.

Rifle Bullets of the British Army.

Professor VON BRUNS (Tübingen) made a communication relative to the bullets used by the British army in recent warfare. These projectiles were originally coated with nickel, but as it was found that the enemy when wounded were not invariably disabled the nickel coating was filed away from the top of the bullet. In fact, the nickel covering enabled the bullet to pass through the body making only a relatively small wound, but when this covering was removed from the top the lead was flattened out as soon as it struck the body, by which flattening the remainder of the covering was burst open in an explosion-like way, inflicting wounds of an astonishingly severe character. These bullets, which are termed Dum-Dum bullets, are now officially introduced into the British army. In experiments made with them on dead bodies Professor von Bruns found that shots fired at distances of from 25 to 50 metres (from 80 to 160 yards) caused wounds of the skin as large as a hand, the muscles were lacerated, great pieces of bone were torn out, and the wound was filled with fragments of lead and nickel. Professor von Bruns said that these bullets were in accordance with the letter but not with the spirit of the Convention of St. Petersburg, by which the use of explosive projectiles was prohibited. The convention would therefore have to be amended and he would be glad if the discussion of the question by the Surgical Association would have the effect of inducing the German Government to take the necessary steps.

Operations on the Liver and Gall-bladder.

Dr. PETERSEN (Heidelberg) gave an account of 162 Operations on the Liver and Gall-bladder performed in the surgical clinic by Professor Czerny. In 65 cases single cholecystotomy was performed, in 1 case cystotomy by two successive operations, in 6 cases dialysis, in 3 cases cholecystopexy, in 10 cases cholecystectomy (with 2 deaths), and in 20 cases choledochotomy (with 4 deaths). Choledochoduodenostomy was performed on 11 patients, with 4 of whom Murphy's button was used. Single cystotomy must be the normal operation. Cystectomy must be resorted to in cases of malignant growths. In 2 of the cases of cholecystotomy some calculi were left behind; the other patients did not relapse. Biliary fistulæ were established in 8 instances, but it was found that they did not occur when drainage-tubes were inserted in the gall-bladder after the operation. In 50 cases the bile was examined bacteriologically, with the result that colon bacilli were found in 38 cases, streptococci in 6, and staphylococci in 4. After the operation the bacteria usually decreased rapidly. Carcinoma was present in 30 cases and sarcoma in 3 cases.

Dr. RIEDEL (Jena) said that death after operation may be caused by infection of the bile. In the great majority of cases the bile is aseptic, so that it may penetrate into the peritoneal cavity without any harm, but on the other hand it may contain pathogenic bacteria. It is difficult to say before the operation whether the bile is infected or not, but patients with healthy bile generally feel well when the fit is over, whilst those whose bile is infected become cachectic. Patients of this kind are lost with or without operation.

Dr. FRANKE (Brunswick) showed some Gall-stones which had been broken by a medical man who had applied manual force through the abdominal walls without laparotomy. The fragments lacerated the gall-bladder and an abscess of the liver developed.

Space permits only a passing reference to the other papers read at the meetings of the association, the principal of them being as follows: by Dr. VON ZOEGE MANTEUFFEL (Dorpat) on Volvulus; by Professor VON BRAMAN (Halle) on Intestinal Resection for Carcinoma; by Dr. DOYEN (Paris) on Operations on the Brain; by Professor GARRÉ (Rostock) on Resection of the Œsophagus, &c.

At the final meeting Professor Hahn of Berlin was elected president. Of British members Mr. Arthur E. Barker of London and Professor Alexander Ogston of Aberdeen were present.

LITERARY INTELLIGENCE. — Messrs. Baillière, Tindall, and Cox inform us that they have the English agency for Kobert's "Practical Toxicology" which was noticed in our columns last week. They will publish during the next few days a "Manual of Surgery" by Professor Wm. Rose of King's College Hospital, and Mr. Albert Carless, Teacher of Operative Surgery in King's College. The work will take a place between the large text-books and the smaller manuals which are not now deemed sufficient for examinational purposes. They will also publish "Outlines of Practical Surgery" by Mr. W. G. Spencer of the Westminster Hospital and a new edition of Pearmain and Moor's "Manual of Applied Bacteriology," with coloured plates, the first edition of which has run out in a few months.—Messrs. Munns and Allen, Broad-street, Birmingham, have published a booklet of 48 pages containing a useful collection of annotations on the British Pharmacopœia of 1898, with remarks on the important differences between the present Pharmacopœia and its predecessor of 1895 and the additions of 1890. The price is 1*s*. The author is Mr. Thomas Chase, pharmaceutical chemist, Five Ways, Edgbaston, Birmingham.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—**At the Convocation held on April 23rd the following degrees were conferred:—**

Doctor in Medicine.—Ernest Chittenden Bridges, M.B., B.S. Durh.; Robert Cunyngham Brown, M.B., B.S. Durh.; Harry Crichton, M.B., B.S. Durh.; Charles Holmes Joy, M.B., B.S. Durh.; Nicholas Magoris, M.B., B.S. Durh.; William Rawes, M.B. Durh.; William Rushton Shortt, M.B., B.S. Durh.; James Ward Summerhayes, M.B. Durh.; and William Edwyn Falkingbridge Tinley, M.B., B.S. Durh.

Doctor in Medicine (Practitioners of Fifteen Years' Standing.)—Moses George Biggs, M.R.C.S., L.S.A.; Francis Charles Bryan, M.R.C.S., L.S.A.; William Lindsay Chubb, M.R.C.S., L.R.C.P.; William Darley-Hartley, M.R.C.S., L.R.C.P.; Charles Graham Havell, M.R.C.S., L.R.C.P.; Henry Martin Lightoller, M.R.C.S., L.R.C.P., L.S.A.; Justin McCallum McCarthy, M.R.C.S., L.S.A.; Lawrence Willmer Kinglake Phillips, M.R.C.S., L.S.A.; and Alfred James Turner, L.S.A.

Master in Surgery.—John William Henry Eyre, M.D., B.S. Durh., and Ernest Robert Kendall, M.B., B.S. Durh.

Bachelor in Medicine.—Thomas George Drabble Adams, College of Medicine, Newcastle-upon-Tyne; Henry Edward Montgomery Baylis, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; John Thomson Bell, College of Medicine, Newcastle-upon-Tyne; Francis Ward Crossman, M.R.C.S., L.R.C.P., and Herbert James Godwin, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; John Harris, B.A., Guy's Hospital; Frederick Charles James, M.R.C.S., L.R.C.P., and Howard Percy Kennard, St. Thomas's Hospital; Ralph Albert Rogers Lankester, University College Hospital; Harold Turner Newton and Theodore John Phillips, College of Medicine, Newcastle-upon-Tyne; Arthur Montague Rygate, M.R.C.S., L.R.C.P., Guy's Hospital; Reginald Charles Jeremie Stevens, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Thomas John Augustus Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; and Percy Edward Turner, M.R.C.S., L.R.C.P., and Maurice Dale Wood, St. Bartholomew's Hospital.

Bachelor in Surgery.—Thomas George Drabble Adams, College of Medicine, Newcastle-upon-Tyne; Henry Edward Montgomery Baylis, M.R.C.S., L.R.C.P., St. Batholomew's Hospital; John Thomson Bell, College of Medicine, Newcastle-upon-Tyne; Francis Ward Crossman, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; John Harris, B.A., Guy's Hospital; Howard Percy Kennard, St. Thomas's Hospital; Ralph Albert Rogers Lankester, University College Hospital; Harold Turner Newton and Theodore John Phillips, College of Medicine, Newcastle-upon-Tyne; Reginald Charles Jeremie Stevens, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; John Augustus Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; and Percy Edward Turner, M.R.C.S., L.R.C.P., and Maurice Dale Wood, St. Bartholomew's Hospital.

At the third examination for the degree of Bachelor in Medicine held at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners:—

Second-class Honours.—Howard Henry Congreve Dent, M.R.C.S., L.R.C.P., Mason College, Birmingham, and Norman Christian Balles, College of Medicine, Newcastle-upon-Tyne.

Pass List.—Solomon Cross, George Oswald Morrell Dickenson, and Harold Ben Fawcus, College of Medicine, Newcastle-upon-Tyne; Charles Edward Fenn, King's College, London; Charles Thomas Holmes, John Rutherford Halliday, Douglas Hethcote, and Ernest Inman, College of Medicine, Newcastle-upon-Tyne; Samuel Percy Johnson, Mason College, Birmingham; Maurice Jacobs, James Milligan, James Muirhead, and Robert Lowis Routledge, College of Medicine, Newcastle-upon-Tyne; Grace Harwood Stewart, London School of Medicine for Women; and Edward Norman Threlfall, Charles Augustus Vogwell, and David Henderson Weir, College of Medicine, Newcastle-upon-Tyne.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—**At the April sittings of the Examiners of the Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, held in Glasgow, the following candidates passed the respective examinations:—**

First Examination, Five Years' Course.—John William Isbister, Glasgow; David Joseph Cagney, Blarney, Cork; David Moodie, Whiteinch; Joseph R. W. Sutton, Cork; William Thomson, Glasgow; James Joseph Egan, Galway; Anthony H. Corley, Belfast; Hugh Williams, Glasgow; Frederick A. Georgeson, Edinburgh; and Syed Zamiruddin, Glasgow.

First Examination, Four Years' Course.—John Gemmel Welsh, Irvine; William Hunter, Sunderland; Patrick Park, Belfast; John Allison Maclardy, Glasgow; Richard M'Kim Wilkin, Belfast; Jas. Ebenezer Boon, Glasgow; George M. Freke, Edinburgh; and Joseph C. Shelmerdine, Partick.

Second Examination, Five Years' Course.—James Noble, Pollokshields; David Crombie, Crossmyloof; Charles Wm. Sharp, Glasgow; John Bell Walker, Rutherglen; David S. Erskine M'Nab, Shotts; Percival Horace Rainbird, Glasgow (with distinction); Harry Miller Roberts, Pollokshields; William M. Battersby, Glasgow (with distinction); John Campbell Douglas, Greenock (with distinction); Peter M'Kellar Dewar, Glasgow; John Tudor Griffiths, Glasgow; William Burns, Belfast; Alice Miles, Glasgow; William Turner, Glasgow; Joseph Burnard O'Mahony, Midleton, County Cork; Robert Elwell-Nalsh, Glasgow; and Francis Andubon Gray, Edinburgh.

Second Examination, Four Years' Course.—Arthur Clarence Turner, Londonderry; John M'Elroy, Glasgow; Bartholomew Francis Murphy, Edinburgh; Lawson S. Shennan, Edinburgh; Arthur Mellor Crosfield, Edinburgh; John Eilul, Edinburgh; Oliver Scanlan, Glasgow; and Andrew Snody Omand, Edinburgh.

Third Examination, Five Years' Course.—James Valentine Roche, Edinburgh; Thomas Richard W. Atkins, Edinburgh; Reginald Storrs, London; Joseph Fulton, Antrim; David Fyfe, Glasgow; Albert Sophron Sieger, Greenock; John Thomas Moore, Dublin; Thomas Day Bird, Glasgow; and Charles M'Donnell, Edinburgh.

Final Examination, and admitted Licentiates of the Three Colleges.—Hugh Macpherson, Oban; Edwin Thomas Walker, Smethwick; Harry Lowick Phelps, Bishopton, Bristol; Henry Gard, Devonport; Robert Mackie, Glasgow; James M'Glynn, Castlederg; Kenneth F. Lund, Liverpool; Arthur Frederick Seacome, Rock Ferry, Cheshire; John Boyd, Dublin; Hugh Owen Jones, Festiniog (with honours); John Farmer, Clydebank; Hugh Joseph Fern, Greenock; Andrew M'Credie, Stranraer; and John Francis M'Givern, Melbourne.

UNIVERSITY OF CAMBRIDGE.—**At the congregation on April 28th the following medical and surgical degrees were conferred:—**

Bachelor of Medicine and Bachelor of Surgery.—R. A. Yeld, B.A., Trinity; C. C. Stead, B.A., Caius; A. Trethewy, B.A., Caius; and E. J. Woolley, B.A., Caius.

Bachelor of Medicine.—G. F. McCleary, B.A., Trinity Hall.

"Paley's Evidences" have been retained as one of the subjects of the Previous Examination by the Senate. There were 109 votes for the subject and 70 against.

APOTHECARIES' HALL OF IRELAND.—**The following candidates at the examinations in April passed in the subjects indicated:—**

Physics and Chemistry.—G. O'Callaghan Walsh.
Biology.—R. Treacy and G. O'Callaghan Walsh.
Anatomy.—R. Treacy.
Second Professional Examination: Advanced Anatomy.—R. Tichborne.
Third Professional Examination: Pathology.—F. E. Bass.

UNIVERSITY OF LONDON.—**At the meeting of the Senate held on April 27th the following were among the gentlemen elected examiners for 1898-9:—Mental and Moral Science: Professor S. Alexander and Professor William Knight, LL.D. Mathematics and Natural Philosophy: Mr. E. W. Hobson, Sc.D., F.R.S., and Mr. Joseph Larmor, D.Sc., F.R.S. Experimental Philosophy: Professor G. F. FitzGerald, F.R.S., and Professor Silvanus Thompson, D.Sc., F.R.S. Chemistry: Professor Wyndham R. Dunstan, F.R.S., and Professor William Ramsay, Ph.D., LL.D., F.R.S. Botany and Vegetable Physiology; Professor F. W. Oliver, D.Sc., and Professor J. W. H. Trail, M.D., F.R.S. Comparative Anatomy and Zoology: Mr. F. E. Beddard, F.R.S., and Professor G. B. Howes, LL.D., F.R.S. Geology and Physical Geography: Professor T. G. Bonney, Sc.D., LL.D., F.R.S., and Professor Charles Lapworth, LL.D., F.R.S. Practice of Medicine: Dr. W. H. Allchin and Dr. Frederick Taylor. Surgery: Mr. William Anderson and Mr. W. Watson Cheyne, F.R.C.S. Eng., F.R.S. Anatomy: Professor G. D. Thane and Professor A. H. Young, M.B. Physiology: Professor J. G. McKendrick, M.D. Aberd., F.R.S., and Professor E. A. Schäfer, LL.D., F.R.S. Obstetric Medicine: Dr. G. E. Herman and Dr. Peter Horrocks. Materia Medica and Pharmaceutical Chemistry: Dr. D. J. Leech and Dr. Sidney Phillips. Forensic Medicine: Professor J. Dixon Mann, M.D. St. And., and Dr. Thomas Stevenson. State Medicine: Dr. Arthur Newsholme and Dr. Edward Seaton. Mental Physiology: Professor S. Alexander and Dr. T. Claye Shaw.**

ROYAL INSTITUTION.—On Friday evening, April 29th, Professor Andrew Gray delivered a discourse on Magneto-optic Rotation and its explation by a gyrostatic medium. In the principal optical experiment which was shown a rod of Faraday's "heavy glass" (borate of lead) mounted between two Nicol's prisms was traversed by a beam of light. When the prisms were crossed the transmitted light gave only a very faint disc on the screen, but when a magnetic field was created by passing a galvanic current through a coil of wire surrounding the glass rod the illumination of the disc was distinctly increased without any change in the position of the prisms. Lord Kelvin has suggested that the phenomena point to molecular motion in the medium being the cause of this magnetic rotation of the plane of polarisation, while the so-called "natural" rotation produced by solutions of sugar and many other substances is probably due to the structure of the medium. Precessional motion and other effects produced by gyrostats were shown, as well as a gyrostatic pendulum, which constantly changed its plane of vibration, tracing looped figures which were shown on a horizontal blackboard by means of a stream of white sand falling from the pendulum.

FRENCH HOSPITAL AND DISPENSARY. — The thirtieth annual dinner for the benefit of this institution takes place this (Saturday) evening at the Hotel Cecil, His Excellency the French Ambassador in the chair, supported by the Lord Mayor and Sheriffs of London.

LLANELLY HOSPITAL. — Owing to some unpleasantness among the nursing staff of Llanelly Hospital the committee recently decided to accept the resignations of the matron and nurses, who accordingly left on April 28th, and another matron has been placed temporarily in charge. The committee had (as was stated in THE LANCET of April 30th) intended to close the institution for the purpose of replacing the staff but now find that there will be no necessity to do so.

THE SAVAGE CLUB AND THE MEDICAL PROFESSION.—On Saturday, May 7th, at the House Dinner of the Savage Club the Medical Profession will be strongly represented. Among the guests of the Chairman (Mr. J. Y. W. MacAlister) will be the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England (Sir Samuel Wilks and Sir William MacCormac), Sir Dyce Duckworth, Sir William Gowers, Sir Thomas Smith, Professor David Ferrier, Dr. Church, Dr. C. J. Hare, Mr. Thomas Bryant, Mr. Warrington Haward, and others.

THE RECOVERY OF MEDICAL FEES.—At Totnes County Court, on April 25th, Judge Woodfall read a judgment of Judge Edge *re* Dr. K. R. Smith *v.* Mrs. Payne Collier. Plaintiff, a medical man of Totnes, sued defendant for £41 for medical attendance and medicine. Judge Edge stated that there was no doubt that plaintiff was employed by defendant, that she was in possession of a free and separate estate which would reasonably bind her to any contract, and that the evidence showed that the maintenance of Mr. and Mrs. Payne Collier and their family depended upon Mrs. Payne Collier's income, which was about £500 or £600 per annum. Judgment was given for plaintiff with costs.

DIPHTHERIA IN LONDON.—The decrease in the amount of diphtheria in London chronicled in the four weeks ended on March 26th as compared with the like period ended on Feb. 26th has been fully maintained in the four weeks concluded on April 23rd. In the March period the total of notified cases was 813 and the successive weekly numbers were 202, 174, 221, and 216. But in the April period the weekly figures only once reached 200, having been 182, 174, 203, and 170, the tendency to increase in the third week of the period having been spasmodic only. The aggregate of these four totals, 729, falls short by 84 of that for the March period and the weekly average of the earlier month of 203 gives place to one of 182 notified cases. In March one district escaped invasion, in April all districts reported cases, although in 6 of them only 12 cases in all were recorded. In each period two districts had upwards of 50 cases each, the same two districts, moreover, being in question, the total of 140 in these areas in March being replaced by 131 in April. In the matter of fatal diphtheria the weeks of the earlier month recorded 38, 33, 36, and 53 deaths respectively, an average of 40 per week, and a total of 160. In April the successive figures were 45, 29, 34, and 31, an average of 35 deaths per week, and a total of 139. Here, then, also we see a fall; and the case mortality, which had been 19·7 per cent. in March, declined to 19·1 per cent. in April. In the Outer Ring the registered deaths have, on the whole, remained much the same in the two periods—namely, 22, 19, 10, and 16, or 67 in all in March, and 15, 13, 21, and 16, or 65 in all during the April period.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Irish Local Government Bill.

THIS measure is slowly making its way through committee of the whole House. Clause 9, dealing with the future provision and management of lunatic asylums, occupied a very long time in its discussion, but though a great many amendments were moved few were carried and the clause practically remains in its original form. A proposal was made by Mr. Lecky that instead of entrusting lunacy administration to county councils the Government should keep it in its own hands and meet the cost out of the Imperial funds. The proposal, however, was resisted by the Government and defeated by a large majority.

Midwives Registration Bill.

The second reading of this measure stands as the first order for Wednesday of next week, but it is open to the Government to put the Irish Local Government Bill in front of it, and this course is almost certain to be adopted. If it is, then the Midwives Bill will be relegated to the crowd of private members' Bills which have practically no chance of being discussed during the present session.

HOUSE OF COMMONS.

THURSDAY, APRIL 28TH.

Lead Poisoning in the Potteries.

Mr. M'Kenna asked the Home Secretary whether he had received a petition from working potters in Burslem, Hanley, and the district in which the recent deaths, blindness, and other suffering from lead poisoning had occurred asking that a female inspector be appointed for the potteries; and whether, in view of the large number of women and young persons employed, amongst whom the greatest sufferers from lead poisoning are found, he would consider the desirability of appointing a female inspector to take charge of the district under the control of the chief inspector.—Sir Matthew White Ridley replied that he had received the petition to which the hon. Member referred and he had consented to receive a deputation from the district on the subject. In these circumstances he should prefer not to make any statement at present.

Medical Referees in Scotland.

Sir John Leng asked the Home Secretary whether he would appoint medical referees in Scotland as well as in England under the Workmen's Compensation Act of last session, and, if so, whether any special regulations would be made with regard to their qualifications and duties.—Sir Matthew White Ridley replied that he proposed to appoint medical referees in Scotland and the regulations would be the same as in England with such variation in details as might be made necessary by the differences between county courts in England and sheriff courts in Scotland. On this latter point he was in communication with the Scottish Office.

Venereal Disease in the Straits Settlements.

Mr. Chamberlain, replying to questions on this subject, said: I informed the Straits Settlements Association, in reply to their letter of Nov. 8th, that I was not prepared to sanction the re-enactment of the Contagious Diseases Ordinances in the Straits Settlements, but that I was conferring with the Governor as to whether other measures could be taken to check the spread of venereal diseases in that colony. The correspondence with the Governor is not yet completed, but when it is it will be laid before the House.

FRIDAY, APRIL 29TH.

Experiments on Living Animals.

Mr. Jesse Collings moved for a return showing the number of experiments performed on living animals during the year 1897 under licences granted under the Act 39 & 30 Vict. c. 77, distinguishing painless from painful experiments (in continuation of Parliamentary Paper No. 239 of Session 1897).—Mr. Swift MacNeill said he did not wish to oppose the return but he complained that the information given was incomplete and misleading. The return ought to show not the number of experiments but the number of animals experimented upon, because one experiment in a line of scientific research might involve the lives of as many as 40 or 50 animals. Last year there were 7500 experiments and that would give the public to understand that only that number of animals were killed. Again, a distinction was carefully drawn between painful and painless experiments, but that was most misleading because "painless" only meant that the experiment was made under the influence of an anæsthetic and took no account of the subsequent suffering of the animal. He would also like to have information in the return as to the number of visits paid by the inspectors.—Mr. Collings, in reply, said that the return was perfectly fair and honest so far as it went, but if the hon. Member would communicate with the Home Office and explain his views as to the form the return should take he would see what could be done in another year. The motion was then agreed to.

The Troops and Civil Practitioners.

Captain Norton asked the Under Secretary of State for War whether, before employing civil practitioners in affording medical aid to the troops, every effort had in the past been made to obtain for that purpose the services of retired army medical officers, whether these be retired on pension and liable to recall or retired on a gratuity, and whose names appeared in the monthly army list up to December, 1897, as liable to recall.—Mr. Brodrick replied that every effort was being made to utilise the services of suitable retired medical officers, whether retired upon gratuity or otherwise. The preference, however, was given to those who were in receipt of retired pay.

Rabies in Surrey.

Mr. Skewes-Cox asked the President of the Board of Agriculture whether he was now in a position to withdraw the Dog Muzzling Order so far as it affected the administrative county of Surrey.—Mr. Walter Long replied: I am afraid that the time has not yet come for the withdrawal of the muzzling order now in force in Surrey. Four cases of rabies have occurred there during the past six months and in view of the proximity of the county to the metropolis and of the fact that the disease had been more or less prevalent within its area for several years past the relaxation of the Order at the present time would probably endanger the success of our operations and render the re-imposition of the muzzle necessary at no distant date.

The Tuberculosis Report.

Mr. Channing asked the President of the Board of Agriculture whether effect would be given to the recommendation made last August by one of Her Majesty's Commissioners on Agricultural Depression, and now made again in the recently issued report of the Royal Commission on Tuberculosis, that facilities should be provided at the expense of the State for the voluntary application of the tuberculin test to cattle, with a view to the gradual elimination of tuberculosis by the Danish method, and whether a supplementary estimate be presented for this purpose.—Mr. Walter Long replied: As

the hon. Member is aware the report of the Royal Commission to which he refers was only circulated on Tuesday last and the minutes of evidence and other documents are not as yet available. In any case, however, it is, I think, clear that it would be premature for me to submit to the Chancellor of the Exchequer any proposals for expenditure in the direction suggested until representative agricultural bodies have had an opportunity of considering the recommendations made by the committee and I am in a position to form some idea as to the extent to which stock-owners would be likely to avail themselves of the facilities proposed to be given.—Mr. Channing gave notice that he would seek an opportunity of calling further attention to the subject.

MONDAY, MAY 2ND.

Roentgen Rays in the Soudan.

Sir Alfred Hickman asked the Under Secretary of State for War whether he was aware that the medical staff with the army in the Soudan were not provided with the Roentgen rays apparatus; and whether he would take steps to supply the deficiency.—Mr. Brodrick replied that the Roentgen rays apparatus for field service required special construction. One was made for Egypt and was despatched thither on April 5th, together with a large one for use in the Station Hospital at Cairo.

Medical Examination for the Civil Service.

Colonel Dalbiac asked the Secretary to the Treasury, as representing the Postmaster-General, if the rule had been abolished enabling the refunding of medical fees paid by candidates who, having failed to pass the departmental doctor's examination, had been granted a re-examination by a medical board and had successfully passed it; by whom should the fee paid for the second medical examination be refunded; and was he aware that in a recent case in the South-Eastern District Office the Controller denied the liability of the department and referred the applicant to the Civil Service Commissioners, who, however, on March 1st replied that they were not liable for any of the expenses incurred in connexion with the special medical examination.—Mr. Hanbury replied that so far as the Postmaster-General was aware there never had been a rule for the repayment of medical fees to candidates for appointment in the Post Office who having failed to pass the departmental medical officer's examination, had been granted a re-examination by a medical board and had successfully passed it. For the examination by the medical officer of the Post Office no fee was charged to the candidate, but with the re-examination the Post Office had nothing to do. This when granted was granted by the Civil Service Commissioners and was not confined to Post Office candidates, and the Postmaster-General had ascertained that one of the conditions on which it was granted was that all expenses must be borne by the candidate whatever might be the result. In the particular case to which the hon. Member referred the circumstances appear to have been properly explained to the candidate.

TUESDAY, MAY 3RD.

The Sanitation of Post Offices.

Mr. Hanbury, replying to a question on this subject, said that all post-offices which were not provided by the Department itself were subject to inspection by the local sanitary authorities. Crown post-offices—that was to say, those provided by the Department—were, like other buildings the property of the Government, exempt from inspection by the local sanitary authority. The Postmaster-General was responsible for the supervision of the sanitary condition of these offices and by his direction the sanitary arrangements were under constant supervision by the officers in charge as well as by the local medical officers to the Department. They were also supervised by the professional officers of the Board of Works. When a sanitary inspector desired to visit one of these offices the officer in charge was instructed to obtain authority for him to do so. Whenever the staff of any office complained of inadequate arrangements for safeguarding their health the complaint was immediately investigated and steps were taken to apply any remedies that might be found necessary and practicable. In the circumstances it was not at present considered necessary that the local sanitary inspector or factory inspector should have further facilities for investigation.

The Plague in India.

Lord George Hamilton, in answer to Sir Mancherjee Bhownaggree, said that the despatch from the Government of Bombay on the riots which took place in that city in the beginning of March had been received. The Bombay Government were of opinion that the riots were not the result of political agitation or deliberately planned, but were merely a sudden ebullition of disorder among an uneducated and fanatical section of the community. They added that the leading representatives of all classes had exerted themselves to allay excitement. The despatch and enclosures would be included in the next set of plague papers laid upon the table.—Lord George Hamilton, replying to a question addressed to him by Sir John Leng, said that his latest information regarding the plague at Calcutta was dated May 1st and 2nd. The existence of local plague cases, he regretted to say, had been placed beyond doubt and instructions had been given for carrying out the preventive precautions prescribed by the Venice Convention. 23 cases of plague and 7 deaths occurred during the last four days of April. He was confident that the Government in combating the plague at Calcutta would give due weight to the religious sentiments of the people and would make every endeavour to obtain their coöperation.

Phossy Jaw in the Match Trade.

Sir Charles Dilke asked the Home Secretary whether his attention had been called to an inquest held at Bow on Saturday concerning the death from "phossy jaw" of a match dipper, aged twenty-two years, employed at Bryant and May's, and to the coroner's remarks upon the conduct of the manager of the factory; and whether he would consider if the time had come to prohibit the manufacture and importation of the class of matches requiring the employment of the more dangerous kind of phosphorus.—Mr. Pickersgill also asked the right hon. gentleman whether his attention had been called to the report of an inquest held at Bow on Saturday last on the body of Cornelius Lean, lately employed at the match factory of Messrs. Bryant and May, from which it appeared that Lean was poisoned by the yellow phosphorus used in the manufacture; that the factory doctor, who admitted that the death was due to "phossy-jaw," gave no indication of this fact on the certificate of death; and that the coroner commented on the apparent desire to hush the whole matter up, whether the factory doctor gave the notice to the chief inspector of factories required by sub-section (1) of section 29 of the Factory Act, 1895; whether the occupier of the factory gave the notices to the inspector and to the certifying surgeon for the district required by sub-section (3) of the same section; whether an inspector or some person on behalf of the Secretary of State was present at the inquest to watch the proceedings in accordance with section 19 of the same Act; if not, did the coroner send to the inspector the notice of the holding of the inquest required by that section, and, if such notice was sent, why did not the inspector attend; and what steps did he now propose to take in the matter.—Sir M. White Ridley replied: My attention has been called to this inquest. The case was not notified either by the occupier or the factory medical officer and the explanation given by the latter that he was not sure of the diagnosis appears to me to be far from satisfactory. In addition to the provisions of section 29 of the Act of 1895 the special rules in force in the factory required every case where there was any symptom of necrosis to be reported. The factory inspector attended the inquest and has visited the works. He reports that in other respects the special rules have been observed. I propose, however, to make further inquiries into the case. No other cases of phosphorus poisoning have been reported since the Act of 1895 and I do not therefore think that I should be justified in the unconditional prohibition of the use of yellow phosphorus.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDERSON, GEORGE, M.B., C.M. Edin., has been appointed a Medical Officer for the Swinefleet Sanitary District of the Goole Union.

BAILEY, JOHN GEORGE, M.B., C.M. Edin., has been appointed Resident Medical Officer for the Victoria Hospital, Burnley, vice J. S. Warrack, resigned.

BLACKLOCK, J., M.D. St. And., has been appointed a Medical Officer for the Brindle Sanitary District of the Chorley Union.

BLAXALL, F. R., M.D. Lond., D.P.H. Camb., has been appointed a Bacteriologist by the Local Government Board.

BURGESS, A., M.D., B.Ch. Irel., has been appointed a Medical Officer for the Home No. 1 Sanitary District of the Lincoln Union.

CLUCKIE, N. G., M.B. Glasg., L.F.P.S., has been re-appointed Ophthalmic Surgeon for the Victoria Eye Infirmary, Paisley.

COOKE, WILLIAM H., M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed an Honorary Medical Officer to the Eastern Dispensary and Anæsthetist to the Royal United Hospital, Bath.

DONALD, ARCHIBALD, M.B., C.M. Glasg., D.P.H., has been appointed an Assistant Surgeon for the Victoria Eye Infirmary, Paisley.

DYSON, M. G., L.R.C.P. Lond., M.R.C.S., has been appointed First Resident Assistant Medical Officer for the St. John's-road Workhouse and Infirmary of the Parish of St. Mary, Islington.

FOX, EDWARD LAWRENCE, M.A., M.D., B.Ch. Cantab., M.R.C.P. Lond., M.R.C.S. Eng., has been appointed an Honorary Physician to the Plymouth Royal Eye Infirmary.

GAINS, J. E., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Garforth Hospital.

GARDNER, WM., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Nunney Sanitary District of the Frome Union.

GIDDY, C. F., M.B., C.M. Edin., has been appointed a Government Surgeon for the Colonial Hospital, Singapore.

GORDON, J. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the Dalwood and Stockland Sanitary District of the Axminster Union.

HARNESS, H. NELSON, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon for the Royal Cornwall Infirmary, Truro, Cornwall.

HAYES, T. C., M.A., M.D., has been elected Professor of Obstetric Medicine and Diseases of Women and Children by the Council of King's College, London.

HOWARD, J. A., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed a Medical Officer for the Seventh Sanitary District of the St. Saviour's Union.

HOWES, F. C. P., M.D. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Home No. 2 Sanitary District of the Lincoln Union.

KENDALL, N. F., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Chiddingfold Sanitary District of the Hambledon Union.

LEVICK, H. DRIFFIELD, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, London.

LIGHTBURNE, E. A., L.R.C.S., L.R.C.P., has been appointed Police Surgeon for Bow, London.

MACGILL, H. M., M.B., C.M. Edin., has been appointed a Medical Officer for the Hartlepool Sanitary District of the Hartlepool Union.

MACLAREN, J. A., M.B., Ch.B. Vict., has been appointed a Second Resident Assistant Medical Officer for the Workhouse of the Township of Manchester.

MELLISH, J. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Wells Port Sanitary Authority.

MORRIS, S. GLANVILLE, M.D., M.S., has been appointed Certifying Factory Surgeon for the District of Nantgaredig, Carmarthen.

MUDGE, JAMES, M.R.C.S., L.R.C.P. Edin., L.S.A., has been re-appointed Medical Officer of Health by the West Penwith (Cornwall) Rural District Council.

O'RAFFERTY, J. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer for the First Sanitary District of the Daventry Union.

PADBURY, G. J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a Medical Officer for the Kilmington Sanitary District of the Axminster Union.

PARRY, GEORGE HEARN, M.B., C.M. Edin., has been appointed Assistant Resident Medical Officer for the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor, Isle of Wight.

PARSONS, ALLAN C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Royal Free Hospital, Gray's-inn-road, London.

PATON, G. A., L.R.C.S. Irel., has been appointed a Medical Officer for the Second and Third Sanitary Districts of the St. Saviour's Union.

PHILLIPS, JOHN, M.A., M.D., has been elected Lecturer in Practical Obstetrics by the Council of King's College, London.

PRESTON, C. H., F.R.C.S., L.D.S., has been appointed an Honorary Dental Surgeon for the Manchester Children's Hospital, Pendlebury and Garside street.

PRITCHARD, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for Home Patients, Manchester Infirmary.

PROBYN-WILLIAMS, R. J., M.D. Durb., L.R.C.P., M.R.C.S., has been appointed Assistant Anæsthetist for the Dental Hospital of London.

SMITH, GUY BELLINGHAM, M.B., B.S., F.R.C.S. Lond., has been appointed a Surgeon to the Surrey Dispensary.

TAYLOR, FRANK E., M.A., M.B., Ch.B., B.Sc. Vict., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Hospital for Women and Children, Leeds.

TAYLOR, F. R. P., M.D. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed, *pro tem.*, Medical Superintendent for the Darenth Adult Asylum.

THURSFIELD, W., M.D. Aberd., L.R.C.P. Lond., M.R.C.S., has been appointed a Consulting Physician for the Bridgnorth and South Shropshire Infirmary, vice B. Fletcher.

WILLIAMS, RALPH PAUL, M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Free Hospital, Gray's-inn-road, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary £130 per annum, with prospect of increase, and rooms in the infirmary free, also coals and gas.

CITY AND COUNTY OF BRISTOL.—Medical Officer for the Workhouse. Salary £250 per annum, with an allowance of £30 per annum for rent. Applications to the Clerk to the Guardians, St. Peter's Hospital, Bristol.

CHESTER GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with residence and maintenance in the house.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

COUNTY ASYLUM, Whittingham, Lancashire.—Junior Assistant Medical Officer, unmarried. Salary commencing at £100 per annum, with prospect of increase, together with furnished apartments, board, attendance, and washing.

DONCASTER GENERAL INFIRMARY AND DISPENSARY, Doncaster.—Indoor Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

ESSEX AND COLCHESTER HOSPITAL, Colchester.—House Surgeon, single or widower without family. Salary £100 per annum, with board, residence, and washing at the hospital.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon, for six months. Salary at the rate of £20 per annum, with board, lodging, and washing in the hospital.

HANTS COUNTY ASYLUM, Farnham.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Honorary Physicians and Honorary Surgeons.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30 for that period. Also non-resident Clinical Assistant.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

JOINT COUNTIES ASYLUM, Carmarthen.—Second Assistant Medical Officer, unmarried. Salary £100, increasing, if suitable, to £120, by increments of £10 at the end of the first and £10 at the end of the second year, with board, lodging, washing, and attendance.

LONDON THROAT HOSPITAL, Great Portland-street, W.—House Surgeon (non-resident) for six months. Salary £25.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer for the Eastern Fever Hospital, Homerton, N.E., unmarried. Salary, first year £160, for the second year £180, and for the third and subsequent years of service £200, subject to statutory deduction, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

PARISH OF ST. LEONARD, Shoreditch.—Medical Officer for the separate Infirmary, Hoxton-street, N., and for the adjacent Workhouse of the parish. Salary (apportioned between the Workhouse and Infirmary) either £300 per annum, with furnished apartments, board, washing, and attendance, or £400 per annum, with furnished apartments, lights, fire, and washing, subject to statutory deductions. Applications to the Clerk to the Guardians, Clerks' Offices Kingsland-road, N.E.

PRESCOT UNION.—Resident Medical Officer for the Workhouse and Infirmary at Whiston, unmarried. Salary £80 per annum, rising to £100 by annual increments of £10, with furnished apartments and residential allowances, subject to statutory deduction. Applications to the Union Clerk, Union Offices, Whiston, Prescot.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging in the hospital. Applications to the London Office, 34, Craven-street, Charing-cross, London.

SCARBRO' HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum.

SCHOOL BOARD FOR LONDON, Victoria Embankment, W.C.—A Male and a Female Practitioner. Salary £250 per annum each.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Physician. Salary £75 per annum, with board and residence. Applications to the Secretary, Greenwich.

ST. THOMAS'S HOSPITAL, London.—Assistant Physician.

TUNBRIDGE WELLS EYE AND EAR HOSPITAL.—Lady House Surgeon. Salary £60, and board and lodgings. Applications to the Honorary Secretary, 3, the Pantiles, Tunbridge Wells.

WARNEFORD HOSPITAL, Leamington.—House Surgeon for six months. Salary at the rate of £100 per annum, with board, lodging, and washing.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck-street, W.—Honorary Surgeon.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Second Assistant Medical Officer. Salary £180, with board, &c., rising £10 annually to £230.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon, and to act as Surgical Registrar for one year. Salary £100 a year, with board, lodging, and washing. Also House Physician, and to act as Medical Registrar, Pathologist, and Anæsthetist, for one year. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BOLUS.—On April 28th, at Beckenham, the wife of H. B. Bolus, M.B. Cantab., of a daughter.

CROUCHER.—On April 30th, at Onslow House, Burlington-place, Eastbourne, the wife of Alexander H. Croucher, M.D. Edin., of a son.

EVANS.—On April 27th, at Denmark Lodge, The Grove, Clapham-common, the wife of Lewis Evans, L.R.C.P. Edin., L.F.P.S. Glasg., of a daughter.

FERRABY.—On April 27th, at St. Mary-street, Ladywood, Birmingham, the wife of G. A. Ferraby, L.R.C.P., M.R.C.S., of a son (Arthur Ludovic).

GASTER.—On May 2nd, at Greencroft-gardens, West Hampstead, N.W., the wife of A. Gaster, M.D., M.R.C.P. Lond., of a son.

MANN.—On April 30th, at Newgate-street, Chester, the wife of Alfred Mann, M.D., of a son.

SEGUNDO.—On May 3rd, at Brook-street, Hanover-square, W., the wife of C. S. de Segundo, M.B., B.S. Lond., of a son.

MARRIAGES.

HARDING—WALTON.—On April 27th, at St. Peter's, Swinton, Lancashire, Charles Headley Harding, M.R.C.S. Eng., L.R.C.P. Lond., only son of the late C. F. Harding, M.D. Lond., of Whittlesea, Cambs., to Florence Ada, youngest daughter of Joshua Walton, Esq., of Kingslea, Swinton.

HINDLEY—TYLER.—On May 1st, at Southampton, Godfrey Douglas Hindley, B.A. Oxon., M.R.C.S., L.R.C.P., of Queen's-road, N.E., to Alice Evelyne, eldest daughter of Sir John Tyler, M.D., C.I.E., of Hanover-square, W.

JONES—PORTER.—On April 27th, at Wreay Church, T. Henry Jones, M.B., C.M., eldest son of Henry Jones, of Chester, to Edith Frances Porter, youngest daughter of the late W. H. Porter, of Heads Nook.

JOHNS—DICKINSON.—On April 26th, at Misson, John Francis Johns, M.D., of Lansdown-place, Cheltenham, to Lucie, third daughter of the late John Dickinson, Misson, Bawtry.

KNIGHT—MITCHELL.—On April 27th, at St. Andrew's Church, Bolton-on-Dearne, W. H. Knight, L.R.C.P., L.R.C.S. Edin., of Cudworth, near Barnsley, to Ellen Josephine May Mitchell, daughter of the late Joseph Mitchell, C.E., J.P., of Bolton Hall, Rotherham.

LANE—COGHLAN.—On April 27th, at Stepney Parish Church, by the Rev. John Hallward, Harry Argell Lane, M.R.C.S. Eng., D.P.H. Camb., third son of Thomas Argell Lane, of Holbeach, Lincs., to Mary, eldest daughter of John Coghlan, of Rathgar, Dublin.

LOVEDAY—WIX.—At the Abbey, St. Albans, William Dunmore Loveday, L.R.C.P., M.R.C.S., son of William Loveday, of The Poplars, Irthlingboro', Northants, to Lilian Emily, youngest daughter of the late Samuel Wix, of Broadwater Down, Tunbridge Wells, Kent.

SCOTT—MURRAY.—On April 28th, at the John Knox Presbyterian Church, Newcastle-on-Tyne, by the Rev. A. Scott Berrie, T. O. Scott, M.A., M.B., eldest son of the late Mr. John Scott, of Berwick-on-Tweed, to Elizabeth Stuart, eldest daughter of A. D. Murray, editor of the *Newcastle Daily Journal*. No cards.

THORNE THORNE—HOUGHTON.—On April 27th, at St. Peter's, Old Woking, by the Rev. F. J. Oliphant, M.A., vicar, assisted by the Rev. W. F. T. Hamilton, M.A., Berthold Bezly, eldest son of Sir Richard Thorne Thorne, K.C.B., F.R.S., to Ruth Golding, daughter of the late John Houghton, of Liverpool, and of Mrs. Houghton, of Poundfield, Old Woking.

DEATHS.

AUSTEN.—On May 2nd, at Matto'k-lane, Ealing, Josiah Austen, M.R.C.S., L.R.C.P., late Staff-Surgeon R.N.

GORDON.—On April 29th, at Hume-street, Dublin, Samuel Gordon, M.D., ex-President of the Royal College of Physicians of Ireland.

IRVING.—On May 3rd, at Royal York-crescent, Clifton, Bristol, Surgeon-General James Irving, M.D., Bengal Army (retired), aged 75 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (14th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (9th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for Election of Officers and Council for Session, 1898-99. 8.30 P.M. Ordinary Meeting. Mr. C. Mansell Moullin: The Treatment of Tuberculous Disease of the Bladder.—Dr. Macnaughton-Jones: Recurrent Hæmatemesis caused by Hepatoptosis discovered by Laparotomy.

TUESDAY (10th).—ROENTGEN SOCIETY (11, Chandos-st., W.).—7.30 P.M. Council Meeting. 8 P.M. Papers:—Mr. A. Apps: Notes on the Description of a New Induction Coil in *Electrical Review*, Feb. 4th, 1898 (with demonstration).—Dr. J. Macintyre: Some Notes on Contact Breakers. Followed by a discussion.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. S. West: Intra-pleural Tension.—Mr. A. Doran: A Case of Cyst of the Urachus, with notes on Urachal and so-called Allantoic Cysts

WEDNESDAY (11th).—SOCIETY OF ARTS.—8 P.M. Prof. V. B. Lewes: Water Gas and its Applications.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. D. Grant, Dr. Pegler, Mr. Wingrave, Mr. Baber, Mr. Robinson, Mr. Walsham, and others.

THURSDAY (12th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Edgware-road).—8.30 P.M. Dr. M. Handfield-Jones: The Clinical Aspects of Cancer of the Body of the Uterus.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square).—8.30 P.M. Specimens will be shown by Dr. G. Bantock, Mr. F. Bowreman Jessett, Mr. W. D. Spanton (Hanley), Mr. J. F. Jordan (Birmingham), and Mr. C. Ryall. Dr. F. Edge: Notes of a Case of Uterus Septus Bilocularis and Vagina Subsepta. Paper:—Dr. F. Purcell: The Risks to the Ureters when Performing Hysterectomy, illustrated by a case in which both Ureters were Occluded and freed fifty-eight hours after. Discussion on Dysmenorrhœa (opened by Dr. G. Bantock).

FRIDAY (13th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. D. B. Lees and Mr. A. Q. Silcock: Case of Cæcal Intussusception, Excision of involved Gut, Recovery.—Dr. W. S. Colman and Mr. T. H. Kellock: Case of Chronic Intussusception of the Cæcum with extreme Latency of Symptoms.—Dr. D. B. Lees: Case of Chronic Intussusception treated by Irrigation and an Icebag, Recovery. Dr. H. D. Rolleston: Case of Perforation of the Vermiform Appendix in the Course of Ambulatory Typhoid Fever, Operation, Death.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (9th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Woakes: Nasal Neurosis.

TUESDAY (10th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. M. Copeman: On the Natural History of Vaccinia. (Milroy Lecture.)

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lichen Planus and Acuminatus.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Taylor: Lecture.

WEDNESDAY (11th).—LONDON POST-GRADUATE COURSE. — Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Construction of Dwelling-houses.

THURSDAY (12th). — LONDON POST-GRADUATE COURSE. — Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. T. Williams: Clinical Lecture.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Waterhouse: Clinical Demonstration of Surgical Cases. (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

ROYAL INSTITUTION.—3 P.M Right Hon. Lord Rayleigh: Heat.

LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. J. Startin: Rare Clinical Cases.

FRIDAY (13th). — LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Examination of Air, Soil, and Water.

ROYAL INSTITUTION.—9 P.M. Prof. W. A. Tilden: Recent Experiments on certain of the Chemical Elements in relation to Heat.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

UNREGISTERED PRACTITIONERS.

MR. LEOPOLD LEIBSTER was recently charged at Worship-street Police-court with having wilfully used the name and title of a Doctor of Medicine, he not being registered as a medical practitioner. His cards and plate bore the words M.D. Vienna, but he admitted to a patient who called on him at the instance of the prosecution that he could not give a certificate as he was not registered in this country. It was allowed that he was registered in Vienna. The magistrate dismissed the summons and gave defendant his costs, agreeing to state a case for a higher court. This being the case we refrain from any comment.

AN OPPORTUNITY!

To the Editors of THE LANCET.

SIRS,—The enclosed is a copy of a letter from a young cousin of mine in South Africa and is of course quite innocently written and well meant on his part. It may be thought worthy of more extensive circulation through your columns, free, gratis and for nothing, as Mr. Bone will not be distracted with a multitude of offers.

I am, Sirs, yours faithfully,

May 2nd, 1898. B.

[ENCLOSURE.]

March 27th, 1898.

MY DEAR C——,—There is a man here named Wm. Bone, a doctor who passed all his exams. except his final, consequently has no degree. He has been practising here for the last five years and was making about £800 a year, but now the Government have jumped on him and shut him up. If you have the necessary degree and care to come out and go into partnership with him you could work up the business to, say, £1500 per annum or more. It is very nearly a cash business, Dutch people and Kaffirs. If you think anything at all about it write to Wm. Bone. He will answer any question you care to ask, and I think would pay your passage, or at all events part of it. Yours, &c., ——.

*** We have thought it wiser to omit Mr. Bone's address.—ED. L.

CIGARETTES.

MESSRS. OGDEN of Cornwallis-street, Liverpool, have submitted to us specimens of their Guinea Gold Cigarettes which they claim to be of pronounced purity. We found that they were composed of light Virginia leaf and were quite free from objectionable flavouring materials.

THE GREAT GREGORY.

To the Editors of THE LANCET.

SIRS,—Can you tell me if the great physician who is commonly known and spoken of as "Gregory" is the same Gregory who wrote "Conspectus Medicinæ Theoreticæ," published in 1333? I shall be glad if you can oblige me with the desired information in the next issue of THE LANCET. Thanking you in anticipation,

I am, Sirs, yours faithfully,

May 3rd, 1898. M.B.

*** There have been three Gregorys eminent in the medical world, John, James, and William, but James is the great Gregory. John was Professor of Medicine in Edinburgh University about 1765 and wrote "Observations on the Duties of a Physician" and a popular didactic work in the shape of letters called "A Father's Legacy." James succeeded his father as Professor of Medicine at Edinburgh and wrote the "Conspectus Medicinæ Theoreticæ," the first edition of which was published in 1780. He was a magnificent teacher and lecturer and a keen controversialist. William, his son, also a medical man, worked chiefly at chemistry. He was Professor of Chemistry at Edinburgh, edited Liebig's "Animal Chemistry," and wrote one or two original treatises. He was inclined to mystic views on the subject of animal magnetism.—ED. L.

THE FIERY ORDEAL OF FIJI.

THE May number of the *Wide World Magazine* among other interesting articles dealing with travel and adventure contains a vivid account of a religious ceremony "which has hitherto baffled the scientists and astounded the traveller in the South Seas." The ceremony, according to the writer, takes place in the island of Benga, the supposed residence of some of the old gods of Fiji. A circular oven is dug in the ground, measuring some 18 ft. or 20 ft. in diameter and lined with large water-worn stones which are made white-hot by means of a wood fire. So great is the heat that anyone but a native finds it intolerable to stand 10 ft. from the edge of the oven. The ceremony consists of the performers walking about bare-legged and barefooted on the hot stones. It has been suggested that the natives are able to perform this feat because they have on the soles of their feet a natural sort of leathery substance which is a non-conductor of heat. But, says the writer, Lord Stanmore has stated that he has seen the natives while crossing a short extent of the shingly bed of a river in the hot sunshine compelled to rush into the stream to cool their feet.

"THE JOHN PAGE HENTSCH APPEAL"

To the Editors of THE LANCET.

SIRS,—Subjoined is a further list of contributions to this fund:—Mr. H. H. Clutton, F.R.C.S. Eng., £2 2*s.*; Dr. W. F. Brooke, £1 1*s.*; and Dr. de Havilland Hall, £1 1*s.*—I am, Sirs, yours faithfully,

410, Brixton-road, S.W., May 3rd, 1898. G. DAVID KNIGHT.

A LADY FACTORY INSPECTOR CONDUCTING HER OWN CASE.

ON April 29th a dressmaker of Wellington-street was summoned under the Factories Act for omitting to notify that some of her employées were working overtime and for failing to post overtime notices in the workshops. Miss Dean, the lady inspector, appeared and gave evidence in support of the charges. The defendant through her solicitor pleaded guilty and evidence having been given that this was by no means the first offence the magistrate fined the defendant in all £19 17*s.* 6*d.*

THE CHURCH HOUSE CHILDREN'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—About three years ago the birth of the society I founded was made known by a letter to the *British Medical Journal*. The principle of the scheme was the training of ladies in the means of reducing infantile mortality, the attachment of them to out-patient departments and their following up of infant patients by visits and instruction to the mothers in their own homes. After I left the Bristol Children's Hospital I tried to get the hospitals of Bristol to accept the services of my workers. For reasons best known to the institutions they refused and finding that in order to get access to the homes a dispensary was necessary I established one where nurses attended and followed up infant patients with necessary home supervision. Several distinguished specialists in children spoke highly of the scheme which I made known at various London hospitals at the outset. The society grew until a large building was taken and wards were furnished. This was advertised eight months ago and since then 800 new patients have been admitted and have been seen on an average seven or eight times each. Ten in-patients have been cared for and several operations have been done. There are two nurses on active duty and I reside on the premises. There are five beds and one in-patient—a charity case—under constant care for chorea. The most of the money that supports the institution comes from fees arranged on a sliding scale to suit the patients, but forty subscribers' notes have been given away and 78 patients have been treated fully by me without fee or subscriber's note. Lectures on nursing are given and the ladies of the society make clothes and provide medical comforts and even milk for starving or very poor infants. The work is surely a noble one and in this crowded industrial centre a hospital is much needed. None of the workers are paid and no salary is allotted to me by the society. If a resident surgeon, two nurses, and a large building with twelve rooms and five available beds is a hospital then surely I have not erred in giving for the first time to the public what has been privately known for several months as the Nursery Aid Society's Cottage Hospital or Church House Children's Hospital. I am pleased to see that the Belgrave Children's Hospital is now about to begin lectures to nursery maids, but I believe when I began our Nursery Aid Society in August, 1895, at the Bristol Children's Hospital we were the first to insist on the great need of sending skilled nursery aid instruction into the actual homes of the people.

I am, Sirs, yours faithfully,

W. L. CHRISTIE.

The Church House Children's Hospital, May 3rd, 1898.

"ET DONA FERENTEM."

"Professor Munyon has, by cable, offered £100,000 worth of his medicines as his patriotic contribution to the United States Army and Navy."

We extract this item of information from the *News of the World* for May day and are wondering where the patriotism comes in.

Medicus.—Vaccination fees are reckoned as "emoluments" if the district medical officer is holding the appointment of public vaccinator at the time when he resigns the post of medical officer. Superannuation will be calculated, in our opinion, with reference to both district appointments and will vary in amount proportionally to the length of time that the holder has been in possession of the posts. This is a matter of opinion only. Until such points have been actually and officially decided it is not possible to answer with absolute certainty. Vide THE LANCET, vol ii., 1896, p. 1167.

J. A. R.—Our correspondent could not do better that use the popular form which he is told "is out of date." In our opinion it is the best form. We do not give reasons, for we do not pretend to be specialists in the mechanism of cycles; we only speak with regard to matters of health when such matters are in any way touched upon in relation to cycling.

Mr. A. Wright.—Public vaccinators are not mentioned by name under the Poor-law Superannuation Act of 1897, but in our opinion they do come under its provisions all the same. Our correspondent will find the matter fully dealt with in a leading article published in THE LANCET of Nov. 7th, 1896.

M.D. has not complied with the rule that correspondents must furnish their names and addresses.

Verax.—Our correspondent's communication will receive detailed attention next week.

Aqua.—We have no information.

Mr. M. Romey.—Yes.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 5th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 29	29·55	S.W.	0·04	94	60	49	50	52	Overcast
" 30	29·58	S.	0·05	89	57	45	48	51	Overcast
May 1	29·81	S.	0·28	65	54	44	49	53	Overcast
" 2	29·64	N.E.	...	112	69	49	51	52	Overcast
" 3	29·53	S.W.	0·15	110	63	49	52	58	Cloudy
" 4	29·41	S.W.	0·07	97	58	50	50	52	Cloudy
" 5	29·88	S.W.	...	70	56	47	50	53	Cloudy

During the week marked copies of the following newspapers have been received: *Jarrow Express, Sheffield Independent, Acton Gazette, Le Temps (Paris), Hyde Reporter, Goole Wednesday Journal, Leicester Post, Carnarvon Herald, Westmorland Gazette, Todmorden Advertiser, Dorset County Chronicle, Burton Chronicle, Newcastle Journal, Birmingham Post, Leek Times, East Anglian Daily Times, Times of India, Pioneer Mail, Essex Times, Isle of Wight Chronicle, North Wilts Herald, Liverpool Daily Post, Northampton Mercury, Architect, Citizen, Warwick Advertiser, Builder, Cheltenham Mercury, Western Daily Press, Loughborough Mercury, Bury Guardian, Lancaster Standard, Leeds Mercury, Public Health, Keighley News, Sussex Daily News, Preston Guardian, Gravesend Standard, Manx Sun, Yorkshire Post, Mid-Counties Express, Hampshire Observer, Scotsman, Bristol Mercury, Sanitary Record, Evening Times (Glasgow), Western Mail, Dewsbury Reporter, Cornish News, New Ross Reporter, Montreal Star, Callender Advertiser, Walsall Advertiser, Caithness Courier, Brighton Gazette, Hong-Kong Weekly Press, Surrey Advertiser, Local Government Journal, Bradford Advertiser, City Press, Mining Journal, Local Government Chronicle, Coventry Herald, Reading Mercury, Gateshead Guardian, Hertfordshire Mercury, Journal of Gas and Sanitary Engineering, Ardrossan Advertiser, Caithness Courier, Cheadle Herald, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. Attlee, Lond.; Messrs. Allen and Hanburys, Lond.; Messrs. Arnold and Sons, Lond.; Surgeon-Captain A. R. Aldridge, Purijal, India; Alpha, Lond.; Mr. F. Algar, Lond.

B.—Dr. F. Bolster, Haslar; Mr. J. H. Brooks, Ludlow; General Saml. Breck, Boston, U.S.A.; *British and Colonial Druggist*, Lond.; Mr. L. A. Bidwell, Lond.; Messrs. Battley and Watts, Lond.; Dr. Battye, Lond.; Miss Broadwood, Lond.; Messrs. Baillière, Tindall, and Cox, Lond.; Mr. A. H. Buck, Brighton; Messrs. Black and Co., Lond.; Bona Fides, Lond.; Dr. F. T. Bond, Gloucester; Burton-on-Trent Infirmary, Secretary of; Mr. H. O. Beck, Lond.; Mr. W. H. Best, Lond.; Dr. Brooks, Lupton.

C.—Mr. J. D. Campbell, Lond.; Dr. G. J. Conford, Nottingham; Chester General Infirmary, Secretary of; County Asylum, Whittingham, Superintendent of; Mr. G. Clark, Downpatrick; Messrs. E. Cook and Co., Lond.; Messrs. A. H. Cox and Co., Brighton; Cortland Wagon Co., Lond.; Clayton Hospital, Wakefield, Hon. Secretary of; Chinosol Hygiene Co., Lond.; Cardiff Medical Society, Secretary of; Mr. F. W. Clarke, Manchester.

D.—Dr. T. O. Dudfield, Lond.; Messrs. Dale, Reynolds, and Co., Lond.

E.—Mr. T. S. Ellis, Gloucester; Esmond Cycle Saddle Co., Lond.

F.—Sir J. Fayrer, Lond.; Messrs. Fairchild Bros. and Foster, Lond.; Mr. P. J. Freyer, Lond.; Ferru-Cocoa Manufacturing Co., Carmarthen; F.R.C.S., Lond.;

G.—Mr. J. J. Griffiths, Lond.; Great Eastern Railway Co., Lond., Continental Traffic Manager of; Mr. H. E. Girdlestone, Lond.; Messrs. Gale and Co., Lond.; Mr. A. V. Geoghegan, Mickleton.

H.—Mr. Stenson Hooker, Hastings; Mr. J. Heywood, Manchester; Mr. C. H. Haycroft, Bow; Mr. J. W. Hopkins, Snettisham; Mr. T. Haden, Leicester; Miss M. Holland, Lond.; Harveian Society of London, Secretary of; Homo, Lond.

I.—Messrs. Irving, Son, and Jones, Liverpool; Index, Lond.

J.—Mr. S. James, Samastipur, India; Messrs. Johnson, Brown, and Culshaws, Prescot.

K.—Mr. C. T. Kingzett, Lond.; Mr. C. N. Krohne, Lond.; Dr. L. Kidd, Lond.; Messrs. Krohne and Sesemann, Lond.

L.—Mr. C. Legg, Euston; Messrs. Lucius and Brüning, Hoechst; London Food Co., Lond.; Messrs. Lee and Martin, Birmingham.

M.—Mr. J. McMurtrie, Glasgow; Messrs. Macmillan and Co., Lond.; Milk Wine Co., Lond.; Messrs. H. Marshall and Son, Lond.; Dr. J. P. MacLaren, Claygate; Mr. R. McAlpine, Glasgow; Dr. H. Macnaughten-Jones, Lond.; Mental Nurses' Coöperation, Lond., Lady Superintendent of; Medical Society of Victoria, Melbourne, Hon. Secretary of; Mutual Life Insurance Co. of New York, Lond., Manager of; Medical Society of London, Secretary of; Metropolitan Machinists' Co., Lond.; Messrs. J. M'Geachy and Co., Glasgow; Mr. J. Merryweather, Guisborough.

N.—Messrs. Newton Chambers and Co., Thorncliffe; Nightingale Home, Southsea.

O.—Messrs. Orridge and Co., Lond.; Messrs. P. de Otadery and Co., Lond.

P.—Mr. F. E. Pirkis, Nutfield; Mr. J. B. Pike, Loughborough; Dr. G. H. Philipson, Newcastle-on-Tyne; Printemps, Lond.; Messrs. Parke, Davis and Co., Lond.

R.—Mr. R. Redpath, Newcastle-on-Tyne; Mr. O. Robinson, Fort Camden; Messrs. Richardson Bros., and Co., Liverpool; Revolution Cycle Co, Dublin; Rus, Lond.; Mr. L. H. Roberts, Lond.; Dr. G. D. Russell, Plymouth; Royal Society, Asst. Secretary of.

S.—Mr. T. Sellors, Coventry; Mr. J. G. Sibbald, Inverness; Sanitas Co., Lond.; Messrs. W. H. Smith and Son, Manchester; Messrs. Smith, Elder, and Co., Lond.; Dr. W. Simpson, Newcastle-on-Tyne; Sanitary Institute, Secretary of; Messrs. Street and Co., Lond.; Mr. J. J. Simpson, Bristol.

T.—Mr. J. Thin, Edinburgh.; Dr. F. T. Travers, Maidstone; Messrs. J. Thompson and Son, Boston; Messrs. C. Tayler and Co., Lond.; Mr. J. Taylor, Lond.; Topeka, U.S.A., Postmaster of.

U.—University of Durham College of Medicine, Secretary of.

V.—Mr. J. W. Vickers, Lond.

W.—Mr. E. H. Worth, Scorrier; Mr. A. Wright, Romford; Wolverhampton, &c., General Hospital, House Governor of; Wilderdale, Ilfracombe; West End Hospital for Diseases of the Nervous System, Lond., Secretary of; West Riding Asylum, Wadsley, Clerk of; Herr H. F. Werth, Köln; Dr. C. S. Wallace, Lond.

Y.—Yu, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Dr. J. Althaus, Lond.; Association for Vaccine Lymph, Lond.; A. B., Lond.; Aurum, Lond.; Messrs. J. and R. Archibald, Tillicoultry.

B.—Mr. H. E. H. Bigg, Lond.; Messrs. P. B. Burgoyne and Co., Lond.; Bromley Union, Clerk of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Bicepe, Lond.; Mr. A. Butler, Epsom; Mr. C. Beesley, Darton; Mr. Brettell, Lond.; Dr. G. A. Bruce, Aberdeen; Messrs. T. Browne and Co., Lond.; Borough Hospital, Birkenhead, Hon. Treasurer of.

C.—Mr. J. J. Culmer, Nassau, Bahamas; J. Clarke, Hitchin; Cumberland and Westmorland Asylum, Carlisle, Secretary of; Messrs. Carnrick and Co., Lond.; Mr. J. J. Clarke, Lond.; Dr. J. Cropper, Chepstow; Cui Bono? Lond.; Catlin, Lond.; Mr. H. A. Collins, Saxmundham; Mr. T. J. Croke, Harrogate; Dr. R. Cox, Theale; Clericus, Lond.; Chelsea Hospital for Women, Lond., Secretary of; Clavicle, Lond.; County, Lond.; Chateau, Lond.; C. F., Hungerford; Messrs. A. Cohen and Co., Lond.

D.—Mr. F. C. Dodsworth, Chiswick; Messrs. Davies and Rhys, Aberdare; Delta, Liverpool; Daleth, Lond.; Delta, Lond.; Delta, Sheffield; Dr. T. S. Dowse, Lond.; D. M., Newcastle-on-Tyne; Messrs. A. De St. Dalmas and Co., Leicester; Mr. W. W. David, Llwynypia.

E.—Mr. S. Edwards, Tudhoe; Elberfeld Farben Fabriken Co., Lond.; Exeter City Asylum, Clerk of; Mr. W. Evans, Shepley; Lieut.-Col.-Brig.-Surg. A. F. Elliott, Bodmin; Experientia, Lond.; Electro, Lond.

F.—Rev. W. Farrer, Lond.; Mr. A. C. Farrington, Shelfanger; Messrs. Fletcher, Fletcher, and Co., Lond.; F.R.S., Lond.; Fides, Lond.; Fidex, Lond.; Fullers, Ltd., Lond.; F. M., Lond.

G.—Mr. F. Gahne, Belize, British Honduras; Mr. R. R. Gibson, Birmingham; Messrs. R. W. Greeff and Co., Lond.; Grove House Private Asylum, Proprietor of; General Apothecaries' Co., Lond.; Dr. A. H. Griffith, Manchester; Mr. J. Gray, Stanhope; G., Manchester; Dr. R. Griffith, Netherton; Messrs. Gale and Sons, Birmingham.

H.—Mr. W. P. Hugoe, Chacewater; Mr. T. Hickling, Sulgrave; Mr. Hammond, Leeds; Dr. S. H. Habershon, Lond.; Dr. V. Harley, Lond.; Messrs. Hooper and Co., Lond.; High Shot House, Twickenham, Medical Superintendent of; Mr. E. R. Herbert, Peterborough; Dr. J. Hunter, Linlithgow; Mr. J. C. Honeybourne, Guildford; Hampton, Lond.

I.—Messrs. Ingram and Royle, Lond.

J.—Mr. J. T. Jones, Llanasa; Mr. F. F. Jones, Llanfyllin; Dr. A. B. Jones, Aberystwyth; Joint Counties Asylum, Carmarthen, Medical Superintendent of.

K.—Mr. C. P. Kelly, Hoo; Mr. R. A. Keys, Castlefin; Messrs. Keith and Co., Edinburgh; Dr. W. R. Kingdon, Ticehurst; Mr. R. C. B. Kerin, Lond.

L.—Dr. W. M. Leslie, Lond.; Mr. L. E. Lewis, Dolgelly; Mr. H. A. Lane, Lond.; Mr. T. L. Lynch, Lond.; Liverpool Royal Infirmary, Secretary of; Locum Tenens, Hallaton; Mrs. Leech, Wandsworth; Luscombe, Lond.; L. T., Neath; Mr. H. B. Long, Wimbledon.

M.—Mr. G. Martinson, Hull; Dr. A. Mackay, Crook; Medicus, Low Fell; Medicus, Lond.; Maltine Manufacturing Co., Lond.; Mr. V. E. Mitchell, Margate; M.D., London; Messrs. Mason and Co., Bristol; Messrs. Mullins and Sons, Cork; Medicus, Winfrith; Milk Preparations Co., Brentwood; M. C., Lond.; Dr. J. D. Malcolm, Lond.; Mr. W. Middlemass, Edinburgh; Messrs. R. McAlpine and Sons, Glasgow; Mason, Lond.; M. F., Belfast.

N.—Norfolk and Norwich Hospital, Secretary of; North of England Medical, &c., Association, Leeds, Manager of; Nuntius, Lond.; N. M., Lond.

O.—Mr. J. M. O'Dwyer, Castletown-Berehaven; Occiput, Lond.; Mr. R. O'Callaghan, Lond.; Mr. C. A. P. Osburne, Norwich.

P.—Mr. B. C. Phillips, Grantham; Mr. J. H. Peet, Preston Candover; Messrs. Parry and Tinsley, Swansea; Mr. A. H. Parker, Lond.; Messrs. W. Porteous and Co., Glasgow; Primus, Lond.

R.—Mr. T. O'Neill Roe, Basford; Radcliffe Infirmary, Oxford, Secretary of; Mr. M. Roberts-Jones, Cardiff; Mr. C. Randolph, Milverton; Dr. W. C. Rockliffe; Hull; Messrs. Reynolds and Branson, Leeds; Mr. W. T. Rees, Whitland; Raymond, Lond.; Messrs. Robinson and Sons, Chesterfield; Messrs. J. Robbins and Co., Lond.

S.—Mr. H. M. Speechley, Parkgate; St. Andrew's Hospital, Northampton, Secretary of; Society of Trained Masseuses, Lond., Hon. Secretary of; Messrs. W. H. Smith and Sons, Birmingham; Messrs. Stubbs, Lond.; Salford Royal Hospital, Secretary of; Messrs. A. F. Sharp and Co., Glasgow; Messrs. J. and W. Stewart, Lond.; Mr. E. Smyth, Portaferry; Skin, Lond.; Messrs. J. P. Segg and Co., Lond.; Mr. J. Stratton, Wokingham; Stanley Hospital, Liverpool, Secretary of; Scientific Press, Ltd., Lond.; Statim, Lond.; Scope, Lond.; Surgeon, Birmingham.

T.—Dr. L. C. Thorne-Thorne, Lond.; Tower House Retreat, Westgate-on-Sea; Tadcaster Union, Clerk of.

U.—Upsilon, Lond.

V.—Vinolia Co, Lond.; Victoria Hospital for Sick Children, Lond., Secretary of; V. C., Lond.; Vesta, Lond.; Vide et Crede, Lond.; Vendor, Lond.

W.—Dr. A. C. White, Oldham; Dr. J. H. Waterhouse, Maltby Grange; Wrexham Infirmary, Secretary of; Mr. S. Wand, Leicester; Mr. W. J. Wreford, Exeter; Wonford House Hospital, Exeter, Treasurer of; Worcester County Lunatic Asylum, Secretary of; Dr. A. F. Wilson, Cambridge; Mr. E. H. Worth, St. Day; Mr. H. T. Welch, Kirkby Lonsdale.

X.—X. Y. Z., Lond.; X., Lond.

Y.—Mr. H. K. Young, Middlesbrough.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Amières Paris.

The Milroy Lectures

ON

THE NATURAL HISTORY OF VACCINIA.

Delivered before the Royal College of Physicians of London on May 3rd, 5th, and 10th, 1898,

BY S MONCKTON COPEMAN, M.A., M.D. CANTAB., M.R.C.P. LOND.,

MEDICAL INSPECTOR TO HER MAJESTY'S LOCAL GOVERNMENT BOARD LECTURER ON PUBLIC HEALTH IN THE MEDICAL SCHOOL OF WESTMINSTER HOSPITAL.

LECTURE II.[1]

Delivered on May 5th.

MORPHOLOGY AND CHEMISTRY OF VACCINE LYMPH.

MR. PRESIDENT, CENSORS, AND GENTLEMEN,—Fresh vaccine lymph, taken before full maturity of the vesicle, is a clear, transparent, limpid fluid, almost colourless in man and slightly straw-coloured when obtained from the calf; this difference in colour depends on the varying quality of the normal pigment present in the blood plasma. Calf vaccine lymph is also somewhat more viscid than human lymph and does not flow so readily when the vesicle is punctured; for which reason it is necessary to use compression forceps in the ordinary methods of collection of calf lymph. Examined microscopically vaccine lymph contains a certain amount of epithelial débris, a few cells and portions of cells being always visible. Leucocytes are usually present also, the number depending on the stage at which the lymph is taken; few or even none are to be found in the contents of the vesicle when first formed, but at or after the period of maturation they may be so numerous as to render the lymph turbid or even puriform. A few red blood corpuscles may be noticeable, although most observers will hardly agree with the statement made by Dr. W. Husband to the Royal Commission on Vaccination that this is invariably the case. In stained specimens, particularly, micro-organisms of one or more varieties can readily be demonstrated, the actual numbers being dependent to a certain extent on the care with which the lymph has been collected. The nature and significance of the various microbes which at one time or another have been isolated from specimens of vaccine lymph will be discussed in the section on bacteriology.

It is matter of common knowledge that untreated lymph when stored in capillary tubes tends after a longer or shorter interval to become cloudy, under which circumstances it is also liable to be uncertain in its action if subsequently used for the operation of vaccination. This opaque appearance may be quite independent of any coagulation of the lymph, as may not unfrequently be demonstrated on breaking tubes in which it is most marked. On the other hand, where clotting has taken place after the lymph has been stored, the opacity tends to form with the coagulum a central whitish thread in the midst of a clear fluid, instead of being distributed through the lymph in discrete points as may otherwise be the case. If cultivation experiments be carried out by inoculation on nutrient media the number of colonies resulting from such inoculation with the contents of tubes which have become opaque is usually much greater than if fresh lymph is employed in a similar manner. We are apparently justified, therefore, in considering that the opacity of such old stored lymph is, in the main, the outcome of an enormous multiplication of aerobic bacteria the ancestors of which are present in the lymph when first collected, although their numbers are then so comparatively small as not to render it in any way turbid. It follows that ordinary vaccine lymph which has become opaque should never be employed for vaccination. Vaccination lymph, chemically speaking, consists of the serum or rather of the plasma of the blood. When freshly obtained, therefore, it is faintly alkaline in reaction, but it tends to become distinctly acid after a time when stored. In addition to the various salts and proteids normally present in the blood plasma vaccine lymph contains some substance, possibly of the nature of a toxin or ptomaine, which results from the vital activity of the specific organism peculiar to vaccinia. That this is so may be proved either by filtration of the lymph through porcelain or by exposure of it to a temperature of about 50° C. If, as I have shown, such filtered or sterilised lymph be inoculated on the skin in the usual manner no obvious effect is produced at the point of inoculation, but it will be found that the animal has been rendered temporarily immune to the effects of subsequent vaccination with lymph of normal potency.

BACTERIOLOGY.

Although the study of the bacteriology of vaccinia and variola has, during the past thirty years or so, attracted the attention of a great number of observers, much yet requires elucidation before we can look upon our knowledge in this direction as satisfactory. Nevertheless progress though slow is perhaps sure, and it would seem as if it must be the very difficulties of the subject which enhance the inducement for the constantly renewed initiation of investigations by observers in all parts of the world. As long ago as the year 1809 Sacco placed on record the fact that in vaccine lymph there might be found certain granules generally collected together into masses and possessed of the power of automatic movement. The observation appears to have stood alone for more than half a century, but in 1863 Dr. Lionel Beale gave an impetus to the investigation of the morphological constituents of vaccine lymph by his description of the existence in it of transparent or hyaline particles of extreme minuteness. Both in his original paper in the *Microscopical Journal* for April, 1864, and also subsequently in the Report of the Royal Commission on the Cattle Plague, Dr. Beale expressed the opinion that these granules constituted the contagious principle of the disease, but he does not appear to have obtained experimentally any facts in support of his belief. A few years later Hallier and Zurn (1867) and Keber (1868) called attention to the presence in vaccine lymph of numerous micrococci, or "grains" as they were termed by the latter observer, who also evidently regarded the bodies found by him as the carriers if not the actual generators of the virulent principle.

It is, however, to M. Chauveau (1868) and Professor Burdon Sanderson that we owe the first real step toward the elucidation of the micro-pathology of vaccinia, these observers having demonstrated that vaccine lymph when freed from its contained particles and inoculated on a living animal no longer causes vaccinia, while, on the other hand, the precipitate or deposit, separated from it in one way or another, when employed in similar fashion remains capable of producing the disease. M. Chauveau found that vaccine lymph taken at the stage of maturation of the vesicles contained minute granular bodies to which he gave the name of *corpuscles noirs*, and not unfrequently also much larger bodies resembling the leucocytes of pus. He further found that if the lymph was diluted ten times and allowed to stand these leucocytes when present gradually subsided to the bottom of the containing vessel and could then be removed. When this was done and the material employed for an experimental vaccination a local result was still obtained, thus showing that the active principle was contained not in these leucocytes but either in the granules or in the fluid portion of the lymph. In order to settle this point M. Chauveau devised a method of diffusion by which he was eventually able to separate the granules from the fluid portion of the lymph. The amount of vaccine lymph at his disposal being necessarily exceedingly small the ordinary means for obtaining diffusion were not applicable. M. Chauveau attained the desired object, however, by carefully floating a layer of distilled water on to the surface of a drop of lymph contained in a tiny glass vessel of cylindrical shape. If this manipulation is dexterously performed the two liquids do not mix with each other excepting in the immediate neighbourhood of the point of junction (of the two layers). But after a time the soluble constituents of the vaccine lymph pass upwards into the water, so that if after 24 hours or so a portion of the upper layer be carefully removed by means of a capillary tube and examined under the microscope it is found to be free from "granules." And, further, M. Chauveau was enabled to demonstrate the fact that while this upper layer of fluid which could be shown to contain albumin and so afforded evidence of diffusion having taken place, gave negative results only on inoculation, the lower layer, on the

[1] Lecture I. was published in THE LANCET of May 7th, 1898.

contrary, which contained the "granules" in suspension, was found to be active as vaccine, normal vesicles being obtained as the result of its inoculation Professor Burdon Sanderson shortly afterwards repeated M. Chauveau's work, employing certain improvements in the method which seemed likely to render it more accurate and thus to afford results of greater scientific value. He also made use of another method of his own consisting in the filtration under pressure of the liquid to be tested through a layer of unglazed porcelain, by which means all solid particles were effectually separated from the fluid containing them. Professor Sanderson, by the employment of this method and also of his modification of that originally introduced by M. Chauveau, fully confirmed the results announced by the French investigator. Further, M. Chauveau, by largely diluting vaccine lymph with distilled water and employing the mixture for vaccination, found that he thus obtained strong additional evidence in support of the doctrine now universally accepted that contagium is particulate in nature. He was enabled to show that whatever the degree of dilution the local effect produced (provided that it is produced at all) is always the same. In other words, the difference between the effect of inoculating extremely diluted lymph and that of inoculating the lymph itself without any addition of water does not manifest itself, as might be expected, in the size of the individual vesicle or vesicles produced. He found, on the other hand, that the difference consisted entirely in the numerical relation of successes to failures. If successful, inoculation with a liquid containing an extremely small proportion of lymph may communicate the disease as completely as the original lymph itself—a result which is not only perfectly consistent with the fact that contagium is particulate, but which is in itself a necessary consequence of its being so. As bearing on this question it may be mentioned that Schultz of Berlin has quite recently been engaged in an investigation having for its object the determination of the extent to which, in order to save time and expense, glycerinated vaccine lymph could be diluted without losing its efficiency as vaccine. In the course of his experiments he found that an emulsion containing one part only of vaccine pulp in 2000 parts of glycerine and water was capable of producing locally a normal vesicle in a small proportion of the cases in which it was employed for vaccination. The experiments of Reiter confirmed those of M. Chauveau and showed that vaccine lymph even when excessively diluted was capable of affording a positive result on vaccination, provided the more extensive the dilution the greater the absorbing surface. In 1872 a paper was published by Cohn of Breslau in which he treated the morphological aspects of the subject with much completeness. His observations, which related to both vaccine lymph and variolous lymph, have received general corroboration from all subsequent workers. He, however, apparently believed certain micro-organisms found by him to be of one species only, to which accordingly he gave the name micrococcus vaccinæ or variolæ as the case might be, whereas later observers have shown that organisms of more than one species are usually to be found in any given specimen of crude lymph. Cohn called attention to the fact that in perfectly fresh vaccine lymph the "corpuscles" for the most part occur singly, but that others are joined together in pairs in a form resembling the figure 8; and he states that after the lymph has been kept for a time the number of the "double cells increases and soon chains of four begin to be distinguishable. These chains are usually curved or in zigzags; their attachment one to another is evidently very slight as they can readily be displaced. After a few hours' observation they are seen to be all aggregated into irregular colonies or clumps, each consisting of sixteen, thirty-two, or more corpuscles." He also noted a point of importance in connexion with the opacity which is apt to occur in stored lymph—namely, that "in capillary glass tubes the enlargement of colonies sometimes lasts a long time so that groups of them acquire considerable size and present themselves as floccuii."

Klebs (1873) isolated from vaccine lymph micrococci united together in the form of tetrads which he considered as specific and to which he gave the name of tetracoccus vaccinæ. Cornil and Babes (1883) also met with micrococci. Koch (1882) found micrococci in the vaccine vesicles of a child and noted that human lymph freshly prepared with glycerine contained what he appears to have regarded as the specific bacteria of vaccine. These developed but slowly even in the incubator and were met with in fewer numbers in old lymph, even though it still remained active. Quist in the following year (1883) published a series of experiments dealing with the possibility of cultivating outside the animal body the micro-organisms present in vaccine lymph. The culture fluid employed by him was composed of equal parts of blood-serum, glycerine, and distilled water, this mixture being rendered alkaline by the addition of $\frac{1}{100}$ part of carbonate of potash. After sterilising this fluid by exposing it to a temperature of 60° C. for one and a half hours on three successive occasions it was inoculated with a minute piece of sterilised sponge soaked in clear lymph or with a piece of vaccine "crust" which had been washed in distilled water and then carefully dried. He found that growth eventually occurred both on and below the surface, the former consisting of minute scales while the latter gradually settled to the bottom of the vessel as a fine sediment. The scales, forming a scum on the surface of the fluid, he found to be composed of swarms of micrococci which, when inoculated on the skin of calves, in some cases gave rise, in his opinion, to a typical eruption of vaccinia. Although Quist did not attain any great measure of success in the immediate object of his inquiry (the identification of the vaccine organism), still he showed that the specific contagium of vaccinia could exist for a time at any rate in a fluid containing a considerable portion of glycerine.

About this same time papers were published by Feiler (1883), Serebriakoff (1884) Baragi (1884), and Hubert (1884), all of whom denied that vaccine lymph contained any specific microbe whatever. Voigt isolated three species of bacteria by making gelatin plate cultures of vaccine lymph. Of these one, which alone was constantly to be found, he considered to be specific and consequently termed it the vaccinococcus. He describes this as a small coccus growing usually in groups of two or four, sometimes in masses and less often in chains. These bacteria gave rise to glistening white circular colonies which did not liquefy the gelatin in which they were grown. He further stated that cultivations of this bacterium when inoculated on calves rendered them immune to subsequent vaccination. Guttman (1886) also found three micrococci in the contents of vaccine vesicles. These were the micrococcus pyogenes aureus, micrococcus pyogenes albus, and micrococcus viridis flavescens, but none of these is specific to vaccinia. Marotta (1886) found a coccus (micrococcus tetragonus) which he regarded as specific. By its use he thought that he had succeeded in producing vaccine vesicles. From the characters which he assigns to his cultivations it would appear that in reality what he isolated was the staphylococcus pyogenes aureus. In 1886, Meguin called attention to the fact that the number of micrococci contained in vaccine lymph increased considerably from the second day onwards after the removal of the lymph. During the same year (1886) Dr. Buist succeeded in isolating from vaccine lymph three varieties of micrococci which when grown on nutrient media gave rise to colonies of a white, yellow, or orange colour respectively. All these Buist appears to have considered to be essential constituents of vaccine lymph, as is evidenced by the fact that he speaks of them as white, yellow, or orange vaccine respectively. From specimens of variolous lymph he succeeded in obtaining one organism only, the colour of which was white when grown on solid media. With none of these cultures did he obtain any definite result on the inoculation of calves, monkeys, or human beings.

A certain small measure of success appears to have attended inoculation experiments in the hands of Carmichael (1887), who does not, however, give any detailed description of the morphological characteristics of the growths which he obtained, which, by the way, although differing from one another in colour, he seems to have considered to be the product of one species of micrococcus only. As was doubtless the case with Quist's experiments, in the few instances in which true vaccine vesicles resulted at the site of his inoculations, success was in all probability due to the presence in the material employed of a small proportion of the lymph originally used for the seeding of his culture medium. Tenholt (1887) appears to have isolated from specimens of vaccine lymph a dozen different micrococci, two bacilli, and two yeasts. Hlava (1887), on the other hand, isolated from vaccine vesicles the streptococcus pyogenes, the staphylococcus pyogenes, the staphylococcus pyogenes albus, the staphylococcus cereus albus, and the micrococcus viridis flavescens. Garré (1887) reported the existence in vaccine

lymph of two bacilli and of a small coccus which he considered to be specific; this, when inoculated on the calf, produced the vaccinal eruption followed by immunity, while in the human being it afforded immunity although giving rise to no eruption. Pfeiffer, a year later (1887), recorded the existence in vaccine lymph of micro-organisms of several different forms, including a yeast (named by him saccharomyces vaccinæ) two sarcinæ (lutea and aurantiaca), a short bacillus allied to proteus vulgaris but differing from it in not being pathogenic, and certain micrococci of which one, the staphylococcus cereus albus (Passet) was of constant occurrence, while the staphylococcus pyogenes aureus and albus were less frequently met with. Pfeiffer, however, believes that the specific agent of variola and vaccinia is not to be sought for among the bacteria but rather that it belongs to the class of sporozoa. This subject will require further notice later. In addition to the staphylococcus aureus and albus M. Grigorieu (1889) describes a micrococcus vaccinæ as specific to the disease. This microbe usually developes as a diplococcus, rarely forming chains, and grows slowly on gelatin which it liquefies after from four to six weeks. On the calf it produced a papular eruption which apparently afforded immunity to subsequent vaccination. M. Woitow (1890) succeeded in isolating four staphylococci—aureus, albus, cereus, and citreus. He affirms that the inoculation of a mixture of these microbes produced typical vaccinia in the calf. Professor Leoni (1890) met with several pyogenic microbes in fresh vaccine lymph, notably the staphylococcus pyogenes albus, which was invariably present. M. Protopopoff (1890) in like manner found it possible to isolate several different forms of micrococci.

As the result of my own work previous to 1891 (in which year my first paper was published) it would appear that there are at least three species of micro-organisms—namely, staphylococcus albus, staphylococcus pyogenes aureus, and staphylococcus cereus flavus, corresponding probably to Buist's white, orange, and yellow vaccine respectively—one or more of which are almost universally to be found in every specimen of human or calf vaccine lymph examined. Of these the staphylococcus albus is usually to be found in the upper layers of healthy skin of unvaccinated persons. In addition I have been able to satisfy myself as to the occasional presence of the streptococcus pyogenes. I myself have never detected the streptococcus of erysipelas, but Dr Klein has placed on record the fact that in one instance he isolated this microbe from a specimen of human vaccine lymph the use of a portion of which was believed to have given rise to the occurrence of erysipelas in the human subject. Also I have shown that none of the microbes ordinarily to be isolated from vaccine material can be regarded as specific to vaccinia. Professor Crookshank (1891) succeeded in isolating from various specimens of vaccine lymph—by the method of plate cultivation—an immense number of bacteria, including micrococci, bacilli, torulæ, &c. All of these he recognises as well-known saprophytic bacterial forms associated, some of them, with processes of suppuration, but none of which, he says, can be regarded as the contagium of vaccinia seeing that no single one of them is constantly present in vaccine lymph, human or bovine. M. Besser (1893) found in the papules of a case of small-pox at the fifth day a small bacillus which he is disposed to look upon as the specific organism of variola. He obtained cultures on various nutrient media, coverslip preparations from which always showed the organisms arranged in palisade-like rows. The late Professor Straus (1893) found that the seeding of gelatin plates with fresh vaccine material, whether glycerinated or not, gave rise to the appearance of numerous colonies of micrococci, among which the staphylococcus pyogenes aureus and albus were most frequently met with. When glycerinated lymph which had been kept for a considerable period was employed in similar fashion the number of colonies was greatly diminished. The paper, in which he collaborated with M. Chambon and M. Ménard, is illustrated with three figures of plate cultures from vaccine lymph which had previously been stored for different periods of time. M. Anthony (1893) in the course of the examination of a number of different specimens of vaccine lymph—glycerinated and otherwise—found that four different kinds of micrococci and three species of bacilli are apt to be present. Of these what he terms from its appearance the porcelain micrococcus is invariably present in fresh vaccine. The other three micrococci included the staphylococcus pyogenes aureus, a greyish white micrococcus liquefying gelatin, and a yellow micrococcus often present which does not liquefy gelatin and which grows easily in peptone beef broth, on gelatin, and on agar. The four bacilli noted by him include the bacillus subtilis, the bacillus mesentericus, a fluorescing bacillus, and a motile bacillus which grows in the form of yellow colonies. All these bacilli, according to this observer, represent impurities of the lymph. As the result of his researches M. Anthony concludes that vaccine lymph cannot be regarded as above suspicion as long as it is found to contain any microbes other than the porcelain micrococcus. The inoculation of cultures of his porcelain bacillus on heifers afforded only negative results. M. Maljean (1893) published a paper in which he describes the occurrence in vaccine lymph of two yellow cocci, of which one liquefies gelatin and the other does not, and of a peculiar micrococcus which is of a brilliant white colour when grown on various media and to which he gives the name of *coccus vaccinal;* this micrococcus is larger than streptococcus pyogenes and in cultures it grows as isolated points, as diplococci, and in short chains. Maljean states that this coccus gave rise in the guinea-pig to the formation of a suppuration and on the calf to a typical vaccine eruption. Other observers, however, employing the same cultures failed to obtain a positive result.

Dr. Klein agrees with me in maintaining that none of those microbes which ordinarily can be cultivated from vaccine lymph are "an essential inhabitant in vaccine" or "can have anything to do with its active principle." In the report of the medical officer to the Local Government Board for 1892–1893 he, however, described a peculiar, extremely minute bacillus as occurring in calf lymph and in variolous lymph of human origin obtained in an early phase of the disorder, in calf lymph from 72 to 96 hours after vaccination and in human variola during the third or fourth day. In both instances the lymph was collected aseptically. Clear lymph only, as free as possible from epidermal débris was used for film specimens, which, after heating and treatment with 30 per cent. acetic acid for some minutes, were subjected to prolonged staining in alcoholic gentian violet. Some of the films of calf lymph (collected after removal of the epidermis as a whole) showed an abundance of these minute bacilli, generally massed together, some of the specimens looking indeed like film specimens of an artificial culture. Lymph of early human variolous vesicles showed similar bacilli, but not so abundantly. Calf lymph taken at later stages (five or six days old) showed no bacilli or only a few here and there. In certain of these bacilli from vaccine lymph Dr. Klein succeeded in demonstrating spore-like bodies which, together with the absence of the bacilli in the lymph of later stages, led him to the conclusion that disappearance of these bacilli from the lymph was possibly the result of their having broken up after the formation of spores, which might alone be present about the time of maturation of the vesicle. Dr. Klein adds that these bacilli are incapable of cultivation in the ordinary culture media, no growth whatever having been obtained by him on solidified blood serum, glycerine agar, ordinary agar, sugar gelatin, or ordinary gelatin, although in specimens of the same lymph as was employed for this purpose, and which on transference to the calf produced perfect vaccine vesicles, bacilli were found in abundance. MM. Baillard and Anthony (1894) have worked at the question of the number of microbes present in vaccine which has been stored for various periods. Baillard constantly found in the lymph a white staphylococcus, a yellow staphylococcus, and bacillus subtilis. His experiments led him to the conclusion that, by keeping, the number of germs contained in glycerine pulp becomes considerably diminished, but that germs never completely disappear. After as long a time as seven months the material with which he was experimenting still contained some living germs, among which were the bacillus subtilis and staphylococcus albus. Leoni (1884) also experimenting on the effect of glycerine in the purification of vaccine lymph found that the microbes usually had disappeared in from one to four months. Dr. Buttersack (1894) described the appearance in vaccine lymph, dried on cover glasses, of a dense network of threads associated with numerous granules which he considered as peculiar to vaccine. These threads he regarded as the growing vegetative part of a vaccine fungus, the granules in his opinion representing spores. It appears fairly certain, however, that what he believed to be a mycelium with spores in reality consisted merely of threads and granules of fibrin or of some

other albuminous substance. In this same year (1894) I published a description of numerous minute bacilli sometimes to be found in considerable numbers in the vaccine vesicles both of the calf and the human being at an early stage of their development, in this respect apparently confirming the experience of Dr. Klein which was published in the same year, and of which mention has already been made. Similar bacilli were also demonstrated by Mr. Kent and myself in sections of skin passing through the site of a vaccine vesicle obtained from the calf.

An account of certain experiments dealing with the possibility of cultivating these micro-organisms and also a similar one isolated from variolous material I propose referring to later. M. Ruete (1894) obtained what he believed to be pure cultures of the specific agent of vaccine from calf lymph, this consisting of a micrococcus, the toxin elaborated by which he termed vaccinin. He failed, however, in his attempts at inoculation of the human being. In 1895 Landmann found that in Germany no less than 80 per cent. of certain children vaccinated successfully presented an excessive inflammatory condition of the arm, sometimes of an erysipelatous or hæmorrhagic character. In searching for the cause of these unfortunately numerous complications Landmann undertook an elaborate study of the lymphs distributed from 13 of the German institutes. As a result of his research he found that the number of germs present in the various specimens of lymph varied from 50 to no less a number than 2,500,000 per cubic centimetre. Among the microbes which he succeeded in isolating were the streptococcus pyogenes, the staphylococcus albus, and the staphylococcus aureus. Two American observers, Dr. Stephen C. Martin and Professor Ernst, recorded in 1895 the isolation of a micro-organism which they considered to be specific to vaccinia. This was a short, thin bacillus which they found was capable of growth on serum obtained from ox or horse's blood but not on other media. The growth, which is of a white colour, forms chains and under certain circumstances, according to these observers, takes on the form of a micrococcus. With a cultivation of this microbe of the fourteenth generation they produced a vaccine vesicle on an infant in one attempt out of ten, better success, however, attending their attempts at inoculation of a calf. M. Le Dantec in the same year (1895) found in lymph, staphylococci, the reactions of which he says shows that they are related to the ordinary pus cocci. These staphylococci differed according to the species of animal from which they were obtained, those isolated from calf lymph liquefying serum, while those obtained from human lymph did not do so.

M. Arloing (1896) experimented with the lymph of vesicles of horse-pox obtained by injecting a colt intravenously with vaccine lymph purified as far as possible by storage in glycerine. From the resulting vesicles he first carefully removed the superficial layer of epidermis and then collected the underlying material with aseptic precautions. With this he inoculated tubes of glycerine beef broth, obtaining as a result in each instance a growth consisting of a micrococcus which, however, when inoculated in turn on the animal body produced neither an eruption nor immunity to subsequent vaccination. From his researches M. Arloing concluded that the virulent agent of vaccinia must be of the nature of a soluble toxin. M. Boureau and M. Chaumier, also in 1896, found a number of different microbes in specimens of vaccine lymph, including staphylococcus aureus, cereus and albus, micrococcus flavus, bacillus subtilis and luteus, bacterium termo, proteus vulgaris, a cladothrix, a fluorescing bacillus, and several other bacilli, which they were unable to identify. They make the extraordinary statement that it is only when the vaccine has lost its virulence that the microbes originally contained in it completely disappear; that, in fact, the number of staphylococci present at any given time afford a measure of the potency of the lymph.

Dr. Saint-Yves Ménard (1896), in reply to this communication, reiterated the contention of Straus and himself, confirming my previous work on this subject, that the microbes which can be isolated from vaccine lymph by the ordinary methods are in no way essential to its specific action and that by the end of six months, at any rate, no micrococci can be obtained from "glycerinated emulsion," which has been preserved in sealed tubes, although it is still perfectly active as vaccine. Dr. Sacquépée (1896), in the course of examinations of various samples of vaccine lymph, met with three species of staphylococcus: the bacillus subtilis, the bacillus mesentericus, and another unknown species of bacillus. Of these he regards the bacillus subtilis and the bacillus mesentericus as evidences of accidental impurity of the lymph. Delobel and Cozette (1896–97), collaborating with Gourny, in common with most other observers, found that the bacteria most constantly present in vaccine lymph are a white and yellow micrococcus. They state that when due care is not exercised in the collection of the lymph, bacillus subtilis and bacillus mesentericus may be found. Inoculation experiments on the human being and on the calf afforded them only negative results. M. Paul, also in 1896, published a voluminous account of his researches on the occurrence and significance of pathogenic micro-organisms associated with vaccine lymph. He lays stress on his observation that the staphylococcus pyogenes aureus is by far the most ubiquitous of the microbes that are found in vaccine lymph, although it is certainly not an essential concomitant. He finds, moreover, that it exhibits both variable resistance and variable virulence. A sample of lymph, for instance, of supposed Jennerian stock he found to contain this staphylococcus in a phase of much higher virulence and resistance than was a specimen of this same microbe obtained from a sample of calf vaccine lymph. This staphylococcus, he adds, may be present without causing suppuration, but the use of a lymph containing it in large quantities should naturally be avoided. According to this observer the number of bacteria present in fresh lymph appears to be independent both of the origin of the stock from which it is derived and of the method of vaccination employed. This, as shown elsewhere, does not accord with my experience. Quite recently (1897), in conjunction with Dr. Blaxall, I have carried out a further extensive series of investigations on the bacterial flora of calf vaccine, with the outcome that, as the results of former work had led us to anticipate and as has been repeatedly shown by other observers, calf lymph (or, rather, vesicle pulp) may contain a large number of micro-organisms which are in no way concerned with its specific activity. Human lymph, as a rule, we find to contain remarkably few microbes, but probably this might not be the case were the whole substance of the vesicle removed, as is now usual in collecting from the calf. We have shown also, as have other investigators, that lymph, if carelessly collected, is often found to be contaminated with many of the numerous saprophytes common to dust, &c., in addition to certain possibly pathogenic microbes which may be present.

On the other hand, lymph taken directly from calves vaccinated with vaccine material rendered free from extraneous organisms, as, for instance, glycerinated lymph a month after emulsification, often presents remarkably few colonies of "extraneous" organisms. In one such sample only four colonies appeared on a plate culture of the lymph, one of staphylococcus cereus albus and three of a light brown yeast. If a vaccine vesicle of a healthy child or calf be carefully opened at an early stage with all aseptic precautions and a droplet of the lymph which exudes from it be submitted to bacteriological examination it may not unfrequently be found, as Dr. Klein has also demonstrated, that such lymph is absolutely pure in the sense that it contains no micro-organisms which will grow on ordinary culture media. Yet it is perfectly efficient as vaccine. But, on the other hand, as just stated, in lymph obtained in ordinary fashion from mature vesicles inoculation of plates or tubes of nutrient material usually results in abundant growth of micro-organisms. Those most commonly met with are, morphologically and culturally, identical with the staphylococci found in pus—viz., the staphylococcus aureus, albus, cereus albus, and cereus flavus. Of these the first two liquefy gelatin, the other two do not. Occasionally the streptococcus of pus may be present, as also the staphylococcus citreus. Other microbes of a purely saprophytic nature that are met with include the common hay bacillus, bacillus mesentericus, varieties of proteus, yeast moulds, and sarcinæ. These, however, can for the most part be excluded by careful manipulation, so that in vesicle pulp which has been collected with all due precautions nothing is found beyond some one or more of the four first-named staphylococci, of which a white staphylococcus is perhaps most common, and possibly one or more yeasts. Thus our most recent experience confirms in all essential particulars my first report published in 1891.

The fact that in vaccine lymph or in the vesicle pulp micro-organisms are found which, under certain circumstances, are known to be provocative of suppuration does

not in any way imply that the lymph in which they are present is purulent or that if such staphylococcus-infected lymph were employed for vaccination in the human being suppuration would necessarily ensue. The recent Berlin Commission, indeed, reports that of 18 samples of lymph examined, only 5 contained staphylococci which were pathogenic for small animals and, further, that no harm resulted on the vaccination of children with these particular specimens of lymph. From this circumstance it is evident that the virulence of these micro-organisms for rodents, for instance, cannot be accepted as a measure of their power to affect injuriously the body tissues in the healthy human subject. The streptococcus of pus must be a rare inhabitant of calf lymph, the Berlin Commissioners, indeed, stating that they never once met with it in the course of the examination of 64 samples of lymph. In human lymph it is by no means of so unfrequent occurrence. With reference to the question of the possible presence of the tubercle bacillus in lymph I am not aware of any authentic record of its having been found even in lymph derived from the calf. But, as I shall presently have occasion to show, we are enabled, by the use of a special method of preparing and testing vaccine lymph, to obviate any possibility of danger to which the presence of the tubercle bacillus or other pathogenic microbes in the original specimen of lymph might conceivably give rise.

In 1894, as already mentioned, I showed, concurrently with Dr. Klein, though independently, that in specially stained specimens of vaccine lymph taken at a period antecedent to full maturity of the vesicles the presence of bacilli of extremely small size and in practically pure culture can be demonstrated. These bacilli cannot be found, or only with difficulty, in mature lymph, for the reason probably that they have by then given place to spores. For some time it appeared impossible to obtain further evidence as to the *rôle* of these bacilli, as they altogether refused to grow on any of the ordinary culture media and under either aerobic or anaerobic conditions, though this very fact obviously tends to show that they are not of a merely saprophytic nature. In the following year, however, I carried out certain experiments which appear to prove that it is possible to obtain a growth of similar bacilli from variolous material in a particular culture medium and even to carry on such growth in secondary cultivation. The experiments which have been instituted in this direction are but few in number and it is evident that the exact conditions essential to success have yet to be determined. As it seemed to me, the desideratum for the purpose of inducing growth of the supposititious micro-organisms was a medium which had not been artificially sterilised, which *à priori* should afford the necessary pabulum, and which at the same time was secure in its circumstances against contamination. Hence the choice appeared to lie between the intra-peritoneal fluids of one or another living animal and the hen's egg, which has already been made use of as an alternative culture medium. As regards intra-peritoneal fluid I foresaw difficulty in that it is apt to contain leucocytes which might easily vitiate experiment and accordingly I adopted the hen's egg as a matter of first instance. I had no experience to guide me as to the best method of carrying out the inoculation of the egg or as to the period of incubation best suited for the object I had in view, and my attempts for a time therefore met with but small success. My inoculations were carried out by first cleansing the surface of the egg with corrosive sublimate solution and afterwards with alcohol and then breaking a small hole in the shell by means of a sterilised needle and forceps. Through the opening thus made I mixed the yelk and albumen of the egg by means of a platinum needle and then carried out the inoculation by means of a glass capillary pipette, which had recently been drawn out in the blow-pipe flame. For the purpose of such inoculations I employed variolous crusts obtained from the small-pox ships of the Metropolitan Asylums Board. These crusts were rubbed up in a small glass mortar with a minimal quantity of water or sterilised normal saline solution. Of the resulting emulsion a drop or two was then taken up into the glass pipette and the inoculation carried out. Finally, the small hole in the egg was closed up either by means of a small pledget of sterilised cotton-wool soaked in collodion or with melted sealing-wax. The eggs inoculated in this manner were then placed on beds of cotton-wool and kept in the incubator at a temperature of 37° C. Here they were left for varying periods of time, a month being the period which was eventually found to be that which was most desirable. On opening an egg thus treated I found that in its interior was contained a creamy material which in great part had replaced the ordinary egg contents. This material examined in cover-glass specimens appeared to contain a pure culture of one organism only—namely, a bacillus which morphologically was not to be distinguished from the bacillus which I have previously described as to be found in early vaccine lymph.

My next step was to attempt to grow it in subculture and to make observation also of the effect of its direct transference by cutaneous inoculation into the calf. As regards attempts at subculture in all media most usually employed for such purpose, including gelatin, sugar-gelatin, agar, glycerine-agar, sugar-agar, and serum, these at this time failed, as subculture of the bacilli contained in vaccine lymph had always failed when the ordinary culture media are adopted, but with the calf it was different, and as the result of inoculation of egg cultures on this animal I obtained a strain of lymph which after being passed through a series of calves was successfully employed for the vaccination of children. The calves were all subsequently vaccinated with negative results.

More recently Dr. Blaxall and I have been further investigating the possibility of the cultivation in artificial media of the micro-organism specific to small-pox and vaccinia respectively. Our work received considerable impetus by the discovery that certain culture tubes which had been inoculated with vaccine lymph, but which appeared to remain completely sterile, nevertheless contained a growth of a microbe undistinguishable morphologically from that which I found in egg cultures. This growth, although invisible to the naked eye, became obvious when cover-glass impressions were taken from the surface of the nutrient medium and afterwards stained and examined with the microscope. Dr. Blaxall subsequently devised a method by means of which pure cultivations of apparently the same organism were obtained on the surface of agar plates and this not only when vaccine lymph both of human and bovine origin was employed, but from variolous lymph as well. From these plates agar tubes and tubes of peptone beef broth were also in turn inoculated. In these, again, in the first removes practically no growth was visible except on careful examination by reflected light, but as generations further removed from the original stock were obtained the growth became more obvious, showing as a haziness in the fluid media and as a semi-translucent greyish white line on a sloping surface of agar. Broth cultures of the ninth and succeeding generations when employed for the inoculation of calves afforded in our first series of experiments results which we regarded as most encouraging, seeing that we were enabled to carry on the infection to other calves and subsequently to children, in all of which it took the form of apparently typical vaccinia. Some weeks after the calves were vaccinated with active calf lymph but without result. A later series of experiments, however, were not attended with similar success. The reasons for so great a divergence in our results at one and another time are by no means obvious unless possibly the fact of increased vegetative function shown in the latter subcultures of the microbe may have had as a concomitant a lessened degree of pathogenicity. On this point we are at present unable to make any definite statement, but needless to say the investigation is being continued.

Another direction in which our research work has been extended was suggested to us by certain statements in the report of the Berlin Scientific Commission. In that report an account is given of certain experimental inoculations performed by Freyer with the juice of the spleen, liver, inguinal and mesenteric glands, and marrow of previously vaccinated calves. Using such material vesicles were produced by the employment of almost every organ, which shows in Freyer's opinion that the vaccine germ must be conveyed to them by the circulating blood. This general distribution of that micro-organism takes place, he states, up to three or four weeks after vaccination, but no mention is made by him as to the earliest period at which it was found to occur. The greatest amount of success was obtained by the use of inguinal gland and spleen juice. He further stated that since calves were successfully vaccinated with this material the postulate of an absolutely bacteria-free efficacious lymph was complied with. It is of course obvious that where generalised vaccinia occurs as the result of a local vaccination, as, according to Chauveau, is always the case with solipeds, the micro-organism concerned

must have been conveyed to a distance from the original point of insertion by means of the circulation. Presumably this may also take place, although perhaps to a more limited extent, in that form of the disease where, as in the case of the vaccination of the human being or the calf, the resulting disorder remains to all appearance strictly localised, a secondary eruption being prevented by the spleen or other organ, such as the liver, being enabled to seize upon and ultimately destroy any of the specific germs that happen to be carried thither. It seemed to me that if Freyer's results were capable of confirmation the possibility of vaccinating by means of spleen juice, for instance, must depend on the employment of such material at a period sufficiently late to ensure the active principle having reached the particular organ and antecedent to that at which it would have been destroyed. I thought also that if the most favourable period could be determined it would be possible then to obtain a material free from bacterial growth other than that on which its potency for vaccination depended—a material, therefore, which would afford exceptionally favourable opportunity for the isolation of the organism specific to vaccinia. But, unfortunately, notwithstanding the categorical statements in the report of the Berlin Commission, we have been unable as the result of numerous experiments to obtain similar results *quâ* vaccination to those described by Freyer. Neither have we been able to demonstrate the presence of any micro-organism in culture media inoculated from the fresh spleen, liver, or glands obtained at various dates after vaccination or in the interior of fresh or hardened sections of these same organs. We have therefore temporarily abandoned this portion of our inquiry pending the receipt from Freyer of more detailed instructions.

PROTOZOA.

Owing no doubt to the fact that hitherto it has appeared practically impossible to isolate from vaccine or variolous lymph any bacterium which could with reason be regarded as specific to these affections, a number of observers have turned their attention to the search for a micro-organism of somewhat higher type which might by chance be concerned in the dissemination of vaccinia and variola respectively. Among the first experiments in this direction must be mentioned Renault of Lyons in 1881, Van der Loeff in 1886, and Hlava and Pfeiffer in 1887. It was not, however, until the publication in 1892 of Guarnieri's work that interest in the problem was seriously aroused. Since then the literature of the subject has expanded enormously, owing mainly to the labours of numerous continental pathologists, the only English contributions to the mass of experimental work published up to the present being those of Dr. Ruffer and Mr. Plimmer and of Mr. Jackson Clarke. Renault (1881) first called attention to the fact that peculiar bodies which he regarded as parasitic could be demonstrated in the epithelial cells of the vesicles in vaccinia and variola. Van der Loeff also on examining in the warm chamber a hanging drop of clear calf vaccine lymph discovered "numerous small bodies capable of independent movement," of which, however, he gives no further description, although he offered the opinion that they were living organisms which should be classified with the rhizopoda.

In 1887 L. Pfeiffer described the occurrence in lymph obtained from cases of vaccinia and variola of small, unicellular, generally spherical bodies, which he believed to constitute the specific contagium of these diseases. These parasites he found in still greater numbers in the Malpighian layer of the skin, multiplication taking place by division and also by endogenous formation of spores. These statements were in part confirmed immediately afterwards by Rieck. Guarnieri, having invariably found in the epithelial cells of the skin in the vesicular stage of small-pox small particles half as large as the cell nucleus or even smaller, next attempted (in 1892) the cultivation of similar bodies in the living animal. For this purpose he inoculated the cornea of rabbits and guinea pigs with vaccine lymph, with the result that these protozoa, as he considered them, appeared in the cells of the epithelium covering the cornea. After an interval of about fifty hours from the time of inoculation the surface of the cornea was scraped and the material examined in a hanging drop of aqueous humour. Guarnieri also employed for examination sections taken through the site of inoculation and stained in various ways. In either case he found numerous "parasites" within the epithelial cells of the affected area, generally occupying a zone of the protoplasm immediately surrounding the nucleus, but not intruding upon it. In the hanging drop they appeared as little refractile bodies endowed with slight amœboid power. Examination of sections further showed that they vary much in shape and size, and, further, that they are most numerous in the deep layers of the epithelium, the superficial cells not being involved. To this "parasite" Guarnieri gave the name of cytoryctes vaccinæ. Monti obtained similar results and both Guarnieri and Monti exhibited at the International Congress of Medicine at Rome preparations in which they demonstrated the presence of the parasite. Dr. Ruffer and Mr. Plimmer, who in this country had been working at the subject, also attended the Congress and were thus able to compare their own specimens with those shown by Guarnieri and Monti, thereby establishing, according to Dr. Ruffer, the fact that the protozoa described by all of them were identical in character. Dr. Ruffer and Mr. Plimmer, writing in 1894, described the alleged parasite as a small round body which, when treated with appropriate reagents, appears to have a more darkly staining centre. It is, they say, about four times the size of an ordinary staphylococcus and generally lies in a clear vacuole in the protoplasm of the epithelial cells of the stratum Malpighii, and occasionally indents the nucleus, although they have not found it enclosed in the latter body. These observers stated that they have found the same organism in the sections of skin from small-pox patients and in small-pox pustules of the larynx and the trachea. In the same year (1894) L. Pfeiffer not only confirmed the results obtained by Guarnieri but announced also the discovery, in the blood of persons suffering from small-pox and in the blood of children and calves that had been vaccinated, of amœboid cells which he regarded as parasites. These he found to be most numerous during the pyrexial stage of the disorder, whether variola or vaccinia. These bodies, which are somewhat larger in the blood of the calf than in that of the child, being in the latter about a quarter the size of an average blood corpuscle, are, Pfeiffer states, provided with pseudopodia and are occasionally flagellated. According to this observer they also contain from one to four nuclei which are readily stained. These occur free in the blood, not being contained in cells as is the case in the vaccinated cornea; nevertheless, Pfeiffer considers that they represent a similar stage in the life-history of the organism, of which the more mature form is of a cystic nature, to which he gives the name "monocystis epithelialis." This cyst he believes to give rise in due course to a number of spores. It should be mentioned that he describes similar bodies as occurring in various other vesicular eruptions of men and the lower animals. A Japanese observer, Ogata (1895), as the result of careful microscopic examination of stained film-preparations of vaccine lymph derived from the human being and calf and also of human variolous lymph, concludes that certain protozoa which he had been able to demonstrate in each case should be classified with the Gregarinidæ. Further confirmation of Guarnieri's experiments was afforded in 1895 by von Sicherer, Ernst Pfeiffer, and Mr. Jackson Clarke. According to Ernst Pfeiffer the bodies vary considerably both in size and shape, being sometimes as large as a red blood corpuscle. They resemble the corpuscles also in their affinity for certain staining reagents.

There can, of course, be no doubt as to the occurrence of most of the appearances described, although we may not be prepared to accept the interpretation put upon them; and in this connexion it is well to bear in mind not only that the bodies enclosed in cells, described by Guarnieri, Monti, and Ruffer, are said by them to differ essentially in their staining reaction and in their appearance from those of the Pfeiffers, van der Loeff, and others, but also that all the more recent experimental work in this direction has been carried out on the cornea of the rabbit and the guinea-pig, both of them animals which there is reason to believe are insusceptible to vaccinia. It is therefore, I think, conceivable that the "parasites" in question may represent merely the result of epithelial irritation caused by the scarification, together with that—of a non-specific nature, however—set up by the vaccine lymph employed. That such is indeed the case there is now a considerable amount of evidence to show. Thus Ferroni and Massari (1893) expressed the belief that Guarnieri's so-called parasites are in reality derived from the nuclei of the cells or are due to the immigration of leucocytes. They base their opinion on the results of certain

experiments devised by them, in which they inoculated the cornea of rabbits and guinea pigs with croton oil and india ink. On subsequent examination of stained sections they were able to demonstrate the presence in the epithelial cells of numbers of small bodies apparently identical with those described by Guarnieri. It should, however, be stated that Ernst Pfeiffer failed to find them under similar circumstances, although they were invariably present after the inoculation with vaccine lymph. In the annals of the Pasteur Institute for April, 1897, appeared a most important paper by M. Paul Salmon. This investigator brings to bear on the subject a thorough knowledge of modern staining reactions, by the light of which he shows that Guarnieri's parasites, while differing in their affinity for certain stains from either the protoplasm, nucleus, or nucleolus of the epithelial cell, correspond in all respects as judged by such tests to the nuclei of the migratory leucocytes, the chromatin masses of which rapidly break down in the substance of the invaded cells. He sums up the matter in the following words: "Le pseudo-parasite n'est pas une formation endogène; il a donc forcément une origine extra-cellulaire, extra-épithéliale, et *la petite masse de chromatine ne peut avoir qu'une origine; les cellules migratrices.*" The paper is illustrated with drawings showing all stages of the process of invasion of the corneal epithelium by the leucocytes, from that of their first appearance in the underlying tissue to that of their final dissolution, represented by the presence of minute granules of chromatin only, in the protoplasm of the epithelial cells. No one, I think, comparing this plate with the drawings and descriptions of the corneal "parasites" of Guarnieri and others, can fail to be struck with the truth and completeness of Salmon's explanation of the facts previously observed.

Recent researches have tended to confirm the statements of L. Pfeiffer as to the presence also in the blood of variola and vaccinia, especially during the pyrexial stage, of minute, free, granular amœboid cells. It is, however, doubtful whether it is possible to demonstrate a nucleus. These cells, as already mentioned, are regarded by Pfeiffer as the causative agent of these diseases. This question has been investigated in America by Dr. Walter Reed (1897), whose attention was directed in the first instance to the microscopical examination of fresh preparations of the blood of vaccinated monkeys and calves and subsequently to that of vaccinated children and small-pox patients. Of 11 vaccinated animals (9 monkeys and 2 calves) whose blood was examined Dr. Reed found in the blood of 7 (6 monkeys and 1 calf) "granular amœboid bodies, having a diameter about one-third that of a red blood cell" during the active stage of vaccinia, which on the decline of the local inflammation again disappeared. As showing, however, that these bodies have no causative relationship to vaccinia is the fact that Reed occasionally met with quite similar bodies in the normal blood of healthy children and of monkeys. This same observer states that pale amœboid bodies containing a few dark pigment-like granules may also be present in the blood from cases of variola in the human being and the monkey. The blood of vaccinated children and monkeys was found occasionally to contain bodies of like appearance. Dr. Reed does not appear to have known of a paper published in the previous year (1896) by M. F. Müller, an assistant in Nothnagel's clinic in Vienna. Therein Müller gives a description of "small, generally round, colourless granules" which he found constantly present in the freshly drawn blood both of healthy persons and of those suffering from various diseases. These granules—which may, he says, be readily distinguished from blood-plates—would appear to be of like origin with the minute granular amœboid bodies originally discovered by Pfeiffer. Further light has been thrown on this subject by the labours of Stokes and Wegefarth (1897), who carried out a lengthy series of observations in the bacteriological laboratory of the Baltimore Health Department.

The conclusions at which they ultimately arrived may be briefly set out as follows. In the normal blood plasma and serum of man and the lower animals varying numbers of granules apparently derived from neutrophil and eosinophil leucocytes are usually to be found. There is reason to believe that these granules play some part in bringing about agglutination and cessation of mobility of many pathogenic bacteria and of ultimately destroying them, a property possessed by the normal blood. That this is so is judged from the fact that on filtration of dogs' or rabbits' serum through a Müncke porcelain filter this effect on bacteria was no longer exhibited, although the potency of the serum in this direction could be restored by adding to it a sediment containing granules.

Stokes and Wegefarth make also a suggestion which may not impossibly account for the undoubted fact that, as stated both by Pfeiffer and Reed, the minute granular cells described by them are most readily found in the blood during the progress of certain infective diseases, although, as Reed shows, they must also be regarded as normal constituents of the blood. The suggestion referred to is that the bactericidal power of both leucocytes and serum in man and many animals is due to the presence in them of specific granules, derived in either case from leucocytes, which in presence of invading bacteria are given up to surrounding fluids or tissues. As the outcome of the most recent investigations dealing with the question under discussion it must, I think, be admitted that although Guarnieri and others who have described the presence of protozoa in the blood and tissues of man and the lower animals during certain stages of invasion by variola or vaccinia are undoubtedly correct in their statements as to the occurrence of the particular bodies described by them, they are altogether mistaken as to the true nature and affinities of these bodies. There would indeed appear to be good reason for the belief that these so-called parasites are, in fact, nothing more or less than the fragments of amœboid leucocytes which had originally invaded the peripheral circulation and in turn the particular tissue affected under the influence of chemotaxis.

VARIOLA AND VACCINIA IN THE MONKEY.

Professor Michael Foster suggested to me some years ago that in view of possible deterioration of lymph stocks after employment through a long series of generations it would be well if possible to devise some practical means of investigating the efficiency of the protection afforded by some of those at present in use against variolous infection. The inoculation of small-pox on the human subject being now a penal offence I turned my attention to the monkey tribe on account of their similarity in many respects to man, although assured on high authority that they were not susceptible to either vaccinia or variola. On putting the matter to the test, however, I was agreeably surprised to find that this was not the case, the inoculation of vaccine and variolous lymph having each of them given in my hands successful results in every instance in which I have tried it on the monkey. Briefly described, the *modus operandi* has been as follows: the upper arm or occasionally the inner surface of the thigh is shaved on both sides of the body; the skin is then washed with a solution of some disinfectant, such as corrosive sublimate or carbolic acid, and afterwards with alcohol. Each arm (or thigh) is then scarified in three or four places and the lymph well rubbed in. In the first series of experiments I used ether as an anæsthetic, but I afterwards found this quite unnecessary, as the monkey appears by no means to dislike the scratching process, becoming absolutely quiet as soon as the operation is commenced, and remaining with limbs limp and eyes half closed, as if hypnotised, until its termination, when it at once becomes again as lively as ever. In the case alike of variola and of vaccinia the local result of inoculation attains its acme (*quâ* vesiculation) in the monkey, as in the human being, about the eighth day. The first signs of reaction appear usually on the third day, by which time, if variolous lymph has been used, there is a distinct though very thin crust over the site of inoculation. In the case of vaccinia the appearance of crust at this date is less marked. By the fifth day vesiculation in both cases has generally commenced, this becoming more obvious up to the eighth day, though even then it is much less marked in variolous cases than in those which have been vaccinated, the difference being recognised with the greatest ease. Later the vesicle gives place in either instance to a pustule, by which time there is not unfrequently considerable swelling of the skin and subcutaneous tissue and of the nearest lymphatic glands, the pustule gradually dries up and a scab is formed, which is more pronounced in the case of vaccination than variolation, and which falls off some time during the third week, if the monkey has not picked it off before. The chief difference noticed between the effects resulting from the local inoculation of these two diseases is that in the case of variola there is more or less of a crust from the first; that vesiculation is less marked than

n vaccination; that about from the ninth to the eleventh day a general eruption may appear which in some instances, as in a monkey which, at the request of Professor Foster, was inoculated at Cambridge, covers the whole surface of the body; and that the final scab at the site of inoculation is not so elevated in the variolated as in the vaccinated animal. In both cases there is usually a rise in body temperature, which is more marked and longer sustained in variola than in vaccinia. After variolation it was noticed in several cases that the monkey suffered from diarrhœa, that its eyes were suffused, and that it was not as active as usual. A peculiar odour was also noticed quite distinct from the well-known smell of "monkey." In no instance had the experiment a fatal termination.

Having thus proved to my own satisfaction that monkeys are susceptible not only to vaccination but also to small-pox I next determined to make trial as to the protection against small-pox afforded in the monkey by previous vaccination and the protection against vaccination afforded it by variolation, and I went on to compare the effect produced by the use of human and of calf vaccine respectively. For this purpose humanised lymph was obtained from Birmingham, where, to the best of my belief, the same strain has been continuously carried on by means of arm-to-arm vaccination for the past 38 years. The calf lymph used was obtained from the Government Animal Vaccination station in Lamb's Conduit-street, while small-pox lymph was supplied to me from the hospital ships, from Warrington, and from Manchester. The following experiments will serve as illustration of the system I pursued:—

Experiment 1.—On July 13th, 1892, I vaccinated a male rhæsus monkey in four places on the left arm with calf lymph on points taken at the Animal Vaccine Establishment on the previous day. On July 20th, the eighth day, the appearance presented was undistinguishable from that of a successful case of human vaccination. On July 23rd the vesicles had given place to four large scabs raised nearly ⅛ in. above the surface of the arm, while the surrounding inflammatory zone had nearly disappeared; the axillary glands on the same side were considerably enlarged. The arm was drawn on this day by Mr. Lapidge. By Aug. 9th the scabs had all come off and the monkey was again vaccinated, but this time on the opposite arm in two places and on the inside of the right thigh, also in two places, with humanised lymph of ascertained activity. The animal was carefully examined day by day up to Aug. 17th, but no sign of the second vaccination having "taken" was observed.

Experiment 2.—On July 19th a large female rhæsus monkey was inoculated by scarification in eight places (four on each arm) with two tubes of small-pox lymph from the hospital ships. It was obtained from a patient, aged nineteen years, stated to have been vaccinated in infancy, who was suffering from a semi-confluent attack of the disease. The lymph had been sealed up in carefully sterilised tubes. On July 23rd (the fifth day) the right arm showed papulation and commencing vesiculation. The axillary glands were slightly enlarged. On April 18th, a month after inoculation, this monkey was vaccinated in four places on the inner aspect of the right thigh with active calf lymph. No result followed the operation.

It is, I think, hardly necessary here to enter into details of the numerous experiments which have been performed at intervals of from one to five months after the primary inoculation, whether vaccinal or variolous, and I will merely add that in no instance did anything in the nature of a successful result follow the first or subsequent revaccinations. From these experiments it would appear that the protective power of lymph obtained from these three different sources when inoculated on the monkey is practically identical in all respects.

In discussing the origin of the various lymph stocks at present in use Dr. Collins and Mr. Picton in the Minority Report appended to the Final Report of the Royal Commission on Vaccination make a point of the impossibility of employing at the present day what used to be known as the "variolous test" as a proof of the efficacy or the reverse of any particular strain of lymph. In view, however, of the results of my experiments with monkeys this criticism of Dr. Collins and Mr. Picton falls to the ground, since if it is desired to apply the "variolous test" to any given lymph stock all that is necessary is to vaccinate a monkey with a sample of the lymph in question and subsequently to inoculate the animal with potent small-pox lymphs after the lapse of such period from the first operation as may be thought desirable.

ABSTRACT OF TABLES ILLUSTRATING

The Hunterian Lectures.

BY HENRY MORRIS, F.R.C.S. ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

THE Hunterian Lectures, abstracts of which were published in THE LANCET of April 16th, 23rd, and 30th, were illustrated by a valuable series of tables of cases of operations on the kidney. All the tables except the last refer to cases operated on by Mr. Morris. Table I. recording the cases of nephrolithotomy performed by Mr. Morris himself we print herewith, but we regret that the demands on our space prevent us from giving more than a *résumé* of the others.

Table II. contained cases of nephrotomy for stone. There were 44 cases in all and of these 27 occurred in males and 17 in females. The youngest patient was a male, seventeen years old, and the oldest was also a male, aged sixty-four years. The results were as follows: 33 cases recovered from the operation, one of these dying seventeen days later from apoplexy, and in 11 cases the patient died within a short time of the operation though the fatal result was in several of the cases hardly to be attributed to the operation itself.

Table III. contains Mr. Morris's cases of nephrectomy for stone. These are 18 in number, with 5 deaths. 13 of the cases were males and 5 were females.

Table IV. Exploratory Operations.—These cases show clearly the great value of an exploration when the symptoms point to some morbid renal condition; in many of the cases Mr. Morris was able to remove the cause of the symptoms, even though no stone was found. There were 42 exploratory operations and only 2 of the patients died, and of the remainder all were relieved with the exception of 7.

Table V. Operations for Moveable Kidney—In 57 cases Mr. Morris has fixed a moveable kidney and all have recovered, though in one instance the patient was not relieved by the operation.

Table VI. Operations for Hydronephrosis and Pyonephrosis.—In 20 cases there were only 3 deaths.

Table VII. Operations for Tuberculous Disease of the Kidneys.—Of 28 cases 20 occurred in females. In some cases nephrotomy, in others nephrectomy, and in a few partial resection were performed. 5 cases died soon after the operation, but 4 others died later from tuberculosis elsewhere.

Table VIII. Nephrectomy for Fistula or other Cases.—Of 5 cases 3 recovered and 2 died.

Table IX. Operations for Tumours of the Kidney.—There are in all 15 cases—1 of retro-peritoneal tumour connected with kidney, 5 of cystic disease of the kidneys, and 9 of malignant disease of the kidneys. One of the cases with cystic disease died and 3 of the malignant cases; 2 others of the latter died later from recurrence.

Table X. Operations for Injury of the Kidney.—There were 4 cases and all recovered; in 2 the kidney was explored, in 1 nephrectomy was performed, and in 1 ureterectomy.

Table XI. Collected Cases of Calculous Anuria.—In 33 cases an operation has been performed for this condition. The earliest was by Guermonprez in 1870. Of the 33 cases 25 died. This mortality must be considered in relation to the very fatal result of the disease when left untreated.

TABLE I.—CASES OF NEPHROLITHOTOMY.

Year.	No.	Sex.	Age.	Leading symptoms.	Date of operation.	Result.	Remarks.
1880	1	Female.	19	Excessive pain and tenderness in right loin. Great hæmaturia, quite disabling her from work. Symptoms acute for 17 months. Occasional pain in right side for 11 years.	Feb. 11th, 1880; right kidney.	Recovered.	Incision into anterior surface of kidney near hilum. Recovered with a sinus from 1 in. to 1½ in. long, not communicating with the kidney. Weight of calculus, 31 gr. (Vide Transactions of the Clinical Society, vol. xiv., 1881.)
1884	2	Male.	24	Shooting pains to left testis and tenderness in left loin. Some hæmaturia. Frequency of micturition. Symptoms for 2 years	May 10th, 1884; left kidney.	Recovered.	Incision into anterior and lower part of kidney. No sinus. Weight of calculus, 89½ gr. (Vide Transactions of the Clinical Society, vol. xviii.)
1886	3	Male.	42	Pain in right loin. Hæmaturia. Symptoms for 19 years.	May 15th, 1886; right kidney.	Recovered.	No sinus. Weight of calculus, 23½ gr. (Vide Transactions of the Clinical Society, vol. xx.)
1887 (P)	4	Male.	25	Tenderness and aching in left loin. Hæmaturia and slight pyuria. Never colic. Kidney felt hard. Symptoms 9 years; worse of late.	March 16th, 1887; left kidney.	Recovered.	Calculus removed from pelvis. Weight of calculus, 213 gr. No sinus. Nephrotomy and nephrectomy ten years after for recurrent calculus.
1888 (P)	5	Female.	26	Pain in both loins, but chiefly in right, for 4 years. Hæmaturia. Slight pyuria. Oxalate of lime crystals. Tenderness in right loin. Frequency of micturition for 1 year.	Jan. 18th, 1888; right kidney.	Recovered.	Incision into anterior aspect of kidney. No sinus. Weight of calculus, 199 gr.
1889	6	Female.	21	Pain in right loin for 4 years. Swelling for 1 week, which was freely moveable. Hæmaturia and albuminuria.	May 22nd, 1889; right kidney.	Recovered.	One large stone and 7 fragments removed. Total weight of calculus, 1303 gr. Urinary sinus followed. Subsequent left nephrolithotomy, 1890, and right nephrectomy 1891. (Vide No. 9.)
1889	7	Male.	27	Pain and passage of calculi. Slight pyuria. Repeated attacks of pain for 8 years.	July 31st, 1889; right kidney.	Recovered.	Three calculi removed from kidney. Weight of calculi, 69 gr. No sinus.
1890	8	Male.	23	Pain on right side. Hæmaturia. Passed blood in urine when a child and had had pain for 10 years.	Feb. 23rd, 1890; right kidney.	Recovered.	Incision into anterior aspect. Three branched calculi were removed from the renal substance and a much larger one from the pelvis. Total weight 200 gr. Recovered without a sinus.
1890	9	Female.	22	Pain in left loin very severe.	April 23rd, 1890; left kidney.	Recovered.	Incision into pelvis of kidney. Weight of calculus, 513 gr. Sinus present but not urinary sinus. (For previous nephrolithotomy *vide* No. 6.)
1890	10	Male.	40	Pain and tenderness in left loin for more than 20 years.	June 7th, 1890; left kidney.	Recovered.	An oxalate of lime calculus was removed from the cortical part of the kidney. Weight of calculus, 62 gr. No sinus remained.
1890	11	Male.	34	Pain in left loin for 2 years. Hæmaturia, pyuria, and oxalate of lime crystals.	Aug. 29th, 1890; left kidney.	Recovered.	Incision into anterior aspect, and stone found lying in the kidney substance close to the pelvis. Weight, 129 gr. No sinus remained.
1891	12	Male.	35	Pain and swelling in right loin for 1 year. Hæmaturia and pyuria.	Feb. 11th, 1891; right kidney.	Recovered.	Incision into anterior aspect and extraction of a stone. No sinus. Weight of calculus, 27½ gr.
1891	13	Male.	26	Pain and tenderness in left loin and hæmaturia for 2 years.	April 29th, 1891; left kidney.	Recovered.	Incision into anterior surface near hilum. No sinus. Weight of calculus, 38 gr.
1891	14	Male.	48	Pain in left loin for 6 years and hæmaturia on three occasions 3 or 4 years ago, but not since. Frequent severe colic during last four months. Pain shooting into left groin.	May 9th, 1891; left kidney.	Died May 13th, with symptoms of uræmia and intense mental agitation.	The patient was a very stout man and the kidney was very difficult to reach through an oblique wound 12 in. long joined by a vertical incision 3 in. long. Brisk hæmorrhage followed renal incision, but was soon stopped by pressure. Two stones were removed. Post-mortem wound in left kidney 1½ in. long. Left kidney weighed 7½ oz. and was fatty. Right kidney weighed 5½ oz. and was fatty, as were also the liver and the heart. Small branch of renal vein divided and plugged by recent clot. No injury to peritoneum. Weight of calculi, 19½ gr.
1892	15	Male.	35	Pain in left loin, radiating to scrotum. Hæmaturia. Frequent micturition. Symptoms 1 year.	Jan. 3rd, 1892; left kidney.	Recovered.	Incision into convex border of kidney. No sinus. Weight of calculus, 18 gr.
1892 (P)	16	Female.	35	Attacks of pain and frequent micturition. Hæmaturia for 7 years. Pain in right side and occasionally in left.	July 13th, 1892; right kidney.	Recovered.	Calculus weighed 362 gr. No sinus.
1892 (P)	17	Female.	25	Pain for two months and suppression of urine from left kidney. In November, 1891, a calculus was removed from the right (pyonephrotic) kidney by another surgeon. A large abscess followed and this was succeeded by a sinus. The urine from right kidney was discharged through the loin by the old nephrotomy sinus.	Dec. 24th, 1892; left kidney.	Recovered.	Left kidney drawn on to loin and incised in three places. Twenty-two phosphatic calculi were removed. Weight of calculi, 96 gr. An abscess followed; but on Jan. 9th wound closed and was never afterwards reopened. All attempts to close sinus on the right side were followed by severe symptoms requiring sinus to be reopened. A canula was therefore at length permanently maintained on the right side.

[*Table I. continued on next page.*

TABLE I.—CASES OF NEPHROLITHOTOMY *(continued)*.

Year.	No.	Sex.	Age.	Leading symptoms.	Date of operation.	Result.	Remarks.
1893 (P)	18	Male.	13	Pain in right side for 7 years. Albuminuria and occasional hæmaturia.	May 13th, 1893; right kidney.	Recovered.	Tuberculated heart-shaped stone removed from pelvis of kidney. Weight 33 gr. No sinus.
1893 (P)	19	Female.	35	Pain and tenderness in right renal region for 4 or 5 months. Pain on micturition, necessitating a vesico-vaginal fistula for 10 years.	May 14th, 1893; right kidney.	Recovered.	A small lozenge-shaped uric-acid calculus removed. No sinus. After operation all painful micturition disappeared and vesico-vaginal fistula was closed by operation. Weight of calculus, 4 gr.
1893 (P)	20	Male.	38	Had been operated upon in February, 1893, for a perinephric abscess on left side. This re-formed and was opened on June 10th, 1893. A sinus followed. In November, 1892, and at both the above-named dates there was marked anuria.	June 29th, 1893; left kidney.	Recovered.	Three calculi removed. The kidney was small and somewhat hydronephrotic. In this case an abdominal incision was made as well as the lumbar. Only a few ounces of urine passed by urethra till operation wound began to close. On July 11th 11 oz. were voided naturally and from this time the quantity gradually increased. Weight of calculi, 17 gr. No sinus remained.
1893	21	Male.	21	Pain in right loin for 1 year. Hæmaturia, albuminuria, and pyuria.	Sept. 27th, 1893; right kidney.	Recovered.	Incision made into the organ and a stone extracted. Weight of calculus, 40 gr. No sinus remained.
1894 (P)	22	Female.	35	Lumbar pain on left side. Pyuria with very high temperature and nervous agitation. Hard irregular swelling in right loin, to which no symptoms had been referred and which was not known by patient to exist.	May 17th, 1894 (1st operation); right kidney.	Recovered.	A large calculus removed, weighing 830 gr., which was closely enveloped by the dilated pelvis and upper end of ureter. Urinary sinus persisted. Subsequently nephrotomy was performed on both kidneys.
1894 (P)	23	Male.	49	Previous passage of many calculi—the first 20 years ago, the last in January, 1894. Pain in left loin. Pyuria and hæmaturia and also ova of bilharzia hæmatobia.	May 29th, 1894; left kidney.	Recovered.	An incision in the loin 9 in. long joined by a vertical incision 1½ in. long. Incision into convex border of kidney and a uric-acid calculus, weighing 35½ gr., extracted from the lower fourth. No sinus.
1894	24	Female.	22	Pain and resistance in right loin for 1 year. Albuminuria, pyuria, and hæmaturia. Oxalic and uric acid crystals.	Aug 20th, 1894; right kidney.	Recovered.	Incision into convex border and a calculus extracted weighing 5 gr. Incision in kidney closed with catgut sutures. No sinus.
1895	25	Male.	30	Pain in right loin for 4 years. Hæmaturia and albuminuria. Oxalate of lime crystals.	Jan. 2nd, 1895; right kidney.	Recovered.	Incision into pelvis and ureter. Stone impacted at entrance of ureter; removed through incision in renal pelvis. No sutures. No sinus. Weight of calculus, 6 gr.
1895	26	Male.	11	Pain in right loin. Hæmaturia and pyuria. Duration of symptoms 3 years.	Oct. 11th, 1895; right kidney.	Recovered.	Incision into pelvis of kidney, which was closed by silk sutures. Stone size of small plum-stone extracted. No sinus. Weight of calculus, 8 gr.
1896	27	Male.	20	Pain in left loin for 4 years. Occasional hæmaturia.	March 3rd, 1896; left kidney.	Recovered.	Incision into pelvis of kidney. Stone size of hazel nut extracted. No sinus. Weight of calculus, 25 gr.
1896 (P)	28	Female.	18	Pain in left loin. Hæmaturia. Symptoms since twelfth year of age.	March 15th, 1896; left kidney.	Recovered.	Calculus removed through the front of the renal pelvis. The incision was sutured. No sinus. Weight of calculus, 25 gr.
1896 (P)	29	Male.	58	Pain in left loin. Hæmaturia. Periodic attacks every 6 months for 8 years. During last 2 years attacks much more frequent. For several weeks preceding operation hæmaturia constant.	Aug. 1st, 1896; left kidney.	Recovered.	Incision into posterior aspect of renal pelvis. Oxalate of lime calculus removed weighing 41 gr. No sutures were used for the pelvis. No sinus.
1897	30	Male.	48	Pain in right loin for 40 years. Albuminuria, pyuria, and oxalate crystals.	July 28th, 1897; right kidney.	Recovered.	Incision into the anterior aspect of kidney and a stone removed from its lower part. No sinus. Weight of calculus, 147 gr.
1897	31	Female.	29	Pain in left loin for 16 years.	July 28th, 1897; left kidney.	Recovered.	Incision into pelvis and a stone extracted. The renal wound was sutured with 4 fine catgut sutures. No sinus. Weight of calculus, 35 gr.
1897	32	Female.	22	Pain and swelling in right loin for 6 months. Hæmaturia, pyuria, and albuminuria.	Nov. 22nd, 1897; right kidney.	Recovered.	Incision into posterior wall of pelvis and a friable, irregularly shaped stone was removed. Wound in pelvis was sutured. No sinus. Weight of calculus, 2 gr.
1897 (P)	33	Male.	44	Repeated attacks of pain and tenderness on left side for 16 years. Occasional hæmaturia. An abiding aching aggravated by exercise. No pus; no crystals in urine.	Dec. 18th, 1897; left kidney.	Recovered.	Calculus removed from upper end of ureter by an incision through posterior surface of pelvis. No sutures used, as the tissue of renal pelvis was very soft. No sinus remained. Weight of calculus, 17 gr.
1898	34	Female.	26	Pains in left loin for 2 years. Repeated attacks of left renal colic, accompanied by temporary complete suppression of urine, which lasted for 2 or 3 days at a time. There was enlargement of right kidney, which was also believed to contain a stone, but to which no symptoms were referred. During attacks of pain a swelling was felt in left renal region.	Jan. 26th, 1898; left kidney.	Recovered.	Kidney large and congested. An incision was made in the convex border and through it a stone weighing 11 gr. was extracted from the renal pelvis. Uninterrupted recovery. No sinus. To return for purpose of having right kidney explored.

A CASE OF LYMPHADENOMA INVOLVING THE STOMACH IN A CHILD AGED EIGHTEEN MONTHS COMPLICATED BY RICKETS AND CLOSELY SIMULATING LEUKÆMIA.

BY H. D. ROLLESTON, M.D. CANTAB., F.R.C.P. LOND.,
SENIOR ASSISTANT PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE VICTORIA HOSPITAL FOR CHILDREN;

AND

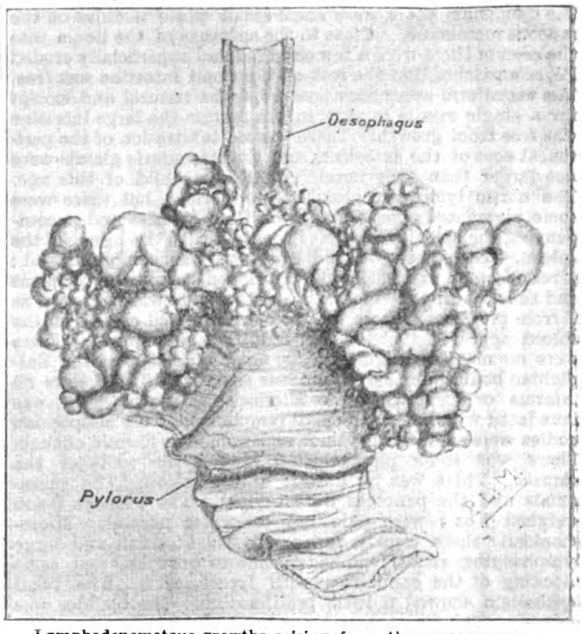
A. C. LATHAM, M.B. OXON., M.R.C.P. LOND.,
CURATOR OF THE MUSEUM, ST. GEORGE'S HOSPITAL; ASSISTANT PHYSICIAN TO THE VICTORIA HOSPITAL FOR CHILDREN; LATE RADCLIFFE TRAVELLING FELLOW IN THE UNIVERSITY OF OXFORD.

THE patient, a male infant, aged one and a half years, was admitted to St. George's Hospital on Feb. 14th, 1898, and died two days later. He was under the care of Dr. Cavafy, who has kindly allowed us to make use of the case. Two months previously the child had been operated upon for a (granulation?) polypus in the right ear and since then had been losing strength and colour. The mother said that the child had brought up blood. A week before admission spots were noticed on the skin which at the post-mortem examination were seen as scattered petechiæ. There was a tender swelling behind the right parotid, and the spleen was found to be much enlarged, but no abnormal signs were discovered in the lungs. The child was very anæmic, but did not complain or appear to suffer any pain except when the right side of his neck was examined, and died quietly from increasing asthenia two days after coming into the hospital.

Owing to the fact that we did not see the patient during life we were unable to make a complete examination of the blood—for instance, we have no data with regard to the absolute number of white and red cells. We were fortunate, however, in having several blood films prepared by Mr. S. Smith, the house physician of the case. An examination of these films showed that there was very considerable degeneration of the red cells and that this was accompanied by a large increase in the number of white cells. A differential count of 500 white cells gave the following figures: lymphocytes, 61·1 per cent.; polynuclear cells, 16·5 per cent.; eosinophile cells, 1·6 per cent.; and myelocytes, 20·8 per cent. During this count 94 normoblasts and 6 megaloblasts were noticed; many of these showed mitotic changes. There were no Charcot-Leyden crystals. The blood thus showed very marked anæmia, together with a marked increase in the number of lymphocytes—many of which were of the larger form—and a very large percentage of cells foreign to normal blood—namely, myelocytes.

At the necropsy the body was found to be markedly anæmic with scattered but not very numerous petechiæ. There was slight œdema of the legs. There were marked rickety curves of the tibiæ and enlargement of the wrists. There was a hard swelling in front of the sterno-mastoid muscle on the right side reaching up into the parotid region. On dissection this was found to be a packet of glands passing underneath the sterno-mastoid muscle. The glands appeared gelatinous from œdema and the fibrous tissue separating them seemed prominent and increased in amount. Microscopically, the packet of glands on the right side of the neck showed thickening and increase of their fibrous capsules; the normal arrangement of the glands was obscured and lost. There was a general slight increase of the fibrous tissue throughout the tissue of the gland with a number of oval connective tissue cells. The number of small lymphocytes was diminished but large lymphocytes were present in considerable quantities. These cells appeared to be the same as those described by many writers as endothelioid cells. The other accessible lymphatic glands in the body were examined but were not found to be enlarged. The anterior fontanelle was open, but not widely; the diploe and bones of the skull-cap were healthy. The membranes and sinuses were normal. The brain weighed 36 oz. and was healthy. Both membranæ tympana were perforated and the middle ears contained soft granulation tissue polypi and muco-pus. The sternum appeared to be normal on section. The ribs showed very marked rickety enlargement at their costo-chondral junctions, there being in several instances some backward displacement of the rib on the costal cartilage. At a distance of from 1½ in. to 2 in. from the costo-chondral junction several of the ribs showed periosteal nodes which on section invaded the medullary cavity and rather suggested a united fracture. But as the node was only on one side, the fracture, if there had been one, must have been a "greenstick." The rickety enlargement was very vascular and was in places excavated into loculi; reddish marrow extended some distance into the shafts of the ribs, in some as far as the periosteal nodes already referred to. There was no hæmorrhage under the periosteum or sign of scurvy rickets. Microscopically, besides marked evidence of rickets, the costo-chondral junction showed an excess of lymphocytic infiltration as compared with normal bones from a child of the same age. This lymphocytic infiltration was also present in the shafts of the ribs: this condition might be thought to resemble, but only in a very minor degree, the lymphadenomatosis of bone described by Weber.[1] The nodes on the ribs were composed of ossifying cartilage; under the node there was a transverse break on the underlying lamina of bone strongly suggesting that a partial fracture had occurred some time before death. The bones of the limbs were not examined. The thymus and thyroid glands were healthy. The pleuræ were normal. The lungs showed early broncho-pneumonia with small hæmorrhages into their substance. The bronchial and tracheal glands were healthy. There were petechiæ on the visceral pericardium. The cardiac valves were healthy. The myocardium was pale but there was no manifest fatty degeneration. The abdomen was distended from the presence of flatus in the intestines; but there was no ascites. The œsophagus was perfectly normal. The outside of the stomach near the lesser curvature showed a few plaques of white growth. The stomach contained some grumous fluid. Its mucous membrane presented a remarkable appearance (vide Fig. 1) from the presence of a number

FIG. 1.



Lymphadenomatous growths arising from the mucous membrane of the stomach. The only part not affected is the region around the pylorus.

of polypoid growths that were scattered all over the lining mucous membrane except for a distance of from 1 in. to 1½ in. around the pylorus. The growths were smooth, white, and not ulcerated. These were of varying size, the largest being equivalent to a small walnut. They were largest and most

[1] F. P. Weber: General Lymphadenomatosis of Bone, one form of Multiple Myeloma. Journal of Pathology and Bacteriology, January, 1898.

closely packed near the cardiac orifice, gradually diminishing as the pyloric region was approached. Microscopically the polypoid growths were composed of the mucous membrane thrown into folds and extensively infiltrated with large and small lymphocytes (vide Fig. 2). The submucous coat did not

FIG. 2.



Microphotograph of lymphadenoma of the stomach × 12 showing infiltration limited to the gastric mucosa and not invading submucosa.

contain any lymphocytes at all. This growth, which also contained some spindle-shaped connective tissue, was apparently derived by proliferation of the lymphoid tissue that is normally found on the mucosa. The tubular glands of the stomach were somewhat displaced by the growth but showed no proliferation or degeneration and were well preserved. The duodenum showed some vascular streaks from which the stomach was quite free. In the second and third parts of the duodenum there were some small white nodules on the mucous membrane. Close to the entrance of the ileum into the cæcum there were a few enlarged and superficially eroded Peyer's patches, but the rest of the small intestine was free. The vermiform appendix appeared to be natural and except for a single sessile growth in the rectum the large intestine was free from growth. There was no infiltration of the peritoneal coat of the intestines and the mesenteric glands were not larger than they normally are in a child of this age. The aortic lymphatic glands were normal, but there were some pigmented glands along the iliac arteries and accompanying the splenic artery at its entrance to the hilum of the spleen. The spleen weighed 8 oz. and was much enlarged; it rested on an extremely well-developed costo-colic ligament and the adjacent splenic flexure of the colon was collapsed as if from pressure. There was no capsulitis and on section the spleen appeared to be tough, reddish, and uniform. There were no manifest pigmentation, no enlargement of the Malpighian bodies, and no lardaceous reaction. There were no infarcts or hæmorrhages. Microscopically the pulp was inundated with large and small lymphocytes; the Malpighian bodies were small but had not undergone any fibrotic change. There was some pigmentation around the walls of the sinuses. There was no fibrosis of the spleen. The suprarenals and the pancreas were normal. The kidneys (each weighed 1 oz.) were pale but otherwise normal. Microscopically there were a few small foci of small and large lymphocytes, small lymphadenomatous growths, and some blocking of the capillaries with lymphocytes. The tubal epithelium showed a little proliferation. The bladder was normal. The testes were large but healthy. The liver was enlarged to a slight extent and on section appeared to be swollen and pale. There was a large white gland in the portal fissure, but there were no growths on the substance of the organ. The bile-ducts were pervious. The gall-bladder was almost empty. Microscopically there was a general excess of lymphocytes in the capillaries, so that the liver appeared to be in a state of early leukæmia. In addition there was in the portal spaces and outside the capillary vessels early lymphadenomatous growth composed of lymphocytes and young connective tissue-cells. There was no cirrhosis or fatty change.

Remarks.—Viewing the case in the first place from the standpoint of the blood examination alone the case would plainly have to be described as one of lieno-myelogenous leukæmia. The small percentage of eosinophile cells is unusual, but the majority of observers are agreed that the part played by eosinophile cells in leukæmia is unimportant. Some of the blood changes are undoubtedly due to the fact that the child was suffering from marked rickets. In this disease there is considerable anæmia, which is often accompanied by a lymphocytosis and a small (from 2 to 3 or less) percentage of myelocytes. In this patient, however, the large percentage of myelocytes was far in excess of anything that has been found in any other disease than leukæmia. Again, a part of the lymphocytosis and the small number of polynuclear cells might readily be accounted for by the age of the child, so that it is fair to regard the excess of small lymphocytes as due to some other cause than leukæmia. In fact, our knowledge of the changes which occur in the blood in children is not sufficiently accurate for us to form any definite conclusions on a blood examination alone in such a case as this. It might be suggested that the case should be classified under what von Jaksch[2] and others have called "anæmia infantum pseudoleukæmica." It is very doubtful, however, whether this name can be fairly given to any class of disease. The vast majority of cases recorded under this heading have not been examined in a sufficiently thorough manner in the matter of a differential count of the white cells for us to say under what classification they should be put. Further, very different types are given by different observers. We agree with von Limbeck[3] that no such disease exists and we believe that Cabot[4] is right in suggesting that the cases which have been recorded as cases of "anæmia infantum pseudoleukæmica" are in reality either cases of pernicious anæmia, secondary anæmia without leucocytosis, Hodgkin's disease, lymphatic leukæmia, or possibly cases of spleno-myelogenous leukæmia. It is further possible, as Cabot suggests, that there may be cases which are intermediate between leukæmia and pernicious anæmia. Turning to the point of view of the morbid anatomy the case appears to be a remarkable example of lymphadenoma. The growth, as is so often the case, apparently began in the cervical glands, and it is probable that the poison, whatever it may be, which gives rise to lymphadenoma gained entrance to the lymphatic system through the abraded surface in the right tympanum. Starting here, the growth had become general and, a noteworthy feature in the case, chiefly in the alimentary canal and especially in the stomach. The spleen was much enlarged and there was some infiltration of the ribs. These latter lesions, as will be seen, are of great interest. Now though lymphadenoma, unlike leukæmia, is far from rare in young children, it appears that lymphadenomatous growths from the gastric mucous membrane have not been previously described at so young an age. The youngest case which Pitt[5] recorded was twenty-four years old and the average of his 5 cases was 44·8 years. The morbid appearances in our case closely resemble those in Pitt's own patient, who was forty-eight years old. In both the mucous membrane of the stomach around the pylorus, in the antrum pylori, was free from lymphadenomatous growths. This is very striking, especially in Pitt's case, when it is considered in the light of the anatomical distribution of lymphoid tissue in the mucous membrane of the stomach. From a number of observations Soltau Fenwick[6] concluded that in "infancy and childhood these collections of lymphoid tissue are fairly developed and profusely scattered over the whole surface of the organ, but are always particularly large and distinct in the pyloric region near the lesser curvature. After the age of forty it is often impossible to demonstrate their presence in the cardiac two-thirds of the stomach without the use of the microscope, and in the pyloric region they are much reduced in numbers and appear small and shrunken." The growths have therefore in both cases avoided the parts where the lymphoid follicles are normally best developed, and in Pitt's case were present where the lymphoid tissue is usually atrophied at that age. It is plain, then, that although the disease appears from the morbid anatomy

[2] Von Jaksch: Wiener Klinische Wochenschrift, 1889, Nos. 22 and 23.
[3] Von Limbeck: Grundriss einer Klinischen Pathologie des Blutes, p. 368.
[4] Cabot: Clinical Examination of the Blood.
[5] Pitt: Transactions of the Pathological Society of London, vol. xl., p. 80.
[6] Soltau Fenwick: Journal of Pathology and Bacteriology, vol. i., p. 424.

standpoint to be lymphadenoma, yet it presents some unusual features in such points as the distribution of the disease. So far we find that the blood examination points to a diagnosis of lieno-myelogenous leukæmia and that post-mortem evidence gives support to the diagnosis of lymphadenoma. If the disease were leukæmia throughout there ought to have been much more marked leukæmic infiltration of the liver and the kidneys than was present, for it is probable that if the large polypoid growths in the stomach were due to lymphocytic infiltration occurring in lymphatic leukæmia the other organs should be affected to a corresponding degree. On the other hand, the examination of the sections of the liver and kidney showed that the capillaries were in places filled with lymphocytes, thus supporting the diagnosis of early leukæmia. Against leukæmia, however, we have to face the fact that only two cases of genuine leukæmia in infancy have been recorded,[7] and that of these only one was of the lieno-myelogenous type. In this case there was a percentage of 21 myelocytes and this was associated with a large increase in the number of white cells and an abundance of nucleated red cells. It is possible to regard the case as primarily one of Hodgkin's disease which in its later stages had taken on the characteristics of leukæmia. There is no doubt that cases which clinically are primarily cases of Hodgkin's disease do before death develop the blood characteristics of leukæmia. It may be that towards the end of a case of lymphadenoma we get in some instances what may be called a lymphadenoma of the blood—that is to say, the process in the glands becomes acute and there is secondary invasion into the blood, getting in this way the appearance of lymphatic leukæmia, just as in sarcoma a secondary invasion occurs by means of the blood. This secondary invasion in sarcoma is, it may be noted in passing, often associated with what appears to be a lymphocytosis. This occurrence thus becomes very interesting, not only from the point of view of the relationship between lymphadenoma and leukæmia, in which the lymphatic glands and the leucocytes are respectively affected, but as bearing on the relationship of lymphadenoma to sarcomatous growth. The close connexion of these diseases is made more evident by the result of Muir's[8] careful study of a series of leukæmic cases; he comes to the conclusion that the changes in both forms of leukæmia are due to the proliferation of a certain cell—possibly owing to the action of some irritant—in a manner analogous to what is found in certain tumours, such as sarcomata. In this particular case the morbid appearances suggest Hodgkin's disease, the blood examination points to a mixed leukæmia, and in view of the above it might be held that the case was primarily Hodgkin's disease and secondarily had taken on the blood characteristics of lieno-myelogenous leukæmia. Against this, however, we know in the first place that strange variations occur in the blood of children without any very apparent cause, and further although the blood examination is in itself very much in favour of lieno-myelogenous leukæmia, yet considering the age of the child it does not justify the conclusion that the case was leukæmia. This conclusion is very much strengthened by the fact that there appears to be no record of any case of lymphadenoma which went on to lieno-myelogenous leukæmia, although cases of Hodgkin's disease indistinguishable in the late stages from cases of lymphatic leukæmia are common. It would seem best to regard the case as one of aberrant lymphadenoma in which changes simulating lieno-myelogenous leukæmia had been induced by a marked condition of rickets. As has already been pointed out, the large amount of lymphocytosis and the marked anæmia with the presence of nucleated red cells is what is found in rickets. Further, in rickets there is apparently no increase in the number of eosinophile cells and this would be in keeping with the small number—practically normal—of eosinophile cells present in this particular case. Again, the age of the child might account for the relatively small number of polynuclear cells present. So far then we have accounted for all the blood changes with the exception of the presence of the abnormal cells or myelocytes. A very small percentage of these cells is common in rickets. It is probable that the infiltration of the marrow of the ribs by lymphadenomatous material which occurred in this case may have acted in some way in conjunction with the marked rickety condition, either as an irritant or otherwise, so that it caused a more or less intense proliferation of the cells which are found in bone marrow but are foreign to the blood—namely, the myelocytes. Viewed in this light it seems best from post-mortem evidence to regard the case as one of lymphadenoma complicated by rickets, especially as the blood changes can be satisfactorily explained by this combination of diseases.

For the drawing of the stomach and the micro-photograph we are indebted to Mr. P. L. Mummery, B.A., and Mr. Harold Spitta, senior students at St. George's Hospital.

[7] Morse: Boston Medical and Surgical Journal, 1894.
[8] Muir: Journal of Pathology and Bacteriology, vol. i., p. 123.

A METHOD OF EXPOSING AND OPERATING ON THE KIDNEY WITHOUT DIVISION OF MUSCLES, VESSELS, OR NERVES.[1]

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,
SENIOR SURGEON TO THE GENERAL INFIRMARY AT LEEDS AND PROFESSOR OF SURGERY IN THE YORKSHIRE COLLEGE.

MY much lamented friend, the late Greig Smith, used to insist on the importance of opening the abdomen in the course of the muscular fibres as much as possible so as to avoid the weakness that is apt to follow on division of muscle, but I can find no evidence in his writings, nor did I gather in my many conversations with him, that he had conceived the idea of exploring the kidney on this principle. Dr. McBurney's method of exposing the vermiform appendix, which I have employed on numerous occasions with great satisfaction, suggested to my mind the possibility of exposing the kidney in a similar manner, and it was not until I had performed a number of operations by the method I am about to describe that my attention was drawn to a paper by Dr. Abbé in the Transactions of the New York Surgical Society, in which he describes a case of nephrectomy performed on the same principle. Seeing that the operation is one which from ample experience I have found of great utility in all operations on the kidney I have no hesitation in describing it and recommending it to the notice of other surgeons. The accompanying diagram, which was drawn for me by my friend

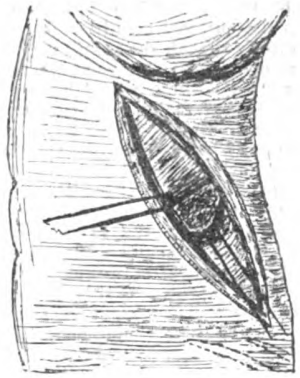


Diagram of incision, showing splitting and retraction of fibres of the external oblique muscle and also of internal oblique and transversalis.

Dr. F. Gairdner, who has assisted me in several of these operations, shows at a glance the principles on which the operation is based. The incision beginning to the inner side of the anterior superior spine of the ilium is carried backwards obliquely towards the tip of the last rib. The fibres of the external oblique and its aponeurosis are then split and retracted, exposing the internal oblique muscle, the muscular fasciculi of which are split in a line between the ninth costal cartilage and the posterior superior spine of the ilium, in which position they are longer than in front of or behind that line. When the fingers are pushed through the internal oblique to split it the fibres of the transversalis are pierced and can be retracted along with the oblique muscle. A

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society on April 22nd, 1898.

diamond-shaped space is thus formed, at the bottom of which is seen the transversalis fascia, which is then incised, exposing the peri-renal fat, and on pushing the fingers through this the kidney is easily reached in whatever position it may lie. If needful the whole hand may be introduced into the peri-renal space and the kidney can be grasped and freely manipulated, the retractors for the moment being withdrawn. If the vessels are moderately long, and in all cases of moveable kidney, the organ may be brought through the wound and explored by incision or by needling or it may be examined by the selenium screen and the Roentgen rays. Should a calculus be found it can be extracted and the wound sutured before the organ is returned, as in the following cases reported for me by my house surgeon, Mr. Dobson.

CASE 1.—A woman, aged sixty-nine years, had suffered from attacks of pain in the left lumbar region for several years and from acute continuous pain for the last three weeks, with pyuria, vomiting, and constitutional disturbance. A tumour could be felt in the renal region, tender, moveable, and dull on percussion, the dull area being crossed by a resonant band. On Feb. 11th, 1898, the operation as described above was performed and four stones were removed from the dilated kidney, together with a quantity of pus. Drainage was effected through a stab wound in the loin and the original wound was closed. The wound healed by first intention and the tube was removed in a week. She was made an out-patient on March 1st and was shown at the clinical meeting of this society on March 4th.

CASE 2.—A woman, aged sixty years, had passed renal calculi six and three years previously and for eight weeks before I saw her was feeble and ill, suffering from pyuria with bladder irritability. The symptoms were referred altogether to the bladder, but the left kidney was enlarged and tender. On April 11th I exposed the kidney by splitting the muscle and brought the kidney out of the wound. It was sacculated and contained purulent urine, but the ureter was free from obstruction. An oxalate stone with sharp projections was excavated from the top of one of the calyces through a free incision along the dorsum of the kidney, bleeding being arrested by compressing the renal artery. The wound in the kidney was then sutured by catgut stitches passed deeply, after which the kidney was returned and a drainage-tube passed down to the neighbourhood of the renal wound in case of leakage. The tube was removed on the third day, when the rest of the wound was found to be healed. The bladder irritability has subsided and the patient so far as the surgical condition is concerned is progressing satisfactorily though she is still very weak.

CASE 3.—A woman, aged thirty-one years, was admitted to the infirmary with a three years' history of attacks of pain in the right lumbar region radiating to the thigh and across the abdomen. She had had hæmaturia on several occasions. During the last few months the attacks had been very severe with vomiting and collapse. On April 21st, 1898, the kidney was exposed by splitting the muscles and was drawn through the wound, when a calculus was felt in the pelvis of the kidney which was exposed on its posterior aspect. The stone, which weighed 18 grains, was of about the size of a wren's egg and after its removal the wound in the pelvis was sutured by catgut, a drainage-tube being inserted into the peri-renal space. The patient has thus far progressed satisfactorily. Should it be found necessary to drain the kidney or its pelvis it is easy to make a stab wound through the loin and to pass a tube through that into the wound in the kidney, as in the following case.

CASE 4.—I was asked by Mr. Roberts of Knayton to see a woman, aged thirty-five years, suffering from a tender swelling in the right renal region, but without any marked urinary symptoms except a little pus and albumin in the urine. The symptoms had come on after a period of gradual failure of health and had been acute for eight weeks. When I saw her the temperature was 103° F. and the pulse was rapid and feeble. She was brought to a surgical home and the kidney was exposed by splitting the muscles. Offensive pus was found round the kidney, the kidney itself being swollen and containing pus. The kidney was drained by a tube passing through the loin and the upper wound was sutured. Except where the tube was the wound healed by first intention and at the end of a fortnight, the discharge having ceased, the tube was left out. She returned home on the twenty-first day and has progressed satisfactorily since. Should no disease be found beyond preternatural mobility sutures can be passed through the kidney substance when it is exposed, and then, on returning it, they can be passed through the tissues in the loin so as to anchor it securely as in the following case.

CASE 5.—A woman was sent to me by Mr. Reynolds of York with a very moveable left kidney producing all the symptoms of calculus. The pain was paroxysmal and was followed by albuminuria, which passed off between the attacks. The kidney was exposed and brought out of the wound, but a thorough exploration of it and the ureter revealed no stone. Sutures were passed through the kidney substance and then the kidney was returned and the stitches made to transfix the tissues in the post-renal region and to fix the kidney there. Healing occurred *per primam* and she returned home within the month.

Should no calculus be found and no disease involving further operation on the kidney the ureter can be explored even to its termination in the pelvis by an extension of the opening downwards and by means of a search light. When the peritoneum is well retracted the tube may be seen along its whole course, as in the following case.

CASE 6.—A man, aged thirty-nine years, was admitted to the Leeds Infirmary in October, 1897. He had been subject to attacks of pain in the loin for four years radiating along the course of the genito-crural nerve. There were irritability of the bladder, hæmaturia, &c., so that all who saw him suspected stone in the left kidney. The kidney was palpated and explored and the ureter was examined along its whole course, but without any stone being found. In this case, after exposing the kidney, the lower fibres of the internal oblique were divided to the extent of about three inches, in order to give more room to see the vesical end of the ureter. He was made an out-patient on Nov. 30th and has remained well and free from his attacks.

Cases 7, 8, and 9 afford other examples of negative exploration.

CASE 7.—The patient, aged thirty-four years, had had radiating renal pain for five years, hæmaturia, &c. On Jan. 20th, 1898, exploration of the kidney and ureter by an anterior oblique incision was performed. The result was negative as to calculus, but up to the present relief to all the symptoms. He was made an out-patient on Feb. 9th.

CASE 8.—The patient, aged thirty-six years, had had pain for six weeks in the left lumbar region, coming on in attacks radiating down the thigh and across the abdomen. There was pain on percussion over the kidney and the patient was said to have had hæmaturia. On Jan. 27th, 1898, an anterior oblique incision was made and the kidney and ureter were explored. The result was negative as to stone. She was made an out-patient on Feb. 26th.

CASE 9.—The patient, aged twenty-four years, had had renal pain, hæmaturia, &c., for fourteen months. On March 12th, 1898, exploration by an anterior oblique incision and splitting of the muscles was performed. The result was negative as to stone, but there was no return of pain. He was made an out-patient on March 22nd.

If the disease prove too extensive for simple nephrotomy it is quite easy to ligature the pedicle and perform complete nephrectomy, as in the following case, which I saw early last year.

CASE 10.—The patient was a woman, aged fifty years. She was suffering from hæmaturia with enlargement of the right kidney, which on exposure proved to be extensively invaded by malignant disease. The kidney was easily drawn through the wound and removed, recovery being uneventful.

In case the disease of the kidney is only partial the complete exposure enables a conservative operation to be done, as in the following example of partial nephrectomy.

CASE 11.—A woman, aged fifty-eight years, was sent to me by Mr. Wilson of Kirkby Overblow for tumour below the right costal margin accompanied by marked loss of flesh and great pain. Exploration revealed a tumour of the upper end of the kidney which was removed by excising a wedge-shaped piece of the upper end of the kidney including the tumour; bleeding, which was very free, was easily arrested temporarily by compressing the renal vessels and the kidney being outside the wound offered no difficulty to manipulation. On bringing together the V-shaped aperture by catgut sutures passed deeply, bleeding was completely arrested, and although a drainage tube was inserted as a precaution it was removed on the second day. The wound healed by first intention and the patient rapidly regained her flesh and strength and is now well.

After all necessary manipulations on the kidney have been

effected, the kidney, if not removed, is replaced, or if not disturbed from its bed is left *in situ*. The cavity is then sponged out and on withdrawing the retractors the muscles at once fall together and may if thought desirable be sutured with two or three interrupted catgut sutures, the skin incision being brought together by interrupted silkworm gut sutures. As a rule, not a single ligature is required, as there is no bleeding.

The advantages of this method of exploring the kidney are obvious. 1. There is no division of muscle and therefore no weakening of the abdominal wall immediate or remote. 2. No vessels are divided, thus not only saving time but rendering healing *per primam* more likely. 3. No nerves are severed and therefore paralysis of the rectus and other muscles is avoided. 4. The operation is done with the patient lying on the back, to the great convenience of the anæsthetist, the operator and his assistants, and to the manifest advantage of the patient, who is saved much unnecessary disturbance. 5. The great saving of time as well as the diminution of hæmorrhage means lessening of shock, thus rendering operation feasible when it otherwise might be questionable. 6. It is an important fact that diagnosis in kidney cases, especially in renal calculus, is by no means perfect, and if it can be proved that an exploration of the kidney can be done quickly with little or no danger and without any subsequent weakness being left, the physician will be less loth to permit and the surgeon to perform an exploratory operation after all other means have been fruitlessly tried. 7. Lastly, after such an operation convalescence is materially shortened as the patient may be safely allowed to be up at the end of the second week or even earlier, since there is no fear of the wound giving way.

I may take this opportunity of saying that wherever I can when operating away from the middle line of the abdomen I make use of the principle of splitting instead of dividing muscles—for instance, in gastrostomy, in inguinal colotomy, in typhlotomy, sometimes in cholecystotomy, and nearly always in removal of the vermiform appendix. I would also point out that if it be found necessary to extend the opening—for instance, in case of operation on the ureter—deeply in the pelvis it is easily accomplished by departing slightly from the principle here advocated and dividing the deep plane of fibres and further splitting the external oblique towards Poupart's ligament. The internal oblique will then require suturing to bring together the divided edges. In this way the ureter, even to its entrance to the bladder, may be fully exposed to sight as well as touch, as in a case which was witnessed by my colleagues, Mr. Teale and Mr. Ward, who will, I feel sure, bear me out in my statement as to the efficiency of this method of exploration. I could relate a greater number of cases on which I have operated, but I think that those I have given will be sufficient to serve as examples.

Leeds.

PUERPERAL ECLAMPSIA.[1]

BY THOMAS G. STEVENS, M.D., M.R.C.P. LOND., F.R.C.S. ENG.,

OBSTETRIC PHYSICIAN TO THE SURREY DISPENSARY; LECTURER ON ELEMENTARY BIOLOGY, GUY'S HOSPITAL.

PUERPERAL eclampsia is now understood to mean convulsions with loss of consciousness unconnected with gross cerebral or spinal lesions in parturient women. The frequency of its occurrence is variously stated by writers, but in all probability about once in 260 labours[2] is the usual proportion. With regard to the period at which convulsions come on, the greater number occur before labour commences, then in order of frequency during, and, finally, after labour.[3] All statistics do not show this; but it must be remembered that appearances are sometimes fallacious, the onset of the convulsions being so closely followed by labour that the two phenomena have been supposed to be synchronous. Cases have been recorded at all periods of pregnancy from twelve days upwards; by far the greater number occur between the seventh and eighth months. Premonitory signs usually are present, but often are not taken much notice of. The commonest are headache, disturbances of vision, flashes of light before the eyes, amblyopia or even blindness, ringing in the ears, dyspnœa, tingling and numbness of the limbs, and, a very important sign, epigastric pain very similar to the pain complained of before diabetic coma supervenes. Occasionally diminution, steady and gradual, in the amount of urea eliminated by the kidneys has been noted and this has been used as an argument by some for the routine examination of the urine from time to time in parturient women, especially in primiparæ.

There is nothing resembling the aura of epilepsy in these cases. The phenomena resemble those of true epilepsy, but there is no epileptic cry. The tonic stage is very short, lasting only from half to one second, and is rapidly succeeded by the clonic with its usual stertor, jerking of muscles, and irregular respiration. This stage lasts for a minute as a rule, but may be prolonged to five minutes. Coma of variable duration succeeds the clonic stage, and then the patient recovers. On the other hand, consciousness may not be recovered before a second convulsion begins, this perhaps to be followed by others, even as many as 100 convulsions having been recorded in one patient. The temperature generally rises with each attack; this is said to constitute a differential diagnosis between eclampsia and uræmia from Bright's disease, in which the temperature usually but not invariably falls.

Eclampsia is always associated with albuminuria. I am aware that statements have been made to the contrary, but I feel sure that albuminuria will always be found at least just before and during the attack, though the next day, if convulsions have ceased, it may also have disappeared. In all the cases of eclampsia in the Guy's Hospital Lying-in Charity in which the urine was examined during the forty years up to 1875 albumin was only absent in two,[4] and in one of these the convulsions were due to meningitis; in the other they came on after severe post-partum hæmorrhage in a girl who had been seduced. It must be borne in mind that all parturient albuminurics do not get eclampsia; indeed, it is exceedingly rare to see eclampsia follow on the chronic albuminuria of pregnancy, and as a general rule a patient with dropsy and albuminuria during pregnancy may be confidently told that she will not get eclampsia. The urine may be scanty or even suppressed at the onset of the convulsions. The uterus is usually excited to contract but does not share in the irregular muscular contractions, though Braxton Hicks stated that it may become tetanic. In about 50 per cent. of the cases the fœtus dies before delivery, either because labour terminates before the fœtus is viable, or the fœtus is poisoned by the same cause which produces the eclampsia, or is asphyxiated on account of deficient oxygenation of the blood or separation of the placenta by hæmorrhages.

Terminations.—Complete recovery may occur without special treatment if delivery is completed soon enough; on the other hand, death may occur in spite of treatment from any of the following causes: acute toxæmia leading to heart failure; gradual asphyxia due to accumulation of secretions in the bronchi; pneumonia; puerperal sepsis due to infection during the hurried treatment often adopted. The albuminuria generally disappears quickly in cases which recover, but not uncommonly grave renal disease persists after the attack.

Diagnosis has to be made from true epilepsy which is not accompanied by albuminuria, has not the same prodromata, is not associated with a rise of temperature, and, as a rule, has a definite history of previous attacks; from meningitis which is accompanied by vomiting, optic neuritis, opisthotonos, and rise of temperature before the convulsions; and from hysteria which is not accompanied by albuminuria, never by incontinence of urine or fæces, in which unconsciousness is rarely absolute, and in which there is no rise of temperature, and the movements of which are very irregular and do not as a rule in the least resemble epilepsy.

Prognosis is most difficult in those cases in which the fits begin before labour; but even here, if the number of fits is less than fifteen, the coma not very profound between the fits, the pulse not too frequent or the temperature not very high, and, above all, rapid and safe delivery is possible, the prognosis is

[1] A paper read before the Æsculapian Society on Dec. 3rd, 1897.
[2] Vinay: Traité des Maladies de la Grossesse, Paris, 1894.
[3] Herman: Transactions of the Obstetrical Society of London, 1892.
[4] Galabin's Midwifery.

generally fairly good. According to Duhrssen[5] in 93 per cent. of the cases the fits cease after delivery. Deep œdema, constantly recurring convulsions, slowly progressing labour, especially combined with anæmia and a bad pulse, always put a very serious aspect on the case.

Post-mortem appearances are very inconsistent and apparently there is no known lesion constantly associated with eclampsia. In a large proportion of cases the kidneys are affected; a parenchymatous nephritis is found sometimes associated with very acute congestion. In some cases the brain shows minute hæmorrhages and anæmia, rarely hyperæmia. The liver is sometimes markedly pathological, small hæmorrhages, areas of necrosis, and sometimes even complete disorganisation of structure being present. In all probability these changes are secondary and stand in no way in causal relation to the disease.

Etiology.—The causation may be classified under three heads: predisposing causes, essential causes, and exciting causes. Among the predisposing causes primiparity (the disease is seven times more common in primigravidæ than in multigravidæ) and twin pregnancies probably act in the same way by giving a greater tendency to albuminuria and renal inadequacy due to increased work thrown on the kidney. Heredity as a cause is very doubtful. Then there are the mental disturbance and increased irritability of the nerve centres in pregnancy. The essential causes must be carefully distinguished from the chronic conditions which produce albuminuria, for, as has been shown, chronic albuminuria in pregnancy, whatever its cause, is very unlikely to give rise to eclampsia. The older theories, such as the cerebral anæmia theory of Traube and Rosenstein, the cerebro-spinal congestion theory, the uræmic theory, and countless others are now given up. No one now contends that uræmia is due to retention of urea in the blood, for large quantities of urea may be injected into the blood-stream without producing convulsions. A microbian theory has, of course, been suggested, but no microbe has been isolated and in any case the microbe could only be proved to be the source of the toxins which are now generally accepted as the cause. The toxæmic theory suggests that the symptoms are due to the retention in the blood of poisons usually eliminated by the kidneys. The clinical picture lends colour to this theory, consisting as it does of prodromata, action of the nerve centres, and inflammatory sequelæ. The analogy of such diseases as diphtheria and typhoid fever also supports this view. What is the source of the toxic agents? It has been proved that normal urine contains several toxic principles and Bouchard[6] has shown that in eclampsia these are decreased in the urine and that the toxicity of the blood is increased. If the blood becomes supersaturated with these principles owing to renal incompetence (not necessarily inflammatory but simply physiological) intoxication results and eclampsia appears. The poisons may be maternal but from what source we do not know. They may also be fœtal, for we know certainly that in some cases when the fœtus dies the eclampsia ceases. The important point to realise is that these toxic principles are in all probability physiological products of normal organs, and as such their origin may be in the muscular system, in the viscera, or anywhere in fact where active metabolism is going on. The exciting causes may be very slight. Given the supersaturation of the blood with toxic principles, a slight stimulus such as a uterine contraction, a mental fright, the passing of a catheter or the giving of a rectal enema, or even the making of a vaginal examination, may be sufficient to upset the balance.

Treatment is based on the assumption of the toxæmic theory above described and may be divided into two categories: first, the treatment of the cause of the disease and, secondly, the treatment of the convulsions themselves. The first, of course, is the more important and briefly put consists in aiding nature as far as possible to eliminate the poisonous toxic principles from the body. The usual avenues for the elimination of excretions are the skin, the kidneys, and the bowels. We can stimulate either of these to increased action, and if the kidneys are inadequate the extra action of the other two may be made to compensate somewhat. To stimulate the skin and to promote diaphoresis we use the hot bath at 100° F., or the hot vapour or air bath, or the hot wet pack. I need not go into the questions of how to give these. I do not believe in drugs to induce sweating, and especially *not* pilocarpine. It is a dangerous drug to use in these cases on account of its depressing action on the heart and the danger of asphyxia from the large amount of bronchial mucus it produces. Drugs by the mouth of course are contra-indicated because the patient is usually unconscious. As the urine is unusually scanty, and the kidneys are probably deeply congested active measures must be taken to relieve these. An old-fashioned but very efficacious remedy is dry cupping to the loins, followed by linseed meal poultices. Infusion of salt water (1 dr. to the pint) into the veins or subcutaneous tissue is very useful in promoting diuresis. In many of these cases the circulation is at very high tension as shown by plethora and the very hard pulse; this condition by itself greatly embarrasses the action of the kidney (or possibly the inadequate kidney really produces it) and I am confident that for such a condition there is nothing to compare with bleeding. It acts by relieving the circulation and lowering the tension, by diminishing the congestion of the kidneys, and very probably also by removing some of the toxic principles from the blood. The quantity of blood removed should not exceed 20 oz. I have twice used bleeding in typical cases and both times the result was all that could be desired, the pulse became slower and the tension was relieved, and the fits stopped entirely and did not recur Bleeding must not be employed when the patient is anæmic or when the circulation is feeble. The time-honoured treatment for the bowels is to give two minims of croton oil, but I am bound to say that this does not always have any effect. Any drug which can be given to an unconscious patient and which will produce a liquid motion may be used and will help to relieve the circulation. With regard to the treatment of the convulsions the patient must be prevented from hurting herself through falling out of bed or biting her tongue. Chloroform must be given by inhalation and light anæsthesia may be continued for hours, increasing the dose if a fit seems to be coming on. As an alternative to chloroform morphia has been largely used of late years at the Rotunda Hospital, Dublin. It is given hypodermically in full doses until the full effect is reached and it is claimed that the results have been better since chloroform has been abolished. There need be no fear of giving morphia on account of the renal complication. It does not seem to matter whether the kidneys are sound or not; indeed, morphia is largely given nowadays in chronic Bright's disease. Besides these bromide of potassium is generally given with or without chloral hydrate by the rectum—from 30 or 60 gr. of the former, 30 gr. of the latter—but very little good could be expected from them alone. My own experience of these drugs is limited to chloroform, but my cases are too few and too uniformly happy in their ending to be able to say much about it.

To my mind there can be no doubt that labour should be induced where eclampsia precedes. I am convinced that nothing gives the mother a better chance of recovery than a rapid but safe and deliberate delivery. No forced delivery should be attempted, the greatest care must be taken not to produce tears, and above all the strictest antiseptic precautions must be taken; for a patient recovering from eclampsia is in the worst possible condition for withstanding septic microbes and therefore is more prone to septicæmia than other presumably less worn out patients. Nothing could be more miserable than to pull a patient through an attack of eclampsia only to see her succumb to the ubiquitous streptococcus. The greatest success in these cases will be with him who carries out all these methods of treatment, not hesitating to pile up one upon the other until the disease is checked.

As a routine treatment for a given case I would suggest the following. Give chloroform or keep the patient under morphia and also give the bromide and chloral *per rectum*. Protect the patient from injury. Induce labour. Bleed if the pulse is hard and the patient is plethoric. Give a hot wet pack or bath. Dry-cup the loins and then put on linseed meal poultices. Give two minims of croton oil on a bread crumb placed on the tongue. In a large proportion of cases a good result will be obtained if treated in this manner. Even with all this treatment, however, there are, unfortunately, cases which do terminate fatally; but as far as we are concerned we cannot recognise them beforehand and so we must not omit one item of the treatment.

St. Thomas's-street, S.E.

[5] Archiv für Gynäkologie, 1892.
[6] Leçons sur les Auto-intoxications dans les Maladies.

A RECENT SERIES OF 100 OPERATIONS FOR STONE IN THE BLADDER, WITH SOME PRACTICAL REMARKS THEREON.[1]

BY P. J. FREYER, M.A., M.D., M.CH.,
SURGEON TO ST. PETER'S HOSPITAL.

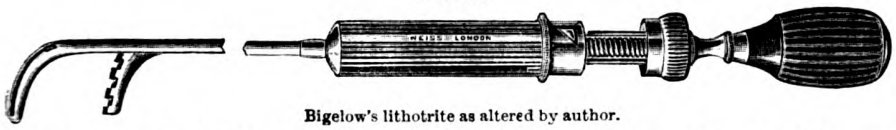
IT has now fallen to my lot to have performed 912 operations for stone in the bladder by all methods—viz., 249 perineal lithotomies, 7 suprapubic lithotomies, 1 vaginal lithotomy, 3 removals of stone from the female bladder by rapid dilatation of the urethra, and 652 litholapaxies. Full particulars of the great majority of these operations, as to age of patients, weight of calculus, mortality, &c., have appeared in papers published by me in the various medical journals during the past sixteen years and in the recent edition of my work "The Modern Treatment of Stone by Litholapaxy."[2] It is, however, to my latest series of 100 operations for stone in the bladder that I propose inviting attention. I may at once say that these operations were one and all successful. I propose giving some brief statistics of these operations, describing the methods by which the results were obtained, and, by reference to important individual cases, directing attention to some practical features in the modern operation for stone.

I have now for several years practically abandoned all other methods of dealing with stone in the bladder in favour of Bigelow's operation. The force of this statement will be brought home when I say that amongst this series of 100 operations there were only 2 lithotomies, the remaining 98 cases having been dealt with by litholapaxy. In one of these two cutting operations—a case in private practice—the suprapubic method was adopted for the removal of these two calculi contained in this cystic tumour which projected into the bladder and presented on cystoscopic examination the appearance of a fibro-papilloma. Details of the case, which I believe to be unique in the annals of surgery, were placed before the Royal Medical and Chirurgical Society in November last and are published in the Transactions of that society. The other case was that of a patient in St. Peter's Hospital, who, in addition to stone, suffered from severe stricture of the urethra with perineal fistulæ. Median lithotomy was performed, the stricture at the same time being successfully dealt with. Amongst the remaining 98 cases operated on by litholapaxy there were 94 males and 4 females; 68 were adults and 30 were male children or lads under seventeen years of age.

Litholapaxy, as you are aware, consists in the rapid crushing of the stone and the complete removal of the fragments at one sitting. Crushing of calculi at numerous "sittings," or lithotrity, had been more or less in vogue from the early part of the century, finding its ablest advocates in Civiale in France and Sir Henry Thompson in this country; but the essential part of the modern, or Bigelow's, operation consists in the complete removal of the fragments at one sitting. Undoubtedly one of the most, if not the most, essential elements of success in this operation is the employment of proper instruments. Time will not permit of my going into that interesting subject—the history of the development of these instruments. I will therefore confine myself to a brief description of the instruments employed in my own practice at the present time.

The lithotrite shown in Fig. 1 was made for me in

FIG. 1.



Bigelow's lithotrite as altered by author.

1886 by Weiss and it is the model on which all my lithotrites have since been constructed. It contains the handle and locking action of Bigelow with fully fenestrated blades instead of a non-fenestrated female blade as originally used by Bigelow. The ball handle affords a much firmer grip to the hand than the old-fashioned wheel—a grip which is essential when dealing with large and hard calculi. The locking action is of the simplest character, the instrument being locked and unlocked by a quarter turn of the cap to the right or left by the right hand, the left hand being free to grasp the female blade and to hold it steady in the bladder during the various manipulations. The female blade is fully fenestrated, smooth, and bevelled on the inner aspect of the slot, so that it is almost impossible to catch the mucous membrane. I use none but fully fenestrated lithotrites in my practice now, regarding the use of any other kind—whether non-fenestrated or partially fenestrated—as dangerous, owing to the liability which exists with them of débris getting impacted in their jaws—an accident which cannot occur with a fully-fenestrated lithotrite when properly used. To cope with calculi of all sizes and consistencies in patients of all ages a series of lithotrites varying from No. 4½ to No. 18 of the English scale should be at hand. Bigelow's original aspirator, though efficient, was both complicated and cumbersome and has been modified from time to time by himself and other surgeons. This form of Bigelow's aspirator, simplified

FIG. 2.



by myself and others, I worked with for years and found thoroughly efficient. I have still further simplified this by dispensing with the tap above the rubber bulb, which is quite unnecessary, as the apparatus can be easily filled by immersing it in a basin of water. The essential requirements, to my mind, in a perfect aspirator are: (1) that the apparatus be light and handy, so that when attached to the cannula in the bladder it can be moved about freely in any direction by one hand; (2) that the distance between the rubber bulb and the bladder be the shortest possible and the intervening course of the fluid as nearly straight as possible; (3) that the rubber be strong and pliant, so as to give sufficient suction power; and (4) that fragments once entering the receiver cannot return to the bladder. These attributes my new aspirator (Fig. 2) possesses. I have now worked with it for more than two years and have found it thoroughly efficient in all respects.

The cannulæ vary in size from No. 6 to No. 18 of the English scale, those from No. 6 to No. 11 being necessary for male children and those from No. 12 to No. 18 for adults and females of all ages. Cannulæ are either straight or curved. Those which I use (Fig. 3) are slightly curved at the end to facilitate their introduction. They should be armed with stylets, which should be introduced before withdrawal of the cannula from the bladder, so as to prevent a fragment getting impacted in the eye, which would tear the urethra or possibly get dislodged in that canal.

The calculi, the débris of which I show you, varied in weight from a few grains to over 3 oz., the average weight in adults being 226 gr. and in children 79 gr. The case in which this large stone, composed mainly

[1] A paper read before the Harveian Society of London on April 28th, 1898.

[2] Baillière, Tindall, and Cox, 1886.

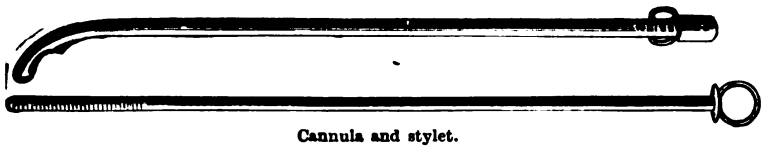
of oxalate of lime and weighing 3 oz. and 20 gr., was removed is interesting, so I will give the details briefly.

The patient, a man, aged thirty-four years, was sent to me by Mr. William Armstrong of Buxton. He had suffered from childhood from symptoms of stone, and had on two occasions been unsuccessfully sounded before coming under Mr. Armstrong's care. On April 29th, 1897, assisted by Mr. J. G. Pardoe, Mr. Woodhouse Braine giving the anæsthetic, I crushed and evacuated in twenty-four minutes this large and hard stone. Two days after the patient wrote to Mr. Armstrong saying that he did not know why he was being kept in bed. He was walking about his room on the fifth day, and he left the surgical home on May 9th perfectly well. This was one of the hardest and sharpest pieces of work I have ever performed. My hands were blistered from the lithotrite and my arms ached for days after the operation. I need scarcely say that it requires much practice to deal so rapidly with a large and hard stone like this. It is, I believe, the largest stone that has been removed in England by litholapaxy, though in India I have successfully removed by this method a urate stone more than twice this weight,[3] and still larger stones have been removed in India and in Egypt.

I attach the utmost importance to the rapidity with which large calculi can be removed by litholapaxy. As a rule in such cases the patient's health is broken down and the kidneys are affected. Under such circumstances prolonged narcosis leads to congestion of these organs, exhaustion of the vital powers and shock. Other things being equal I venture to say that our success will vary in inverse proportion to the length of time spent over the operation.

The average age of the adults was fifty-one years and of the children or lads under the age of seventeen years six years. The youngest child operated on by me in England was one aged one and a half years, sent by Mr. Dartnell of Rochester. The child had suffered for two and a half months from the usual symptoms of stone in the bladder. On Feb. 9th, 1897, Dr. Dudley Buxton giving the anæsthetic,

FIG. 3.



Cannula and stylet.

I removed in six minutes a calculus, weighing 9 gr., composed of an oxalate of lime nucleus covered by phosphates. A No. 6 lithotrite and a No. 7 cannula were passed with ease. During the day the child had some scalding in passing urine. Next day I had the pleasure of seeing him with my friend Dr. John Anderson, C.I.E. The child was playing on the floor quite well and he left the surgical home on Feb. 13th. This is, as far as I am aware, the youngest male child on whom litholapaxy has been performed in England. The oldest patient of the series was a man, aged eighty-five years, suffering from a hypertrophied prostate, from whom I removed by litholapaxy, at St. Peter's Hospital, on Feb. 17th, 1897, a small prosphatic stone weighing 18 gr. This patient recovered without a bad symptom and was discharged on the sixth day. Amongst the series there were 4 females—1 child and 3 adults—litholapaxy being the operation performed in each case, the weight of the calculi ranging from 17 gr. to 290 gr.

A recent case in which I removed a stone from the bladder of a female presented such an excellent clinical picture that I am tempted to give brief details thereof. The patient, aged forty-four years, had suffered for four years from attacks of renal colic, gradually increasing in frequency and intensity. About a month before I was called in a large moveable tumour developed in her left loin, accompanied by pyrexia. Pyonephrosis the result of impacted stone in the ureter was the diagnosis arrived at by her medical attendant and this view of the case was confirmed at a consultation with Dr. Sidney Ringer. Exploration of the kidney was considered advisable but shortly after the consultation the patient passed suddenly over 50 oz. of pus and urine, when the tumour and pyrexia subsided. A day or two after symptoms of stone in the bladder supervened and continued till April 1st, 1898, when I was called in. The patient being anæsthetised by Dr. Dudley Buxton, Dr. Ringer being present, I at once detected a stone in the bladder on sounding. Its crushing and removal by the aspirator were the work of a few minutes. The débris was composed of an oxalate of lime, dumb-bell shaped nucleus, covered by urates and phosphate of lime, and weighing 33 gr. The patient was up and walking about on the fourth day and is now perfectly well, free from all kidney and bladder symptoms.

Bigelow's operation in females is comparatively easy, the instruments employed being the same as for males. The only special difficulty sometimes met with is that, owing to the width and shortness of the urethra, the water which is necessary in the bladder during the crushing of the stone is liable to rush out beside the instruments. This difficulty is obviated by getting an assistant to place the fore and middle fingers of one hand in the vagina and to press the posterior lip of the urethra against the lithotrite, a manœuvre which prevents the water flowing out. Litholapaxy is eminently successful in females, the patient being, as a rule, able to walk about in a day or two after the operation. One of the most terrible afflictions that a woman can suffer from is permanent incontinence of urine; but how frequently do we find this condition after removal of stone by "rapid dilatation of the urethra." In my pre-litholapaxy days I had one such case in my own practice and I have come across several such in the practice of other surgeons, one quite recently. Bigelow's operation obviates the occurrence of this dreadful affliction, as no preliminary dilatation of the urethra is necessary for the introduction of the requisite instruments.

The time spent in hospital or under treatment in case of patients in private practice after the operation of litholapaxy varied from 2 days to 20 days, the average being a little less than 8 days. But in many instances the patients were kept two or three days longer than necessary under treatment as a precautionary measure. Contrast this period of days with the period of nearly as many weeks required after lithotomy, whether perineal or suprapubic.

These 100 operations were performed on 99 individuals, there being only one case of recurrent stone in my own practice—a man, aged eighty-four years, a patient under the care of Dr. John Anderson, with an enormous prostate. In May, 1897, I removed a small urate stone and again in February, 1898, a phosphatic stone weighing 92 gr. Three of the patients had litholapaxy performed previously by other surgeons, but in one instance only was the recurrence due to a fragment having been left behind at the previous operation. In one instance also suprapubic lithotomy had been performed by another surgeon.

It will be within the knowledge of many that the greater portion of my experience in this branch of surgery was acquired in India; it was in India that I performed my first litholapaxy, and it was in that country, with its splendid facilities, that I learnt how to operate for stone. I may therefore be asked, and rightly asked, Is there anything peculiar in the climate of India or in the constitution of the native of that country which renders him a better subject for litholapaxy than the European? To both these questions I answer emphatically in the negative. In the first edition of my work on Litholapaxy I collected statistics of 2592 lithotomies performed in the public hospitals in India in 1882 and found that the mortality was 13 per cent., which is practically the same as that (12½ per cent.) occurring amongst 1827 lithotomies in public hospitals in England, the statistics of which were collected by Sir Henry Thompson. But if the native of India is not a better subject for lithotomy than the European I am unable to comprehend by what method of reasoning it is alleged—and I observed that this has been persistently alleged in the medical journals—that the former is a better subject for litholapaxy than the latter.

I am now, however, in a position to speak with authority in this matter, having had considerable experience of this operation both in India and in England. Last year I had 29 operations for stone in the bladder and during the short period since I settled in practice in London I have performed 45 operations—viz., 43 litholapaxies and 2 lithotomies, all of which were successful.

I find, however, that there are some interesting features of contrast between my practice in India and in England. In the first place I find that the average age of 40 adult Europeans operated on by me is fifty-six years, nearly eleven years greater than the average age in the adult natives of

[3] Brit. Med. Jour., June 16th, 1894.

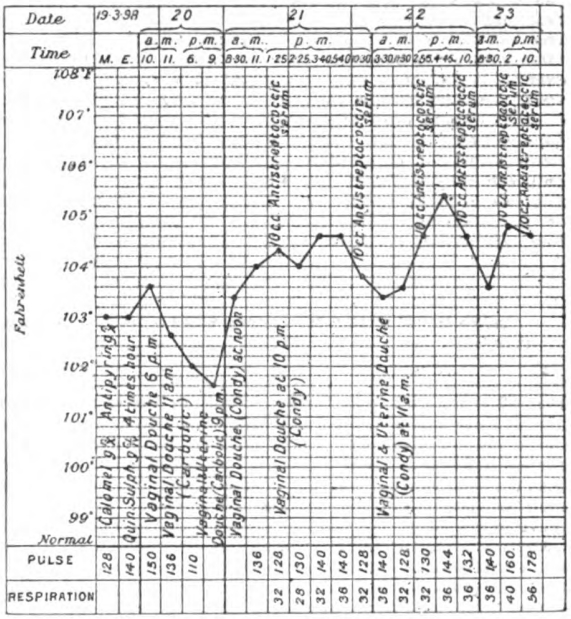
India. Mr. Cadge of Norwich, in his article on "Lithocrity," &c., in Heath's "Dictionary of Surgery," in contrasting the results obtained in my first series of 108 litholapaxies performed in India with a somewhat similar series of cases by Sir Henry Thompson in England notices this marked difference in the average age. It is simply due to the fact that the "expectation of life" in India is probably about ten years less than in England, a native of India being at fifty years of age comparatively as old as a European at sixty years of age. Secondly, the average weight of the calculi removed by me from adults in London is 149 gr. as compared with an average of 309 gr. in India. This is a point to which Mr. Cadge also called attention in the article referred to, the average weight of the calculi removed by me in India in the series referred to having been nearly two and a half times greater than that of the average of Sir Henry Thompson's series. Thirdly, the very much larger proportion of prostatic patients met with in England than in India. Before I commenced practice in London my friends and present colleagues at St. Peter's Hospital, Mr. Reginald Harrison and Mr. Swinford Edwards, frequently said to me that they believed that in the surgery of stone one met the complication of hypertrophy of the prostate much more frequently in England than in India. In holding this view I find they were perfectly correct, for amongst 39 adult males on whom I performed litholapaxy in England there were 13 suffering from hypertrophy of the prostate, or one-third of the whole, a very much larger proportion than one meets with in India and which may to some extent account for the much larger number of recurrences of stone met with in England than in India. It will be noticed that in no instance in this series was the coexistence of hypertrophy of the prostate with stone a bar to the performance of litholapaxy, though in many instances there was very great enlargement of the gland present.

Harley-street, W.

A CASE OF PUERPERAL FEVER TREATED WITH ANTISTREPTOCOCCIC SERUM; DEATH.

BY J. PAUL ROUGHTON, M.R.C.S. ENG., L.R.C.P. LOND., D.P.H.,
SURGEON TO THE KETTERING GENERAL HOSPITAL,
AND
ARNOLD G. TOLPUTT, M.R.C.S. ENG., L.R.C.P. LOND.

A WOMAN, aged twenty-seven years, gave birth to her sixth child on March 16th, 1898, at 12.45 P.M. Mr. Tolputt arrived at 1.10 P.M. and expressed the placenta with ease, the placenta and membranes being complete. Very little hæmorrhage occurred. On the 17th the patient's condition was satisfactory in every respect. On the 18th she was not visited, but on the 19th the nurse stated that she was "feverish" and flushed and complaining of faintness, and that the diapers were noticed to be "slightly offensive and the discharge scanty." The patient was found to be breathing more rapidly than normal; the pulse was 128 and the temperature was 103° F. The bowels had been opened once. There was no headache. 10 gr. of antipyrin were given and 10 gr. of calomel half an hour afterwards, the bowels being moved three times and vomiting occurring twice. A pill containing 4 gr. of sulphate of quinine was given every four hours and was continued throughout the illness. A vaginal douche was given by a trained nurse in the evening. On the 20th the condition of the patient was much the same and we decided to inject antistreptococcic serum, but were unable to obtain the serum till the next day. The patient was apparently better in the evening. On the 21st the patient's condition in the morning was grave, although she had passed a good night. A large thrombus appeared in some varicose veins of the right leg. The abdomen began to be tympanitic. The pulse, respiration, and temperature were much raised and the tongue was covered with a dry white fur. She complained of being drowsy and was a little deaf. There had been no rigor. The lochia had ceased, but they reappeared in the evening, when there was very little fœtor. Milk and beef-tea were taken in good quantities and were well retained. At 1.25 P.M. the first injection of 10 c.c. of Messrs. Burroughs and Wellcome's antistreptococcic serum was made in the abdomen, the most strict antiseptic precautions being taken in every detail. We saw the patient again an hour afterwards and practically no change had occurred in her condition, but she had slept a little. An hour later she was still drowsy; the temperature was a little higher. At 10.30 P.M. a vaginal douche was given, followed by another injection of 10 c.c. of serum; we then found the patient's state practically the same, but the condition of the tongue was much improved; the abdomen, however, was becoming more distended. In the night she was delirious at intervals and diarrhœa supervened, the bowels being opened nine times. On the 22nd in the morning the patient was worse, the abdomen was much more distended, and the clot in the veins had extended up to the groin. The lochia had altogether ceased. A vaginal and intra-uterine douche was given and an opium pill (½ gr.) was administered. The tongue continued to clean and there was



no headache and no rigor. She complained much of "wind." She continued to take nourishment well. At 2.55 P.M. 10 c.c. of serum were again injected and apparently had no beneficial effect whatever beyond keeping the tongue clean and the patient quiet. The condition of the patient gradually became more grave; the abdomen was extremely distended and the motions began to be passed unconsciously and were very offensive. At 10 P.M. 10 c.c. of serum were again injected without any improvement. On the 23rd it was evident that the patient could not recover, but two more injections of serum 10 c.c. were given. Her condition, however, rapidly became worse and she finally died at 2.30 A.M. on the 24th.

In this case the serum seems to have been useless as regards saving the life of the patient, but her general condition was certainly ameliorated. There were no rigors and there was scarcely any headache; the tongue, too, was much improved. It was perhaps unfortunate that the serum could not be obtained sooner. The only cause assignable for the infection was the insanitary condition of the house, the water having been condemned a short time previously. Also the patient had had a bad attack of diarrhœa earlier in the week. We again wish to point out that besides the use of the serum the very strictest possible antiseptic precautions were taken both as regards the instruments used and the hands of the operators.

Kettering.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RECURRENT MEASLES.

BY J. H. BATTYE, M.D. R.U.I.

IN view of the recent extensive epidemic of measles I should like to put on record the case of my daughter, aged seven and a half years, which to me is unique. I have described it to two or three other medical men, my seniors in the profession, and they all tell me that they have not met with one like it. On Feb. 17th, 1898, there came out on my daughter a very moderate crop of morbilli of the pinkish, mild variety, beginning on the face as usual. Her temperature was 101·5° F. She had very slight bronchial catarrh, but no sickness, headache, or malaise. The rash followed the usual course, spreading downwards in patches and reaching the legs by the morning of Feb. 19th, when there was distinct waning of the eruption on the face. The temperature was not taken that morning, as on the previous evening it had been only 98·6°. At 11 P.M. she was not so well; her temperature was 105° and I found that there was a distinct second crop of morbilli of the purple variety very copious over the face, neck, and upper part of the body, intense bronchial congestion and oppression of breathing, and some cyanosis of the lips; the pulse was 160 as near as I could count, and there was great intolerance of light from conjunctivitis but no delirium. During Feb. 20th the eruption spread over the rest of the body, scarcely a particle of the skin being untouched, but the bronchitis became less, expectoration more free, and the temperature in the afternoon fell to 103·4°, rising, however, to 103·8° at 10 P.M. There was no delirium during night or day. On Feb. 21st the rash was fading on the face, but was very dark over the body and legs. The temperature fell further from 101° in the morning to 99 8° at night. On Feb. 22nd the rash was fading rapidly in the morning; the temperature was 99°, the bronchitis was passing away, the lungs were clearing, and everything seemed going on quite normally towards recovery, when just after 9 P.M. I found that the temperature was 103·4°, and that there was a fresh crop of morbilli more papular than either of the two previous eruptions, but not nearly so extensive as the second, though more than the first. Like the two previous eruptions this travelled all over the body, but there was no exacerbation of the bronchitis during the third eruption. The temperature on Feb. 23rd was 101·4° in the morning, 99 6° at night, and on the next morning (Feb. 24th) 99°. It rose again in the afternoon to 100·8° and there seemed a slight increase of the last rash, but on the following morning (Feb. 25th) the temperature was 98·4° and the rash finally disappeared on the evening of Feb. 26th having been out for ten full days.

One curious point about my daughter's case is that she had all the premonitory symptoms of measles—coryza, vomiting, headache, and lassitude with a temperature of 101° on Jan. 20th, and was kept in bed for two days and at home for ten days but no eruption of any kind followed. I may also state that her brother had measles before her, the rash appearing first on Feb. 8th, and that she was allowed to go into his room as I felt certain that she had taken it while he was incubating, an opinion justified by the appearance of the rash in her case on Feb. 17th. Were the successive eruptions of morbilli due to repeated infections from her having been with her brother? There seems to be a great variety of opinion as to whether thorough disinfection is necessary after measles and also as to the duration of infection after eruption. Some maintain that the patient is free from infection one week after the eruption appears, others that the period is three weeks. For myself I regard thorough disinfection to be as necessary after measles as after diphtheria or scarlet fever and that no one is really free from infection till after three weeks from the time of eruption, and in this last contention I think my daughter's case fully bears me out.

On April 28th my daughter was attack d with varicella and again there were no premonitory symptoms whatever. The eruption has been rather copious, but she has never had a headache or lost her appetite all through.

Belgrave-road, S.W.

HYPERPYREXIA IN MALARIAL FEVER.

BY CHARLES LLOYD WORRALL, L.R.C.P. LOND., L.S.A.

ON March 29th, 1898, I was called to see a family suffering from malarial fever, and on arriving at the house about 11 A.M. I found that a child, aged three years and seven months, had had a convulsion about 8 A.M. that day and had not regained consciousness. The convulsion lasted about five minutes, the short duration being probably due to the patient having been put into a hot bath. When I examined the child she lay on her back breathing very rapidly but with no approach to stertor. The pulse was imperceptible and the brow and face were moist and clammy. In the axilla the thermometer registered 108·8° F.; in order to guard against possible error I shook the mercury down to subnormal and replaced the thermometer in the axilla, when it again registered the same degree. The history of the case was briefly as follows. On the previous day (March 28th) the little girl had been as lively as usual until sunset, when she complained of feeling tired. During the night she was very restless and thirsty, but complained of no pain, nor was there any vomiting. She did not take breakfast on the morning of the day I saw her and at 8 A.M. she went off into a fit as stated above. On finding the temperature so high I administered a dose of calomel and phenacetin and placed the patient in a tepid bath, with the result that the temperature came down to 103° in a very few minutes. The girl was then put to bed, whereupon in a few minutes the temperature rose again to 107° and in a few more minutes came down to 106°, and at this point it remained until I left, but unfortunately the patient died in about half an hour after my departure—viz., between 1.30 P.M. and 2 P.M.

During my experience of malarial fever, which extends over three summers, I have only seen one case with a similar temperature. That patient was a woman suffering from puerperal fever complicated with malarial fever; her temperature registered 107·6° on my thermometer and 107·8° on that of a colleague. My two colleagues, the hospital and district surgeons, tell me that they have never seen so high a temperature in malaria. Of the child's case being malarial fever I have no doubt as everything pointed to it—the season, the locality, and the fact that two more of the family were suffering at the same time from distinct malarial symptoms although mild. I may add in conclusion that in children I find that a dose of calomel and phenacetin as a rule acts like a charm in reducing temperature previously to giving quinine.

Barberton, South African Republic.

BORACIC ACID AND SALOL IN CYSTITIS.

BY ARTHUR H. BUCK, F.R.C.S. EDIN.

THE following case is probably of sufficient interest for publication on account both of the age of the patient and of the marked good effect of small doses of boracic acid and salol on bacterial urine.

In the beginning of last December I performed suprapubic lithotomy on a man, eighty-three years of age. This operation was selected in preference to lithotrity on account of (1) the size of the stone, (2) its hardness, and (3) the presence of a large prostate. The bladder was drained after the operation by a large tube for three days, by a No. 12 catheter through the wound for three days, and by a catheter through the urethra for fourteen days. There was practically no escape of urine except through these tubes. Cystitis was present before the operation and in spite of washing out three and four times a day there were bacteria in freshly-drawn urine three weeks after the operation. The urine was of a dull light yellow colour and was becoming more alkaline, varying in quantity from three to five pints. On the twenty-second day 10 gr. of boracic acid, and 3 gr. of salol were prescribed every four hours. Within two days the urine was acid, and in

a fortnight it had regained its normal characters, no albumin being present and no bacteria. The patient was up in a fortnight and out of doors within six weeks after the operation. He still continues well in every way, passing a catheter nightly to get rid of residual urine. The calculus measured 1¼ in. by 1¼ in.; it was composed of oxalate of lime and weighed 1 oz.

Brighton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

(Under the care of Dr. SHARKEY.)

IT is somewhat difficult to estimate the mortality in cases of perforated gastric ulcer which have not been treated by laparotomy, but it has been stated to be 95 per cent., and we may take this number as rather an under-estimate than an over-estimate of the death-rate from this lesion, and indeed the chance of a localisation of the effused contents of the stomach can be but small. Cases of perforation of a gastric ulcer in which previously complete adhesions have formed with a neighbouring organ, such as the liver, belong to an entirely different category and should be excluded from the statistics founded on cases perforating into the peritoneum. The mortality after the operation was considered to be about 70 per cent. by Greig Smith,[1] but this opinion was founded on only about 100 cases; since that time the operation has been performed much more freely and at an earlier period after the perforation, and the death-rate has certainly improved. Laparotomy for perforation of an ulcer of the stomach was first suggested by Dobson[2] of Bristol, and the first operation was performed by Czerny in 1885, but the patient died. This unsuccessful result was followed by four others also ending fatally, but in 1892 Kriege[3] published a case in which recovery followed the operation. The cases which have been recorded recently are numerous and we have published several in "The Mirror of Hospital Practice.[4] Every case is of interest, and the two recorded below illustrate many points of importance. In the case at St. Thomas's Hospital the value of the saline intravenous injection containing brandy is especially noteworthy. Recent papers of value on the subject are those by Pearce Gould,[5] by Barling,[6] and by Weir and Foote.[7] For the notes of the following case we are indebted to Dr. C. R. Box and Mr. Cuthbert S. Wallace.

A woman, aged thirty-three years, was admitted into St. Thomas's Hospital on Dec. 6th, 1897. The family history was unimportant. When she was fifteen years of age she first began to suffer from abdominal pain with occasional vomiting. The vomit had once the appearance of coffee; the pains at first appeared to have no definite relation to the ingestion of food or to exercise. The patient was in service and was believed to have strained herself in making a bed. From this time onward she was unable to eat meat, since it induced pain and vomiting. She had lived on milk, gruel, and fish, but the latter at times also disagreed. Five years before admission she was treated for anæmia and three years later she had hæmatemesis which succeeded an attack of vomiting. Soon after this another profuse hæmorrhage from the stomach took place. For fifteen months prior to admission to hospital she had been treated as an out-patient for gastric ulcer. The pain latterly had become more severe. Whilst walking back from her work at about 5.45 P.M. on Dec. 6th she was suddenly seized with a sharp pain in the left side just below the ribs. She reeled and would have fallen had not her sister, who was walking with her, caught her. She was carried into a shop, where she waited until a cab was procured and she was then taken to the hospital. On the way she vomited some brownish matter which was described as having the appearance of cocoa. During the day she had taken—at 7.45 A.M., bread and butter for breakfast; at midday, bovril; and at 4.15 P.M., cocoa and a biscuit. When seen at 7 P.M. the patient had an anxious expression and was complaining of intense pain in the epigastric and left hypochondriac regions. She lay on her back, with the abdomen rigid but not distended. Percussion showed a normal area of liver dulness and no indication of any fluid in the flanks. The epigastric and left hypochondriac regions were acutely tender to the touch. The extremities were cold and the temperature in the axilla was 95·6° F. The pulse was 88, small and compressible. There was no further vomiting. The urine was acid and of specific gravity 1026; it reduced Fehling's solution rapidly. At 10 P.M. the abdomen was opened in the mid-line above the umbilicus. As shock was evidently great the median basilic vein was opened and three pints of normal saline fluid containing one and a half ounces of brandy were infused. The appearance of the patient and the character of the pulse at once improved so that both were much better at the close of the operation than at the commencement. Immediately the peritoneum was opened several ounces of milky fluid escaped. The ulcer was found on the anterior surface of the stomach quite close to the lesser curvature and to the pylorus. Though somewhat deep in the abdomen it could be dragged down under the wound. The perforation was about half an inch in diameter and was surrounded on all sides by a ring of thickening. The induration was of such extent that excision was out of the question. The ulcer was therefore inverted with a double row of Lembert's sutures and was closed by an omental graft. The intestines were then turned out on to the surface of the abdomen and were washed with sterile water; the abdominal cavity and the pelvis were carefully cleaned with sponges. The pelvis contained stomach contents, but there was no sign of peritonitis. A drain having been introduced through an incision below the umbilicus the operation wound was closed. For fifteen days after the operation the patient was fed by the rectum; but then food in gradually increasing quantities was given by the mouth. The condition of the abdomen never gave cause for anxiety. For a few days after the resumption of solid food abdominal pain was present, but thenceforward the recovery was uneventful. The reducing agent was never present in the urine after the operation. The patient was discharged from the hospital on Feb. 24th, 1898, and is now in the best of health.

[1] Abdominal Surgery, vol. i., p. 570.
[2] Bristol Medico-Chirurgical Journal, 1883.
[3] Berliner Klinische Wochenschrift, 1892, p. 1280.
[4] THE LANCET, March 20th, 1897, p. 806; Jan. 15th, 1898, p. 158; and April 2nd, 1898, p. 930.
[5] Brit. Med. Jour., 1894, vol. ii., p. 859.
[6] Ibid., 1896, vol. i., p. 1314.
[7] Medical News, Philadelphia, 1896, Aug. 25th.

SOUTHPORT INFIRMARY.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

(Under the care of Mr. G. REINHARDT ANDERSON.)

A YOUNG woman, who was apparently in good health, consulted Mr. Reinhardt Anderson on Feb. 18th, 1897, complaining of pain after food. The pain was not constant and was not accompanied by vomiting. She had vomited after every meal on the 16th, but this she attributed to a bilious attack. She had never vomited blood. The pain had, she stated, existed off and on for some months. Mr. Anderson subsequently ascertained that twelve months previously—viz., in the early part of 1896—she was a ward maid in the infirmary, but she had to give up her situation because of anæmia and persistent dyspepsia. On examination the patient was found to be somewhat anæmic with pain and local tenderness in the epigastrium. Mr. Anderson prescribed a milk diet and the usual remedies. On the 21st, at 5 P.M., he received a call to see her as it was thought that she was dying. On his arrival he found that she was in a state of profound collapse; there was profuse perspiration, the face was ashen, and she had a rapid thready pulse. She complained of severe abdominal pain. There had been no

vomiting. It seemed that after eating a very hearty meal at 1 P.M., consisting of calf's heart, peas, potatoes, and pastry, she had taken a walk of over three miles. When nearing home at 4.45 P.M. she was suddenly seized with such severe pain in the abdomen that it was necessary to put her in a cab to get her home, though it was only three or four hundred yards away. From this history Mr. Anderson suspected perforation of a gastric ulcer and on examining the abdomen he made out the following facts. The abdominal walls were rigid, hardly moving at all with respiration; there was marked tympanitic resonance with absence of the liver dulness to the upper border of the seventh rib, and there was shifting dulness in either flank to a small extent. Palpation elicited general acute tenderness. A small injection of morphia was given and arrangements were made for her immediate removal to the infirmary, which was over a mile distant. At 7.30 P.M (two and three-quarter hours after the onset of the pain) Mr. Anderson operated. The abdomen was opened by a mesial incision 5½ in. in length extending from just below the xiphoid cartilage to within an inch of the umbilicus. On entering the peritoneal cavity there was an escape of gas and turbid serum with a marked gastric odour. Flakes of lymph were already visible on the surface of the liver and the omentum as they presented in the wound. On drawing down the stomach there readily came into view a small punched-out perforation from which escaped plentifully the dark-brown fluid contents of the stomach, these at first rushing unavoidably into the peritoneal cavity. Traction on the stomach induced retching and increased the flow. The perforation was now surrounded by sponges and the contents of the stomach emptied as much as was possible into a porringer. The perforation was then secured by three rows of Lembert sutures, infolding the stomach on itself, in its long axis. Fine silk was used. The peritoneal cavity was flushed out by large quantities of sterilised water poured into the abdomen from a jug, and also by means of a glass tube; the peritoneum above and below the liver, in either flank, and in the pelvis, was thoroughly irrigated. This proceeding was continued till the fluid escaped quite clear and free from all gastric odour. Very few solid particles came into view. After systematic sponging the abdominal wound was secured in the usual way. No drain was used. The operation lasted one hour and twenty minutes and the patient bore it well. The subsequent progress was an almost uninterrupted one towards recovery. Vomiting was troublesome for the first forty-eight hours, but was relieved by sips of very hot water and powders of carbonate of bismuth. A slight attack of pleurisy with effusion on the left side appeared on the fourth day, but this gradually and completely cleared up without aspiration. Rectal feeding was maintained till the ninth day after the operation in view of the tendency of the patient to vomit and also because her general condition kept so good as not urgently to demand food by the mouth. Fish was given on the seventeenth day and chicken on the twenty-seventh day. The stitches were all removed on the ninth day, the wound soundly healed, and there was neither abdominal pain nor tenderness. The temperature, which had never been higher than 102° F. on the second day after the operation, became normal on the thirteenth day and remained so. The patient was allowed up for the first time on March 24th and was discharged on April 29th. Eight months after the operation she travelled from Holyhead to Dublin. She was very sick, but sustained no harm, and in April, 1898, she was in perfect health and free from all dyspeptic symptoms.

Remarks by Mr. REINHARDT ANDERSON.—In submitting the notes of this case I am aware that there is nothing very unusual to comment upon. I was fortunately able to see the patient within fifteen minutes of the perforation and I believe that the happy result was largely due to the very short time which elapsed between the occurrence of the accident and the opening of the peritoneum. I may also mention that the perforation was small, not larger than a crow quill, and was situated on the anterior surface near the cardiac end, and though the stomach was loaded with partially digested food not much had had time to escape into the body cavity. Moreover, I was not hampered by those difficulties which have beset many other operators when dealing with similar cases—viz., the presence of induration around the seat of the ulcer or of extensive adhesions.

The chief interest in the above case seems to me to lie in the absence of previous symptoms pointing to a gastric ulcer. The patient's complaint was of vague pain and discomfort after food, her appearance was that of good health, and she was able to fulfil without trouble the arduous duties of waitress in a busy restaurant, so that I must confess that at my first and only interview with the patient 3 days before the occurrence of the acute mischief I was not impressed with the idea that she had a gastric ulcer. I prescribed the milk diet more as a precautionary measure, advice which was evidently totally disregarded. The presence of small, solitary, punched-out ulcers, which in recorded cases are found so frequently in sudden perforation of the stomach, is a matter of some interest, for they may exist without giving rise to more than ill-defined symptoms of dyspepsia, and they may easily be overlooked without careful palpation for a tender or painful area. It is certain that since my experience in the above case I have treated with more respect similar cases coming under my care, and I have enforced the absolute rest which is needful to avoid a possible perforation. In the treatment of this accident there is little doubt that the best chance for the patient lies in early diagnosis and prompt operation.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Intra-pleural Tension.

A MEETING of this society was held on May 10th, the President, Mr. BRYANT, being in the chair.

Dr. SAMUEL WEST read a paper on Intra-pleural Tension, of which the following is an abstract. Dr. West pointed out that the two layers of the pleura, which in health are in close contact, are subject to a constant strain which tends to pull them apart called the "intra-pleural tension," which is for all practical purposes equal in amount to the elastic contraction of the lung, but opposite in direction. The respiratory movements cause constant variations in this tension owing to the different degree to which the lungs are on the stretch in the different phases of respiration. Besides this, the air is somewhat hampered both on its entrance and on its exit from the air-tubes to the extent of half a millimetre of mercury on inspiration and from one and a half to two millimetres on expiration, causing a respiratory oscillation equal to about 2 in. of water. During normal quiet breathing, both on inspiration and expiration, the intra-pleural tension is negative. During forced inspiration the negative value is increased, but during forced expiration the negative value may be converted into a positive one; but as long as the two layers of the pleura are in contact this positive pressure during expiration is supported by the chest walls and does not, except theoretically, affect the pleura. Under pathological conditions, if the pleura contain air or fluid, this pressure then will affect the contents of the pleura also. The effects produced will vary according as the pleura is occupied by fluid, which is practically incompressible, or by air, which is easily compressible. The methods of estimating intra-pleural pressure are mainly two: first, measuring the elasticity of the lung, as Donders did; and, secondly, direct investigations by passing a trocar into the pleura through the chest walls. Perl's observations were referred to and various conclusions which may be drawn from them were stated with comments. When one side of the chest is opened the admission of air goes a long way to satisfy the elasticity of the lungs on both sides. Where the two layers of the pleura are more or less adherent the intra-pleural tension is more or less diminished. Where the pleural cavity is obliterated and the one lung contracted while the other has become enlarged the elasticity of the sound lung is greatly increased, proving that this is a condition of complementary hypertrophy, and not, as it is often called, complementary emphysema. Arguments were adduced to show that the contractility of the lung was probably not purely elastic, but partly muscular, and that there was such a thing as "pulmonary tone," in the same sense as physicians speak of "vascular tone," which may vary considerably in different constitutional conditions or in different nutritive states of the lung. Under pathological conditions the two layers of the pleura may be separated either by air or by fluid, and these present each of them its own peculiarities; thus

fluid has weight, but is practically incompressible; while air is compressible, but its weight may be disregarded. In the case of fluid effusion, therefore, the height of the column above the point of the trocar would affect the manometer reading. With a small punctured wound, as with a stab, or when the lung is injured, as with a fractured rib, the air does not often enter the pleura, but passes across it and makes its way to the subcutaneous tissue. Where there is a large opening through the chest-walls at least as large as the cross-section of the trachea air will pass in and out easily during respiration, and no effect being produced upon the lung it will collapse by virtue of its own elasticity, yet not completely. On the contrary, in such cases the lung is not infrequently found considerably expanded and quite near to the chest-walls, especially if there be forced expiratory efforts, as in coughing. Where the opening in the chest walls is not large enough to allow the air to pass freely out during expiration the pressure within the pleura will rise during expiration and tend therefore to compress the lung; and this is almost always the case where the perforation of the pleura is from within—e.g., from the lung—for it can rarely happen that the air can pass as easily out through the opening in the lung during expiration as it passes in during inspiration. The intra-pleural pressure in cases of pneumothorax during inspiration and during expiration must be considered separately. (1) During inspiration the air will enter the pleura as long as the pressure within the pleura is below that of the atmosphere and then no more can enter. The inspiratory pressure, therefore, cannot exceed that of the atmosphere with air alone, or very slightly where there has been deep inspiratory effort. If the inspiratory pressure is permanently raised some other factor is necessary to produce it, and that is generally the presence of effusion. (2) The expiratory pressure in pneumothorax is always positive and may be high if the expiration be forcible. Thus considerable pressure will be exercised upon the lung and mediastinum, so that the lung will be compressed and the mediastinum considerably displaced. The respiratory oscillation in pneumothorax is generally small, for on the affected side the chest is usually in the position of maximum inspiratory expansion, and on the opposite side, owing to the displacement of the mediastinum, the expiratory contraction of the lung is diminished. The observations upon which the preceding remarks were founded consisted of 20 paracenteses performed in 11 cases of pneumothorax. In 2 cases the inspiratory pressure was zero, but in the rest it was positive, and all of those associated with fluid, the range of pressure thus varying from zero to 9 in. That the pressure in pneumothorax when fluid is present is not higher than it is must be due to the fact that a large amount of the air is absorbed. A persistently high pressure would probably indicate some diseased condition of the pleura and lung which has prevented the ordinary absorption of the air. In serous effusion the pleura, it is probable, is kept dry in health by the action of what has been described as the "lymphatic pump"—viz., the stomata—and the valved lymphatics into which they lead, worked by the respiratory movements. Fluid, therefore, may accumulate in the pleura in two ways; either it may be poured out in larger quantities than the pump can remove or the amount of fluid may not be above the normal, but the pump defective. When fluid collects in the pleura it falls by its own weight to the lower part, and it is the lower parts of the lung consequently that become more collapsed, but the tension in the upper part is also reduced, as is shown by experiment. In estimating the intra-pleural pressure with serous effusion something will depend upon the seat of puncture and allowance has to be made, if possible, for the height of the column of fluid above the mouth of the trocar. The observations upon the pressures in pleural effusion were then recorded. The records show that with serous effusion the pressures vary greatly and irregularly; that there is no definite relation between the size of the effusion and the amount of pressure, for there are instances of large effusion with low or even negative pressure and of small effusions with high pressure. The respiratory oscillation is generally reduced and may be completely absent. Inasmuch as the action of the lymphatic pump depends upon the respiratory movements, of which the respiratory oscillation is the index, it is evident that where the respiratory oscillation is absent the mechanism for the removal of fluid is at a standstill. Where the respiratory oscillation has been absent at the commencement of paracentesis it often returns at the end, showing that the lymphatic pump has been set to work once more. This explains why the removal of a small amount of fluid often determines the rapid disappearance of the rest. The observations recorded show that intra-pleural pressure in serous effusion is not so simple as it might *a priori* be thought to be; that it depends upon many factors which are difficult to allow for; and that the whole subject requires further investigation. Intra-pleural pressure in empyema is much simpler than in serous effusion. In all the cases observed the pressure was considerably increased, the lowest being + 3 and the highest + 16; but, as might be expected, small effusions are quite as likely to have high pressures as large. The respiratory oscillation is practically absent. The bearing of these various facts upon practice was referred to in the course of the paper.

Dr. LAZARUS-BARLOW said that there were several points on which he would like to offer some criticisms. Dr. West had explained the increase of elasticity on the sound side as proving that the lung was in a condition of compensatory hypertrophy, but apart from the improbability of true hypertrophy occurring in so complicated an organ as the lung the increase might be partly due to resilience of the chest wall, which Sir R. Douglas Powell had shown to be an important factor in the causation of emphysema. In any distended elastic bag the recoil was very much greater with considerable amounts of distension than when it was only slightly distended. As to the existence of "pulmonary tone" he had been working at the histology of the lung and had been unable to find any unstriped muscle fibres in the lung, although there were some in the lung of the guinea pig. There were, of course, fibres in the blood-vessels, but the investigations of Bradford and Dean had shown that the nerves had little influence over them. As regards the "valve theory" accounting for the increase of pressure in some cases of pneumothorax he thought that the condition of the pleura must be taken into account as well. Cohnheim had shown that it was impossible when the pleura was healthy to obtain sustained increase of pressure owing to the rapid absorption. Hence cases of pneumothorax occurred particularly in cases of tuberculosis where the pleura was abnormal. Dr. West attributed the rapid absorption of fluid after a small portion had been drawn off to the action of the lymphatics, but Dr. Lazarus-Barlow thought that the experiments of Dr. Starling showed that fluids injected into a serous cavity were absorbed chiefly through the vessels. If a coloured solution, for instance, were injected the colouring solution appeared in the urine before it appeared in the thoracic duct. He thought that it was probable that this absorption depended, not only on local conditions in the thorax, but on some alteration of balance throughout the body.

Dr. NORMAN MOORE said that the paper would be useful in directing attention to the question of entrance and exit in the case of the pleura. It was now recognised that a serous pleural effusion did not necessarily become purulent in time, but that the entrance of some organisms was necessary. Some went so far as to say that there was also some tuberculous disease of the pleura, but without going to that extreme Dr. Moore considered that this was more frequent than had been previously supposed. The tuberculosis might remain localised to the pleura, just as it often did in the case of the peritoneum.

Dr. CALVERT said that he had made experimental observations on the injection of a small quantity of fluid into the lower part of the pleural cavity. He found that there was not merely compression of the base, but that there was a general contraction of the lung which affected the apex as soon as the base. He did not agree that it was necessary for the lung to have collapsed before there could be positive pressure. He thought that this positive pressure occurred when the effusion was localised by adhesions.

Dr. ROSE BRADFORD agreed with Dr. Calvert as to the increase of pressure in cases of localised effusions and remarked that the physical signs in such cases resembled those of empyema rather than those of free pleural effusion, particularly in the presence of tubular breathing. He agreed with Dr. Lazarus-Barlow that the absorption from serous cavities was mostly by way of the blood-vessels. But as to the existence of pulmonary tone, he pointed out that his experiments showed not that the nerves had no influence on the pulmonary vessels, but that it was insignificant compared with the vaso-motor arrangements of the systemic

vessels, so that the existence of such a tone as Dr. West had described was possible. The pulmonary vessels had great power of absorption and this was greatly favoured by the movements of the lungs. The collapse of the lung in cases of pneumothorax was partly due to the rapid absorption of the air in it by its own blood-vessels. The valve theory he considered hypothetical.

Mr. PEARCE GOULD asked for an explanation of the displacement of the heart and mediastinum in cases of pleural effusion. The presence of a small quantity of fluid had been mentioned as necessary for increase of intra-pleural pressure in cases of pneumothorax. He mentioned a case of a boy admitted to hospital with pneumothorax due to injury of the chest, from whose chest air escaped with a rush on paracentesis, but in whom there were no signs of any fluid in the pleural cavity.

Dr. WEST, in reply, said that he did not think that it was any more difficult to conceive of pulmonary hypertrophy than of hypertrophy of the kidney which was so common. He was aware of Cohnheim's experiments on dogs, but it did not follow that the same conditions obtained in man. Several speakers had spoken of the absorption of serous fluid through the vessels, but he thought that the lymphatics also played an important part.

MEDICAL SOCIETY OF LONDON.

Treatment of Tuberculous Disease of the Bladder.—Recurrent Hæmatemesis due to Hepatoptosis.

A MEETING of this society was held on May 9th, the President, Dr. SANSOM, being in the chair.

Mr. MANSELL MOULLIN read a paper on the Treatment of Tuberculous Disease of the Bladder. He called attention to the present very unsatisfactory methods of treating tuberculous cystitis. If constitutional methods failed or were impracticable from a patient's position in life or from other reasons there was nothing left. Local applications were condemned on various grounds. They increased the risk of septic cystitis. They helped to extend the tuberculous disease by the way in which they bruised and injured the still healthy portion of the mucous membrane; and they were of no use, for they never reached their mark. The bacilli were much too well protected by the depth at which they lay in the tissues and the coating of caseous *débris* that formed upon the floor of the ulcers to be affected by iodoform or lactic acid or any other substance that could be injected into the bladder. Drainage at best was only a palliative and in many cases made matters worse, as the tuberculous disease grew down and infected the track of the drainage-tube. For cases such as these if constitutional measures failed there was nothing left, and the question Mr. Mansell Moullin wished to raise was whether some might not be relieved, and perhaps even cured, by adopting much more energetic measures at a much earlier date; whether, in short, the local treatment of tuberculous cystitis had not fallen into its present state of disrepute because it had been too feeble and too late. Suprapubic cystotomy was an operation almost devoid of risk, at any rate in the earlier stages of tuberculous cystitis. Removal of the growth either by excision or erasion under such conditions was a perfectly feasible measure whatever it might be later. The only argument against operation was that the disease in the bladder was nearly always secondary and therefore its removal would not really benefit the case. Mr. Mansell Moullin pointed out that the mucous membrane of the bladder rarely became infected through the epithelial surface. This, unless it was injured in some way, was an efficient protection. Nearly always the bacilli invaded it either by direct continuity from some neighbouring organ or through the medium of the blood-vessels or the lymphatics. In the case of tuberculous pyelitis this was undoubtedly easy as there was a free communication between the lymphatics of the pelvis of the kidney and those of the mucous membrane of the bladder, and when the ulceration began at or around the orifice of one of the ureters the presumption was in favour of its being secondary. But when the disease commenced in other parts of the bladder, or even of the trigone, this was by no means so certain. Tuberculous disease usually began in the trigone of the bladder, not because this was in relation with the generative organs, but because this was the most vascular and physiologically the most active part of the bladder. The bacilli infected it first for the same reason that they attacked the growing epiphyseal line of a bone and not the shaft; and, further, the communication between the lymphatics of the genital organs and those of the mucous membrane of the bladder is by no means free. Especially in the case of women, whose generative organs were not so prone to tuberculous disease as those of men, the tuberculous cystitis, if not secondary to pyelitis, was nearly certain to be primary; and even in men, judging from the extreme frequency of tuberculous epididymitis and the comparative rarity of tuberculous cystitis, the extension of the disease from one to the other would not be so easy as it was usually imagined. Everything depended upon early diagnosis and now that the cystoscope and centrifugalisation of the urine were in common use there ought to be no difficulty in diagnosing the beginning of tuberculous cystitis and eradicating it thoroughly. Mr. Mansell Moullin brought forward particulars of various cases in support of this view. He had operated three times himself and seen two other cases in which operation might have been performed with advantage. One patient was operated upon in January, 1891, and was still well. Two others had been operated upon by Mr. Battle, one, the first in England, so long ago as 1889. Five years afterwards the patient had had no recurrence. And there were upwards of 30 cases recorded as having been operated upon abroad. In most of these the disease was primary, but in 3, other organs were involved as well and yet the patients had been benefited very materially. Reverdin's patient, for example, had suffered two years before from tuberculous epididymitis and was well two years after the operation in spite of having had a perinephritic abscess; Greiffenhagen's patient had a caseous abscess in the perineum, probably in connexion with one of the vesiculæ seminales; and Bell has reported a third case in which, in spite of the presence of tuberculous epididymitis, the bladder symptoms almost disappeared after the ulcers had been scraped with a Volkmann's spoon and cauterised. Two years later, when the testis was removed, the man was described as well with the exception of some incontinence of urine. Mr. Mansell Moullin agreed that it was of no use attempting a radical cure when the bladder had become so rigid and contracted that suprapubic cystotomy was almost out of the question. But he urged that if the diagnosis was made at the beginning, as it should be, and the patient did not rapidly improve under constitutional measures, suprapubic cystotomy followed by excision or erasion of the growth offered a fair prospect of cure in cases in which the infection of the bladder was primary, and that even in those cases in which other organs were involved as well the operation would, with very little risk to life, provide a means by which much of the suffering which inevitably follows in those cases might be successfully prevented.—Mr. FREYER observed that there were great difficulties in the diagnosis of tuberculous disease of the bladder. The hæmaturia, pain, and increased frequency of micturition which were usually present often suggested the presence of a stone, but, whereas the increased frequency of micturition in the case of calculus diminished when the patient was recumbent and during the night, there was no such remission in the case of tuberculous cystitis. Primary tuberculous disease of the bladder was very rare. He thought that it was almost always secondary to tuberculous disease in some other part of the genito-urinary tract, the site of primary disease being, in order of frequency, (1) epididymis, (2) vesiculæ seminales, (3) prostate gland, (4) testicle, and (5) kidney. He himself had opened the bladder in six cases for tuberculous cystitis and he had regretted it in every case but one, and he thought that constitutional medical treatment did more for the patient. The local mischief appeared to increase after the erasion and months elapsed before the suprapubic incision could be closed. He could not agree that the operation was free from risk seeing that Mr. Barling had shown that out of about 50 children on whom suprabubic cystotomy was performed for stone no fewer than 20 per cent. succumbed. As regards the site of the disease he thought from cystoscopic examination that most of the lesions were at the neck of the bladder or at the trigone owing to the proximity of the vesiculæ seminales, &c.—Mr. BATTLE observed that it was worth while trying to give surgical relief to these cases as the state of the patient was such an extremely miserable one. There were two classes of cases, the first in which there was a definite ulcer which might be easy to reach and a second in which the mucous membrane was

studded all over with tuberculous granulations, these being most numerous at the trigone. He agreed that primary cases were very rare, but when they occurred they were very amenable to surgical treatment if they were attacked early. He mentioned five cases in which he had operated for tuberculous cystitis, one in a woman, the other four in men. 1. A woman, thirty years of age, who was extremely exhausted from chronic cystitis. She improved very much after scraping, but died from hemiplegia due to cerebral thrombosis. 2. A man who got well and continued well five years after operation. 3. Another who refused to continue treatment after the operation and yet was free from sign of tubercle elsewhere and the local condition had greatly improved. 4. A patient who had had hæmaturia for four months. The mucous membrane was found covered with granulations which were scraped away, but he did not improve much, although the suprapubic opening was kept open for six weeks. 5. A man in whom no improvement occurred. He had not seen the evil results from suprapubic cystotomy which had been referred to unless an attempt were made to close the wound too early.—Dr. CLIFFORD BEALE said that the statistics of the Victoria Park Hospital for Diseases of the Chest showed how rare was the association of tuberculous vesical disease with that of the lungs. Dr. Beale mentioned one obscure case in which there was much pain, with intermittent escape of pus in the urine, which relieved the pain. At the necropsy this was found to be due to tuberculous disease of the vesiculæ seminales.—Mr. MANSELL MOULLIN, in reply, said that he did not claim that every case could be benefited by cystotomy. He was surprised to hear it said that cystitis was so often secondary to tuberculous vesicular disease. It occurred in women in a large proportion of cases, and here this explanation could not hold good. Even if the primary disease were in the genito-urinary tract all parts of it, including the seminal vesicles, could now be easily reached by operation.

Dr. MACNAUGHTON-JONES read a paper on Recurrent Hæmatemesis due to Complete Hepatoptosis discovered by Laparotomy. The patient, aged thirty-eight years, the mother of seven children, had been very delicate in childhood and had suffered from severe gastrodynia, with vomiting, amenorrhœa, and anæmia during puberty. At the age of nineteen years there was hæmatemesis, supposed to be due to either gastric ulcer or vicarious menstruation. She was married at the age of twenty-three years and five months after her first labour there was recurrence of the hæmatemesis. Following a miscarriage in 1895 there was severe metrorrhagia and in December of the same year there was again hæmatemesis. The metrorrhagia recurred in 1896, when she had an attack of typhlitis. In 1897 gastrodynia and vomiting occurred after eating some shellfish and continued on and off until July, when severe hæmatemesis again set in. On July 14th she was seen with Dr. William Barter. She then was blanched, extremely weak, with rapid pulse, nourishment being administered by enemata, as no food could be retained by the stomach. There was no pain. The abdominal percussion note was resonant in every direction save in the right hypochondriac, lumbar, and inguinal regions, in which a fairly large moveable mass extending from the lower ribs to the inguinal region could be defined. Its edge gave the tactile impression usually experienced on feeling an enlarged spleen. There was neither a renal nor hepatic line of demarcation. Diagnosis resolved itself into the question of hepatic or renal enlargement and the view was taken that it was an enlarged and moveable renal tumour. The condition of the patient was most alarming and precluded abdominal section. Her condition having improved abdominal exploration was carried out on September 17th in the presence of Mr. Bland Sutton. The tumour was reached by the ordinary Langenbuch's incision for nephrectomy, but when the abdominal cavity was opened it was found that it was the edge of the liver which extended from the costal cartilages to the iliac fossa, the right lobe being in the latter position. The gall-bladder was exposed and was found a few inches below and to the right of its natural position. On passing the hand under the diaphragm the vault was found to be empty. The liver was darker than usual and the surface was somewhat deeply injected. The spleen and both kidneys were examined and found to be normal. The liver was resting directly on the right kidney. It was replaced in the same position and the stomach was taken out, laid on the abdominal wall, and in its turn closely examined. It was somewhat enlarged and its vessels were rather distended, but nothing abnormal to touch was found. After careful readjustment of the parts the abdominal wound was closed in the usual manner. The patient made an uninterrupted recovery without any complication. There was no sickness after the operation nor has there been any since. She gradually returned to ordinary diet and left on Oct. 10th for the seaside. "Since then," Dr. Barter writes, "the patient has gone on improving and now, with the help of an abdominal support and with due regard to careful dieting and exercise, is better than she has been for years." Dr. Macnaughton-Jones reviewed the literature of displacements of the liver hitherto published, quoting Mariano Semmola's and Giofredi's exhaustive paper on the subject in 1895, and the condition "hepatoptosis," or migratory or moveable liver, the term applied by Glenard to this condition, in contra-distinction to transposition of the liver, of which but a few cases have been recorded. In 1754 Laurent Hiester demonstrated a laterally displaced liver on the cadaver and Catani in 1866 for the first time on the living subject. In the majority of cases only a lobe has been displaced. No such complete displacement as occurred in this case had, so far as he was aware, been described or discovered during life by operation. Out of 70 cases which had been collected up to 1895 by Graham, in only 8 was there any certainty of diagnosis, and in but 4 was the condition discovered by operation. Peters, Richelot, Terrier and Baudain, and Binnie were the operators. Billroth first sutured the lobe of the liver to the abdominal wall and h patopexy had been successfully performed by Marchand and Ischering and other operators. The particulars of these cases and of others were given where the liver was found in an umbilical or abdominal hernia. The association of hepatoptosis with moveable and enlarged kidney was frequent, hence the error into which some had fallen of mistaking the hepatic tumour for a renal one. The assigned causes, as congenital malposition, enlargement of the kidney, injuries, tight lacing, and lengthy ligaments, were considered, and the more common symptoms to which hepatoptosis gave rise. In many cases hepatopexy was out of the question, as in the case brought forward, but its feasibility had been proved in the instance of partial lobular displacements.—Mr. BATTLE said that during the last few weeks he had met with a case which he thought to be of the same nature. The patient came to him on account of severe right-sided abdominal pain. She was forty-five years of age and had a lax, pendulous abdomen. A mass, believed to be the liver, was felt lying transversely just below the umbilicus. When the patient stood up the mass sank down to the level of Poupart's ligament. The application of a flannel bandage had entirely relieved her symptoms.—The PRESIDENT said that the association of hæmatemesis with hepatoptosis was a very unusual one. It was curious that although there was so much dislocation of the organ and interference with the position of the vessels ascites had been present in so few of the recorded cases.—Dr. MACNAUGHTON-JONES, in reply, said that the mass exactly simulated a renal tumour and was only discovered to be the liver at the operation. In another case its nature might be suspected if there were absence of the hepatic dulness in its normal position.

The following is the list of officers elected for the ensuing year:—President: Mr. Edmund Owen. Vice-Presidents: Dr. J. Kingston Fowler, Mr. John H. Morgan, Dr. J. Mitchell Bruce, and Mr. George R. Turner. Treasurer: Mr. David H. Goodsall. Librarian: Dr. William Henry Allchin. Honorary secretaries: Mr. William H. Battle and Dr. James Calvert. Honorary secretary for foreign correspondence: Mr. Alban H. G. Doran. Council: Dr. John Anderson, C.I.E., Mr. William H. Baker, Dr. E. Clifford Beale, Dr. Frederick L. Benham, Dr. Robert L. Bowles, Mr. Stanley Boyd, Dr. William Ewart, Mr. A. Pearce Gould, Dr. Constantine Holman, Dr. Hector W. G. Mackenzie, Dr. Robert Maguire, Dr. Sidney H. C. Martin, F.R.S., Dr. J. Baldwin Nias, Dr. Humphry D. Rolleston, Dr. Amand Routh, Dr. A. Ernest Sansom, Mr. Morton Smale, Dr. John C. Thorowgood, Mr. Frederick C. Wallis, and Mr. Arthur K. Willis.

OBSTETRICAL SOCIETY OF LONDON.

Primary Carcinoma of the Fallopian Tube.—Exhibition of Specimens.

A MEETING of this society was held on May 4th, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. HUBERT ROBERTS read a paper on a case of Primary

Carcinoma of the Fallopian Tube. The patient, a woman, aged forty-three years, had been married seven years, but had not been pregnant. She had been in good health until March, 1896, when she had a violent attack of abdominal pain accompanied by a vaginal discharge. Other similar attacks occurred in July and November and gushes of watery fluid were noted. On admission in February, 1897, the patient was thin and the uterus was displaced to the left side by a fixed mass of the size of a hen's egg felt in the right fornix, but not tender. There was a watery vaginal discharge. The right tube, enlarged to the size of a Bologna sausage, was removed by Mr. Meredith on Feb. 24th, 1897. It was full of papillomatous-looking growth, which microscopic sections showed to be carcinoma. Reference was made to published cases of primary carcinoma of the Fallopian tube. Removal was advocated, the prognosis being by no means gloomy.

Mr. ALBAN DORAN gave a short history of the literature of Primary Carcinoma of the Fallopian tube with a table of the 23 cases published up till April, 1898, to which he now added a twenty-fourth case reported by Jacobson in *La Gynécologie* for April, 1898; the tube was removed through a vaginal incision and, as in other reported cases, the uterine end was free from disease. The patient was sterile and it was interesting to note that out of the 24 cases only 3 had borne so many as 3 children. Mr. Doran had recently operated on a woman, aged forty-five years, who had been twelve times pregnant. On March 13th she had an attack of labour-like pains, a similar seizure occurring two days later; with each pain much water escaped, till at length she was drenched as in an ordinary labour. A large tender mass could be felt in the right fornix and a smaller body on the opposite side. The symptoms suggested papilloma or cancer of the tube, but he simply found tough, tortuous tubes, with their canals undilated, closely adherent to the uterus and adjacent structures. Mr. Doran believed that primary cancer was commoner than papilloma of the tube or that the latter was very liable to malignant degeneration. Of 7 authentic cases of papilloma 2 had died from the operation, whilst one (Watkins, New York) was very recent; Kaltenbach's case (No. 3 in the tables) had proved malignant, whilst the earliest of all the papilloma series (Spencer Wells 1879) was alive and in excellent health in 1897, though the clinical symptoms before operation were very grave. He agreed with Dr. Stevens that cancer of the tube might arise from Wolffian tubes included in the tubal wall (von Recklinghausen). In order to gain as precise knowledge as possible about recurrence Mr. Doran had communicated with all the authors of cases where the report was incomplete. As for surgery, removal of the tube alone through the vagina seemed questionable, as the state of surrounding parts could not readily be ascertained. Watkins and Schanta removed the uterus with the cancerous appendages. This operation is questionable, however, when the uterine end of the tube is free from disease and useless when the outer end has infected structures to which it has become adherent.

Dr. PETER HORROCKS pointed out that carcinoma of the cervix was common and nearly always occurred in parous women; carcinoma of the body of the uterus was much rarer and occurred chiefly in multiparæ; whilst carcinoma of the Fallopian tubes was the rarest of all and occurred in sterile women chiefly. He thought that clinical evidence showed that tissues which were used much and were liable to damage were more prone to carcinoma than others and this rather favoured the idea that carcinoma was due to, or in some way associated with, a microbe which would first meet with the cervix, and if that were damaged (split cervix) elect the damaged part for its growth. But if it were a multiparous cervix then the microbe might travel into the body or Fallopian tube. It was better to remove this growth in the tube by abdominal than by vaginal section.

Dr. AMAND ROUTH alluded to the difficulty of diagnosis. In Case 2 in Mr. Doran's table, which had occurred in his own practice and in the majority of those in the table, there was usually early continuous pelvic pain simulating acute salpingitis with slight perimetric extension; and when this was associated with sanious, often offensive, discharge, together with a tubal swelling, the diagnosis of some new growth in the tube was probable and fairly certain if by a preliminary dilatation the uterus could be excluded as the source of the discharge.

Dr. ADDINSELL drew attention to the fact that in nearly all the recorded cases the most noticeable clinical features were pain and watery discharge and pointed out that the presence of these symptoms could not be considered pathognomonic of either primary carcinoma or papilloma of the tube as they occurred in some cases of hydrosalpinx.

Dr. GILES drew attention to the unfavourable prognosis in cases of cancer of the Fallopian tube. Of the 23 cases in Mr. Doran's table, in 2 no operation was performed or it was incomplete; in 2 which recovered the patient was lost sight of; in 2 the operation was fatal; of the remaining 17 cases recurrence took place in 10, the time of recurrence averaging from six to eight months after operation; of the 7 cases reported as remaining well there was only 1 that could be safely pronounced to be cured (seven years after operation). In the others the time was too short to allow of a positive statement, the longest time being nineteen months.

Dr. ROBERTS and Mr. DORAN replied.

The following specimens were exhibited:—

Mr. TARGETT: Intestinal Obstruction following Ovariotomy.

Dr. PETER HORROCKS: Fibroma of the Uterus with Sarcomatous Degeneration.

Mr. ALBAN DORAN: Hæmorrhage from the Fallopian Tube without evidence of Tubal Gestation.

OPHTHALMOLOGICAL SOCIETY.

Chip of Steel in the Eye with Skiagraph.—Ophthalmoplegia Externa with Impairment of the Orbicularis Oculi.—Rudimentary Development of the Iris.—Conical Cornea Treated by the Galvano cautery.—Case of Retinitis Circinata.—Peculiar Condition of the Lens.—Exhibition of Specimens.

A CLINICAL meeting of this society was held on May 5th, the President, Mr. H. R. SWANZY, being in the chair.

Mr. ERNEST CLARKE and Dr. MACKENZIE DAVIDSON showed a case of Chip of Steel in the Eye with Skiagraph. The patient was struck by a chip of steel in the right eye in November, 1897. A scar could be seen in the cornea and in the anterior and posterior portions of the lens capsule. The opacity in the lens had somewhat increased since and vision was reduced from $\frac{6}{\text{fr.}}$, when first seen, to $\frac{6}{\text{fr.}}$. A skiagraph taken by Dr. Mackenzie Davidson showed that the piece of metal was lodged in the ciliary region at the lower part. On ophthalmoscopic examination a mass of exudation could be seen at this point. The exposure had now been reduced to ninety seconds and in the case of a child to one minute.

Dr. JAMES TAYLOR showed a case of Ophthalmoplegia Externa with Impairment of the Orbicularis Oculi. Hughlings Jackson had first drawn attention to a case exhibiting weakness of the orbicularis in paralysis of the third nerve exemplifying Mendel's hypothesis that the ultimate nerve supply of the orbicularis was the third nerve. Mention was made of the similar association between paralysis of the orbicularis oris and the hypoglossal nerve.—Dr. BREVOR said that he had shown a case at this society a few years ago in which there was double ptosis and weakness of the orbicularis; it was probable that in most of the cases where the nucleus of the third nerve was involved the orbicularis was affected. Dr. Taylor's case was important as other muscles which had a nerve supply originating in the bulb—those of the palate—were affected; he believed this to be rare.—Mr. FLEMMING said that anatomists were now agreed on anatomical evidence that the orbicularis was supplied from the third nerve nucleus.

Mr. JOHN GRIFFITH showed two cases of Rudimentary Development of the Iris. The patients were brother and sister, in whom the iris was present only as a rudimentary band, which was absent in the lower outer part entirely; the choroid and ciliary body were normal. In one of the cases there were anterior polar cataracts without sign of previous perforation of the cornea and the lenses were slightly displaced upwards. In both patients there was defect of the enamel of the teeth and there was a history of fits.—Mr. SYDNEY STEPHENSON had shown at the society two brothers with daniridia in whom there was deficiency of the enamel of the teeth known to dentists as hypoplasia.

Mr. G. A. CRITCHETT showed a case of Conical Cornea treated by the Galvano-cautery. The improvement in vision had been in the right eye from $\frac{6}{60}$ to $\frac{6}{9}$ and in the left from $\frac{6}{60}$ to $\frac{6}{24}$. In the last series of cases, about 15 in number, he had tried not to perforate the cornea; he used the cautery

wire at the lowest possible red-heat, so that not much more than the epithelium was affected; the whole area intended to be affected was burnt with this, then at a slightly greater heat he burnt a smaller disc within this area; then at a higher temperature still he burnt the centre at a point only. During the first burning the aqueous disappeared and the iris came into contact with the cornea. He used a flat, medium-sized point except for the central and last burning, when he used a small one.—Mr. HARTRIDGE asked the reason for using the different degrees of heat; he was in the habit of using one temperature only and had never seen the aqueous disappear.—Mr. CRITCHETT said he thought a better cicatrix was obtained by this method.—Remarks were made by Mr. DOYNE, Dr. COLLINS, Dr. TAYLOR, Mr. GRIFFITH, and Mr. GUNN, in reply to which Mr. CRITCHETT said that although the iris in these cases was in contact with the cornea the aqueous did not completely disappear in the centre of the pupil, and mentioned one case in which perforation during the application of the cautery was followed by escape of aqueous. Tension was diminished. The cautery was applied outside and below the centre of the pupil so as not to interfere with the visual portion, the apex of the cone being also below.

Dr. FISCHER showed a case of Retinitis Circinata. The patient was a woman, aged sixty-six years, unconscious of anything wrong with her left eye. She was healthy and had no ascertainable kidney disease. The right eye was quite normal; in the left there was well-marked retinitis circinata completely surrounding the yellow spot, which was degenerated.—Mr. LAWFORD thought this case was not typical inasmuch as there was little or no change at the yellow spot and the band of exudation was distinctly raised. The other eye also was quite free from retinal disease.—Mr. GUNN thought this one of the manifestations of old-standing œdema of the retina and that it was similar in nature to the asterisk seen in renal retinitis. There were arterial changes in this case.—Mr. DOYNE thought that the exudation was decolourised blood. The greater functional activity in the muscular region explained the earlier absorption there.—Mr. HARTRIDGE had shown a case at the society some years ago; the exudation had since entirely disappeared, leaving only pigmentation.

Mr. MARCUS GUNN showed a Peculiar Condition of the Lens in a child who had a cataract in the right eye which had been diagnosed in early life, but nothing had been done for it. The right iris was much lighter in colour than the left; there was punctate deposit on the back of the cornea; the centre of the pupil was like an ordinary opaque membrane, with holes in it through which the optic disc could be seen with + 10 D. The peripheral part of the lens appeared like a brown grey granular exudation raised above the level of the central capsule. He thought this might be possibly a uniocular cataract which had undergone spontaneous shrinking, leaving organised lymph on the suspensory ligament.

The following specimens were shown:—

Mr. ROCKLIFFE: (1) Two specimens of Cystic Retina; some of the cysts were between the inner and outer nuclear layers and the others were difficult to locate owing to degeneration of the retina; and (2) specimens of Pseudo-Glioma.

Surgeon-Captain HERBERT: Specimens of Epithelial Xerosis of the Conjunctiva.

Mr. DEVEREUX MARSHALL and Mr. RIDLEY: Specimens of Persistent Hyaloid Artery with Atypical Development of the Vitreous.

Dr. G. H. HOGG: A case of Polyceria.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Exhibition of Specimens.—Catarrh of the Antrum.—Method of Prolonging Nitrous Oxide Anæsthesia for Dental Operations.

A MEETING of this society was held on May 2nd at 40, Leicester-square, W.C., Mr. W. E. HARDING being in the chair.

The CURATOR stated that he had received Two Mandibles (human) which had been dug up near Worthing and were supposed to be about 600 years old. He also stated that Mr. Whatford had presented to the museum models of the mouth of a young woman, aged seventeen years, showing Complete Absence of the Premolars, Maxillary and Mandibular.—The CURATOR also exhibited the Skull of a Young Adult Lion showing a maxillary canine the tip of which had only erupted. An examination of the tooth showed that it was distinctly stunted, the end of the root being formed of an irregular mass of tissue, probably osteo-dentine.

Mr. W. R. ACKLAND read notes on cases of Catarrh of the Antrum and in referring to the anatomy of the antrum stated that in 12 antra which he had examined he had found the opening into the nasal fossa completely closed in 4.

The HONORARY SECRETARY read for Mr. ALFRED COLEMAN a short note on a Method of Prolonging Nitrous Oxide Anæsthesia for Dental Operations. The apparatus used consists of a hood fitted so as to cover the nostrils; to this is attached a tube which is carried over the top of the head to a bag which rests at the back of the chair, the bag in its turn being connected with bottles containing the nitrous oxide. During administration slight pressure is kept up on the bag. In 15 cases recorded by Mr. Coleman a period of anæsthesia ranging from about one to five minutes had been obtained. The patients were specially selected, care being taken to administer to only those perfectly free from any nasal obstruction.—Dr. HEWITT and Dr. SILK took part in the discussion and pointed out some of the disadvantages of the system; while Mr. PATERSON expressed the opinion that the system of prolonging the anæsthesia was a good one and would undoubtedly prove of value in practice.

HARVEIAN SOCIETY OF LONDON.

100 Operations for Stone in the Bladder.

A MEETING of this society was held on April 28th, the President, Dr. JAMES F. GOODHART, being in the chair.

Mr. P. J. FREYER read a paper entitled, "A Recent Series of 100 Operations for Stone in the Bladder, with Some Practical Remarks Thereon," which will be found on p. 1319 of our present issue.

Mr. SWINFORD EDWARDS congratulated Mr. Freyer on the brilliant results of his last series and said that he was thoroughly in accord with everything that had fallen from his lips. Mr. Edwards remarked that though in skilled hands litholapaxy was easy of performance and gave the best results he considered that for surgeons who had not some experience in the operation complicated or difficult cases would be best treated by suprapubic lithotomy. He then touched upon some of the difficulties which might arise either in sounding, crushing, or evacuation, and pointed out the means for overcoming them. Mr. Edwards mentioned that in his own last 100 cases of litholapaxy there were 5 deaths, in 4 of which the fatal termination was due to advanced renal mischief.

The PRESIDENT asked whether Mr. Freyer ever met with stones which were impossible to crush on account of their hardness. He asked for details as to the method of washing out the bladder. In experiments on the cadaver he had sometimes found great difficulty in evacuating the bladder. He congratulated Mr. Freyer on the success of his treatment.

Surgeon-Colonel CALDECOTT spoke of the success which attended litholapaxy in India as compared with the results of other operative procedures.

Mr. TEMPLE MURSELL remarked upon the rapidity with which cases of vesical calculus complicated with cystitis of long standing recovered after litholapaxy without drainage and frequently without any further washing out of the bladder. With regard to calculi which resisted crushing it was very rare to find such cases, but in the few cases that were found or where the calculus had formed around a foreign body which could not be extracted through the urethra with the lithotrite suprapubic cystotomy could readily be performed by cutting on the point of the lithotrite still holding the calculus or foreign body pressed against the anterior bladder wall.

Mr. FREYER, in reply to questions by the PRESIDENT, said (1) that amongst several hundreds of cases of stone operated on by him in the last ten years, since he had become more or less expert with the lithotrite, he had only met with one stone that was too hard to crush, though the calculi had ranged up to 6½ oz. in weight. Strange to say, this was a comparatively small urate stone of 2 oz. in a female, on which his largest lithotrite (No. 18) could make no impression. He found, contrary to what was usually taught, that certain urate

stones are more difficult to crush than oxalates. (2) That a practised hand, as a rule, found no difficulty in clearing the bladder of the last fragments with a properly constructed aspirator. Experiments on the cadaver were deceptive, as the bladder did not expand and contract as in the living subject. There was no selection of cases, these 100 being the only bladder stones that came under his care during the period over which they extended. His success was not unique, as several surgeons in India had recorded similar series of 100 litholapaxies without a death, and he might point to the excellent results from this operation in St. Peter's Hospital, where last year they had had 51 litholapaxies with only 1 death. When stricture of the urethra was complicated with perineal fistula he (Mr. Freyer) preferred as a rule external to internal urethrotomy as more likely to cure the fistulæ, but he agreed with Mr. Swinford Edwards that internal urethrotomy might sometimes be preferable, particularly when there was only a single fistula. In fact, he (Mr. Freyer) had such a case at present under his care in private practice, where the fistula had rapidly closed after internal urethrotomy. He regretted to have to differ from his friend and colleague Mr. Edwards regarding suprapubic lithotomy, which he, Mr. Freyer, considered should be had recourse to only in exceptional cases, such as a very large and hard or encysted stone. It was true that the operation was simple and the requisite instruments might be found in a pocket-case, but in its very simplicity lay one of its chief dangers, as being tempting to the young and inexperienced surgeon not provided with litholapaxy instruments. He (Mr. Freyer) maintained, however, that an operation was to be judged, not by its simplicity, but by the mortality attending it, and Mr. Barling of Birmingham had recently[1] collected statistics from twelve large hospitals in London and the provinces, from which it appeared that suprapubic lithotomy in children had been attended by the appalling mortality of about 20 per cent., whereas lateral lithotomy and litholapaxy were attended by a mortality of less than 5 per cent.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Operation versus Taxis in Strangulated Hernia.—Surgical Treatment of Paralysis.

A MEETING of this society was held on May 6th, Dr. H. P. POTTER, President, being in the chair.

Mr. MCADAM ECCLES read a paper on Operation *versus* Taxis in Strangulated Hernia. By strangulated hernia he understood a hernia which contained bowel, the lumen of which was obstructed by pressure from without, either partially or completely, and at the same time this pressure caused an interference with the circulation through the vessels of the intestinal wall. Two lines of treatment offer themselves in such a condition, taxis or operation, either undertaken to procure the reduction of the gut with as little delay as possible. Against the employment of taxis, he said, might be urged the following facts:—1. Taxis may bruise, lacerate, or even rupture the bowel. 2. Taxis does not permit of a view of the intestine before reduction. 3 Taxis involves the return of fluid from the sac as well as the bowel, which fluid may be septic. 4. Taxis allows of no attempt to treat the hernia radically. 5. Taxis may bring about reduction *en masse*. Against operation, on the other hand, he cited:—1. Operation involves loss of time in preparing for it. 2. Operation usually requires a general anæsthetic. 3. Operation may cause a risk of septic peritonitis. 4. Operation necessitates confinement to bed. 5. Operation may cause the aperture to be enlarged. 6. Operation may be greatly objected to by the patient. Mr. Eccles gave it as his opinion that children with strangulated hernia should be but rarely subjected to operation, for the gut can nearly always be returned by gentle taxis and is seldom very acutely strangled. Again, old persons the subjects of chronic lung trouble should be treated, if feasible, by taxis alone. Almost all other cases of strangulated herniæ he averred might be safely dealt with by operation and he considered that the old adage, "When in doubt operate," might be more widely extended.—Dr. F. H. ALDERSON entirely agreed with Mr. Eccles as to the rarity with which operation was required in the strangulated herniæ of infants.—Mr. KEETLEY alluded to the difference of taxis under various conditions, but gave it as his opinion that operation was indicated in nearly every case of strangulation.—Mr. G. E. TWYNAM thought it very doubtful that operation could be carried out with success in many cases where assistance was difficult to obtain. He thought that circumcision should always be performed in male infants who had strangulated hernia with a view to the cure of the protrusion.—Mr. MALLAM inquired whether it was common to find that the fluid reduced by taxis gave rise to peritonitis.—Dr. R. D. BATTEN and the PRESIDENT having joined in the discussion, Mr. ECCLES replied.

Mr. A. H. TUBBY read a paper on the Surgical Treatment of Spastic and Infantile Paralysis. He said that the object of the paper was to show that certain cases of infantile spastic paralysis might be much benefited by the division of contracted structures and he further wished to bring forward some comparatively new features in the treatment of extreme cases of infantile paralysis. After describing types of cases of infantile paralysis he thought that the results of operation justified the surgical interference in these children. The method of treatment was to divide the tensor vaginæ femoris, the sartorius, and adductor tendons at their pelvic attachments, as well as the hamstrings and the iliotibial band at the knee, and to apply weight extension for a month, and then to sever the tendo Achillis and finally to maintain the rectification by means of a light apparatus. In the treatment of severe cases of infantile paralysis Mr. Tubby advocated tendon-grafting and arthrodesis. He pointed out the indications for, and limitation of, tendon-grafting. Arthrodesis on the ankle was in his opinion a successful method of dealing with the flail-like joints resulting from infantile paralysis and he described the mode in which the operation was performed.—Mr. MCADAM ECCLES congratulated Mr. Tubby on his paper. He asked him whether the length of the sartorius muscle in cases where it was implanted into the tendon of the quadriceps extensor was of much importance.—Mr. KEETLEY thought that much benefit arose in cases of spastic paraplegia by the division of contracted tendons. He was doubtful of the utility of arthrodesis of the hip-joint and he further questioned whether stiff knee- and ankle-joints were to be regarded as beneficial in many instances.—Mr. TUBBY replied.

BIRKENHEAD MEDICAL SOCIETY.

Rectal Disease.

A MEETING of this society was held on April 15th, the President, Dr. R. SYDNEY MARSDEN, being in the chair.

Dr. W. H. ANDERSON read clinical notes and showed a specimen of Perforating Gastric Ulcer.

Mr. MITCHELL BANKS read a paper on Practical Experiences in Rectal Disease. With regard to the operation to be employed for the destruction or removal of hæmorrhoids he thought there were three or four means which might each be employed with advantage by a surgeon who had familiarised himself with one particular method and had acquired dexterity in its use. For himself he had been a consistent advocate of the clamp and cautery operation introduced by Mr. Henry Smith and had certainly done it some two or three hundred times at the lowest estimate. What greatly induced him to adhere to it was the remarkably satisfactory results which followed, for never once had a patient come back with a return of his hæmorrhoids. Whatever drawbacks might be urged against the operation he was absolutely certain of its permanently curative effect if properly done. After the operation he was in the habit of tying into the bowel a short flanged glass tube. This allowed the passage of flatus, which was one of the things which often greatly worried patients for the first twenty-four hours. It, moreover, enabled the blood to escape if any secondary hæmorrhages occurred and so warning was given. He had heard surgeons state that they never had such a thing as secondary bleeding. He could only say that if they went on operating long enough their unfortunate case would at last turn up. To minimise the danger of this after clamping the hæmorrhoid he rarely cut it off, but slowly frizzled it up into a leathery state by repeated applications of the cautery at not too great a heat. Coming to the subject of the removal of

[1] Brit. Med. Jour.

the rectum for cancer by Kraske's method his experience of it made him think that it was one of the most valuable operations for cancerous disease of recent origin because the sacral glands did not seem to be so early affected as in many other parts of the body and so a chance was given for immunity to follow free local extirpation. Operations for cancer of the tongue and mouth generally were most disheartening from the early involvement of the cervical glands, and he thought a great deal of ingenuity and labour were being thrown away over attempts to remove cancer of the stomach and pylorus where recovery—followed by subsequent immunity—was such a rare startling occurrence that it only showed how few were the really successful results. What was so remarkable in the modern rectal operations was that one might pull down even the sigmoid flexure into the wound, while the opening of the peritoneum seemed to be productive of very little danger. His own view was against a preliminary colotomy. As a rule a patient required every particle of strength to stand up against an extensive removal of the rectum, for the bleeding alone at the time of operation was often most alarming. Of course some time would yet have to elapse before the full value of the operation was known, but he could mention the case of a woman who was well and managing the affairs of a considerable household eight years after the operation and of a man who was actively doing the work of surveyor to a marine insurance company after three years. Both were quite free from return. Mr. Banks next drew attention to certain very severe cases of pruritus, which defied all ordinary remedies and which reduced the patients to the most miserable condition. He instanced three patients, of whom one was a merchant in a large way of business who at length was quite unable to attend to it and another a man who came all the way to England from South Africa in search of relief from his complaint. They were all permanently cured by a smart application of the actual cautery around the anus and for a short distance within it.

A hearty vote of thanks was accorded to Mr. Banks for this interesting paper.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Surgical Instruments and Apparatus.—Presidential Address.

THE seventh and last meeting of the session of this society was held on May 6th at the Royal Kent Infirmary, the President, Mr. W. ARBUTHNOT LANE, being in the chair.

Before the meeting Messrs. Maw, Son, and Thompson gave an exhibition of Surgical Instruments and Apparatus.—Dr. Prior Purvis was unanimously elected as an honorary member.

Mr. ARBUTHNOT LANE delivered an address on the Principles that should Guide us in Operations for Malignant Diseases. He pointed out that the two chief indications were the complete removal of the growth at all costs, modified, of course, by the wishes of the patient, who must be made fully aware of the risks and advantages associated with any particular procedure, and the ensuring to the patient of a minimum of discomfort and pain in consequence of the operation. Mr. Lane illustrated his meaning by descriptions of operative measures for the removal of the larynx, tongue, breast and rectum, which were based on the application of these two principles.—Mr. LANE then read a paper on the Treatment of Ununited Fractures by Steel Screws, illustrating the cases by radiographs.

Mr. BIDWELL, Dr. DOCKRELL, and Dr. TOOGOOD discussed the papers and Mr. LANE replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Acute Pneumonia of Childhood.—Paroxysmus Podagræ.

THE seventh ordinary meeting of this society was held on May 4th, Dr. JAMES CARMICHAEL being in the chair.

Dr. SCOTT SKIRVING exhibited a boy, aged five and a half years, after operation for Ectopic Perineal Testicle. The history was that a month previously he had received a kick from another boy on the perineum. Three weeks later pain on micturition was complained of in the mornings. A swelling was then noticed on the right side of the perineum extending from the margin of the scrotum nearly to the anus. The testicle on the left side was wanting. The swelling was cut down upon and a condition resembling ordinary congenital hernia was met with, without the presence of gut, however. There was a free communication with the abdominal cavity. The sac in its descent had entirely missed the scrotum and had wandered into the perineum. It was found impossible to place the testicle in the scrotum. It was therefore removed and a radical cure effected. The tunica vaginalis was considerably thickened.

Dr. WILLIAM TAYLOR exhibited an Electro-thermogen devised by himself and used in the case of neuralgia. Dr. Taylor had suffered himself from neuralgia and found that superficial remedies had only a transient effect. Dry heat alone allayed the pain for a time. He argued that if a damp, cold air current caused the affection then a hot, dry air current might cure it, so he set himself to devise an instrument to generate a hot stream of dry air. A long coil of brass tube was first tried. This was heated by a gas jet and air was pumped through it by a bellows. Such an arrangement is expensive and soon becomes too hot to be handled. Dr. Taylor then devised his electro-thermogen. There is a metallic base which contains clock-work, which causes an air-fan to rotate in order to produce the current. Above this is a chamber into which a glass tube, suitably bent to direct the current, is inserted. Inside this tube is another smaller glass tube around which a platinum wire is coiled in a wide spiral. An electric current is made to traverse this coil and so the air as it passes through the tube is suitably heated. A suitable current is got from the ordinary electric mains. This machine has been found very useful in the treatment of neuralgia. It sometimes produces a blister, however, and Dr. Taylor was surprised at the amount of thermal anæsthesia which it produced. Several cases of neuralgia were related where cures were effected after a single or at most only a few applications. In toothache and twitching of the face it had also shown good results. As a vapouriser it was also useful and in a case of gouty asthma and clergyman's sore throat it had proved of service. A large form of the apparatus was also shown for the treatment of lumbago, torticollis, &c.

Dr. JAMES CARMICHAEL contributed a paper on Acute Pneumonia of Childhood. He noted that the etiology of the disease in children was the same as in the adult and yet the clinical symptoms were widely different. The terms "lobar" and "lobular" were serviceable but gave no information as to the real pathological conditions which were present. Bacteriology had thrown much light on this disease and on its infective nature. Bacteria or the toxins produced by them give rise to the chief symptoms and to the endangering of life. This was shown by the frequency of cerebral symptoms together with the slightness of the pathological conditions present in many cases. In pneumonia the disease is short and the crisis is well marked. Is this due to the short life-history of the organism or to anti-toxins which are readily formed? Dr. Carmichael then proceeded to give a detailed classification of the acute forms of pneumonia founded on their pathology and bacteriology. The bacteriology of the disease was next discussed, and Netter was quoted as having found in 42 cases (of which 25 were primary) 10 cases in which Friedländer's pneumococcus was present; streptococci in 8 cases alone; staphylococci in 5; and Fränckel's capsuled coccus in 2. In 17 there was a mixed infection. In secondary cases of pneumonia the micro-organisms are still more numerous—streptococci and staphylococci pneumoniæ—showing a mixed infection. In the pneumonia of influenza Pfeiffer's bacillus and others have been observed as well as the bacterium coli commune. In pneumonia as a result of diphtheria Löffler's bacillus alone or along with other organisms has been found. Dr. Carmichael then described fully the pathological anatomy of the disease as regards the distribution of 142 hospital cases which he had himself observed and all of which had recovered; 107 showed features of a catarrhal nature and all occurred among children under five years of age; 35 cases were of the fibrinous variety. In 83 of the catarrhal cases the termination was by lysis, while in 24 there was more or less decided crisis. In 53 cases both lungs were affected. As regards the clinical aspect primary acute pneumonia is usually epidemic and this is well seen in hospital work. It is highly probable that

it is infectious, but he had found no proof of this from his own observations. There had been a very large number of cases admitted to his wards during the last six months. Catarrhal pneumonia is a disease essentially of infant life. In duration it varies from ten days to many weeks, chronicity being frequent and tuberculosis not uncommon as a result. Pleurisy is usually present to a greater or less extent and is usually localised. The physical signs are well defined and regular. The temperature rises and remains so until the fifth or seventh day, when the crisis occurs. If it does not then fall the opposite lung has become involved or there has been an increase of the pleural exudate. Pneumonic fever is a good name for catarrhal pneumonia. All forms of pneumonia are due to a common cause. Why should the catarrhal form be found in children under five years and the fibrinous variety in older children or adults? In infants the minute bronchi and alveoli are the most delicate parts of the lung. The alveoli are not developed at the fifth month of fœtal life, and it is not until the fourth or fifth year that they are fully developed. Prior to this period they are much smaller and the walls are relatively thicker; the vessels are very abundant and the epithelial cells are very numerous and readily proliferating. Here is a ready explanation of the pathological condition produced by the disease. The greater vascularity of the walls, the immature nature of the epithelial cells, and the presence of interstitial cells all present less immunity to the infective process. The anatomical conditions thus differ from those of the adult. There are three types of catarrhal pneumonia: (1) those without signs; (2) small areas of consolidation—lobular distribution; and (3) large areas of distribution—lobar. The symptoms are much more constant than the physical signs. They form a marked similarity in different varieties enabling the physician to diagnose the case without physical examination. The mere inspection and history allow of a probable diagnosis. Of the means of physical examination auscultation is by far the most reliable. Percussion is unreliable unless large areas are involved. One ought to examine carefully with the stethoscope every part of the chest, as the area involved may be very small and just under the end of the instrument. Auscultation must be relied on for diagnosis. The breathing is broncho-vesicular with sometimes few or no râles over the centre of the area. The adventitious signs are most distinct over the periphery of the areas. 95 per cent. of the fibrinous cases recover, while there is a mortality of 60 per cent. in the catarrhal. As there has not yet been discovered an antitoxin no special treatment exists for acute pneumonia. Hygiene and diet are all important. The use of a tent bed with towels moistened in an antiseptic solution as creasote are the means used by Dr. Carmichael. In severe cases with cyanosis he has found benefit from inhalations of oxygen. Poulticing is now discarded, but stimulating applications rubbed over the chest for half an hour or a pneumonia jacket of Gamgee he has found beneficial. Local and general diaphoresis relieve the lungs. As regards drugs none is of any special value. Liquor ammoniæ acetatis and spiritus ætheris nitrosi together with alcoholic stimulation are of great value, specially in broncho-pneumonia; strychnine given with alcohol has been of great use and seems to act better with infants than with adults. Belladonna also greatly benefits infants when employed during the early stages of the disease. It is, however, of no use during the later stages. Digitalis should not be used as a routine drug but only in special circumstances. Large doses of antipyretics are contra-indicated and are often harmful. In small doses they are useful in allaying restlessness. Hyperpyrexia is best treated by the cold pack or bath. As regards expectorants, vinum ipecacuanhæ, squills, tartar emetic, &c., are still largely used, but in Dr. Carmichael's opinion harmfully. Children require stimulation and not depressants.

Dr. GEORGE W. BALFOUR next read a paper entitled "A Fit of Gout (Paroxysmus Podagræ): a Pathological Study." He noted the pathological points observable during an attack, drawing attention to the facts that it differed from ordinary inflammation in never ending in suppuration. The veins of the joint become turgid at an early period and cause attention to be first drawn to the part. The turgescence of these veins lasts until the seizure is over. Instead of there being heat in the joint so affected its temperature is subnormal. The urate of sodium which infiltrates the tissues shows that it is a specific form of inflammation. Dr. Balfour went on to show that a thrombosis of the small vessels of the joint would explain all the symptoms and thought that the lowering of temperature of the part was due to the stasis of the circulation. As regards the prophylaxis the attack may frequently be warded off by exercise. Walking may help to break up the thrombi already beginning to form and so lessen the risk of an attack. In cases where the attack has already begun friction and compression are of great value.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Serum Diagnosis of Typhoid Fever.—Mortality of Children.

A MEETING of this society was held on April 29th, Dr. H. C. TWEEDY, the President, being in the chair.

Dr. MCWEENEY demonstrated a Modification of the Serum Reaction in Typhoid Fever which he had introduced with a view to clear up the diagnosis in cases which did not give the agglutination phenomenon with sufficient distinctness. He causes the typhoid bacillus to grow in a hanging drop of broth containing a small percentage (generally 1 per cent.) of the suspected serum. After four hours at 37° C. the preparation is examined, when, should the serum be from a typhoid case, the bacilli will be found to have grown out into beautiful chains which at the end of twenty-four hours are exquisitely twisted and convoluted; motility is quite absent. If, on the other hand, the serum is non-typhoid the bacilli are separate and freely motile. They are usually short, but occasionally grow out into filaments especially if the temperature is low; but these filaments must be carefully distinguished from the chaining which takes place with the homologous serum.

Dr. LANGFORD SYMES contributed a paper on the Mortality of Children in Ireland. From his estimate of ten years ending Dec. 31st, 1896, it appears that in Dublin city out of every 1000 children born there die in the first year 171·2; and in every 1000 total deaths, 306·2 are children under five years of age. In Belfast the death-rate of children is enormous. In every 1000 total deaths in that city, no less than 519·8 are those of children under five years of age. Of the actual registered causes of death for all children in the whole of Ireland the following were the eleven chief diseases found to produce this infantile mortality in their order of importance. They are identically the same diseases for both ages, but in varying proportions:—

UNDER ONE YEAR.		UNDER FIVE YEARS.	
Cause of death.	Deaths under 1 year.	Cause of death.	Deaths under 5 years.
1. Debility, atrophy, inanition	29,136	1. Debility, atrophy, inanition	32,062
2. Convulsions	20,764	2. Convulsions	25,261
3. Bronchitis	14,017	3. Bronchitis	24,775
4. Diarrhœa & dysentery	5,762	4. Whooping-cough ...	11,456
5. Whooping-cough... ...	4,893	5. Diarrhœa & dysentery	8,383
6. Premature birth	3,827	6. Tabes mesenterica ...	7,564
7. Tabes mesenterica ...	3,542	7. Measles	7,557
8. Pneumonia	2,619	8. Pneumonia	6,868
9. Tuberculous meningitis	1,755	9. Croup	5,509
10. Measles	1,691	10. Tuberculous meningitis	5,089
11. Croup	1,589	11. Premature birth	3,827

Dr. Symes pointed out that the terms "debility, atrophy, inanition" were too indefinite for a medical certificate and that the word "convulsions" denotes a symptom rather than a disease.—Dr. GRIMSHAW (Registrar-General), Dr. DOYLE, Dr. FALKINER, Mr TURNER, and the PRESIDENT took part in the subsequent discussion.

ERRATA.—In Mr. W. G. Spencer's case of Gangrenous Appendicitis described in THE LANCET of May 7th, p. 1258, it should have been stated that the patient had "no previous attacks" of pain. The case of Empyema said on p. 1259 to have been shown by Mr. Spencer was shown by Dr. de Havilland Hall.

ABERDEEN UNIVERSITY CLUB, LONDON.—The annual meeting and May dinner of this club will be held in the Holborn Restaurant, on May 18th, at 7 P.M. The chair will be taken by Colonel Sir William S. Bissett, R.E., K.C.I.E. Members desiring to be present are requested to communicate with the hon. secretaries, Mr. J. Gerard Laing, 2, Brick-court, Temple, E.C., and Dr. James Galloway, 54, Harley-street, W.

Reviews and Notices of Books.

Abdominal Surgery. By J. GREIG SMITH, M.A., M.B., C.M. Aberd., F.R.S. Edin., Surgeon to the Bristol Royal Infirmary, Professor of Surgery, University College, Bristol. Sixth Edition. Edited by JAMES SWAIN, M.S., M.D Lond., F.R.C.S. Eng., Professor of Surgery, University College, Bristol, Assistant Surgeon to the Bristol Royal Infirmary. Bristol: J. W. Arrowsmith. London: J. & A. Churchill. 1897.

THE editor tells us in the preface that in less than a year from the publication of the fifth edition of this work it became necessary to issue a sixth, so that little change in the text has been necessary, though he has endeavoured to keep the book abreast of any advance in the subject. The present edition has been prepared almost entirely by Mr. Swain, as he tells us that scarcely a hundred pages of it had been set up before the lamented death of Mr. Greig Smith took place. Mr. Swain had, however, evidently done much of the work required for the preparation of the fifth edition, and besides has this additional qualification for editing the present edition—that he constantly assisted Mr. Greig Smith both in private practice and at the Bristol Royal Infirmary. When a book has reached a sixth edition its position is generally assured, and little notice of it is needed at the hands of the reviewer, but we may say that we think the book deserves its success and that it has rightly come to be regarded as a standard work on the subject of which it treats. Surely, however, in the preliminary chapter on the Diagnosis of Abdominal Tumours more space should have been given to the consideration of the commonest of all abdominal "tumours"—namely, the pregnant uterus at its various stages of development. All those who have had a large experience in abdominal cases know how frequently mistakes are made in regard to pregnancy. Such mistakes may almost always be avoided by keeping the possibility of pregnancy in mind and carefully looking for the various signs of that condition. But here the matter is dismissed in a few lines. We may add that in the description of total hysterectomy for fibroids the writer does not appear to be familiar with Mr. Christopher Martin's paper on the subject. According to the method there described there is no need for suturing the vaginal vault; a gauze drain is merely pulled through from above and about an inch of the gauze is left projecting into the peritoneal cavity.

A Manual of Dental Anatomy, Human and Comparative. By CHARLES S. TOMES M.A., F.R.S. With 263 Illustrations. Fifth edition. London: J. & A. Churchill. 1898. Pp. 586, with Index. Price 14*s*.

THE fifth edition of this standard work on Dental Anatomy has been brought thoroughly up to date and is a distinct advance on any of the previous editions. At first written with a view of providing the dental student with the requisite knowledge for his qualifying examination it has since become a text-book for the student of biology in general. This fact, combined with the rapidly increasing literature on the subject, has, as the author points out, "greatly enhanced the difficulty of bringing the book up to date." It is, however, needless to say that the work of editing has been carried out in an admirable way. In the chapters on Enamel and Dentine, more especially the former, there is much that is new, and in both these chapters a number of new illustrations have been introduced. The chemistry of the tooth tissues has been more fully dealt with than in former editions, and it is interesting to note that the author's investigations go to show that enamel is practically devoid of organic matter, the portion previously considered to be organic being in reality water; while in the dentine a large portion of the previously supposed organic matter is really water held in chemical combination with the lime salt. The chapter on Calcification also contains a large amount of fresh matter in addition to new illustrations. The portion of the book which includes Comparative Odontology includes an account of all fresh knowledge that has accumulated since the fourth edition. If we might make a suggestion it would be that in future editions the chapters on the Pulp and Alveolo-dental Membrane should be more fully illustrated.

Twentieth Century Practice of Medicine. Edited by THOMAS STEDMAN, M.D. Vol. XI., Diseases of the Nervous System. London: Sampson Low, Marston and Co. 1897.

THE list of writers in this most comprehensive work is one which ensures interesting and valuable contributions. It includes Dr. Lloyd, who occupies almost half the volume with an account of the Diseases of the Nerves—Cerebral, Spinal, and Sympathetic; Dr. Bruns of Hanover and Dr. Windscheid of Leipsic, who write on Diseases of the Spinal Cord; Professor Möbius whose article on Tabes Dorsalis is a valuable feature of the volume; Dr. Dercum and Dr. Mills, who between them are responsible for the account of the Trophoneuroses; Professor Strümpell, who contributes a short article on the Combined System Diseases of the Cord; and Dr. Witmer, who is charged with the psychological work.

Dr. Lloyd's article on Diseases of the Nerves is, as we have said, of considerable length, but it is admirable in every respect, dealing fairly with the physiology so far as it is necessary and with the various general pathological conditions affecting nerve trunks, and considering also almost every nerve which is liable to isolated disease. The section dealing with the optic nerve is a particularly good one; in those dealing with the third, fourth, and sixth we miss the usual elaborate descriptions and puzzling diagrams of the different varieties of diplopia, and in that dealing with the olfactory nerve the author has omitted to mention the not infrequent anosmia which arises, presumably as a result of pressure in certain cases of intracranial tumour. It would be an invidious task to pick out small blemishes in such an article as Dr. Lloyd's, however, and we venture to think that it will remain for some time the most authoritative pronouncement on its own subject.

It seems hardly necessary for the Trophoneuroses to have been divided up as they have been. Dr. Mills takes all the trophoneuroses except scleroderma, acromegaly, and adiposis dolorosa which are allotted to Dr. Dercum. Among Dr. Mills's subjects is facial hemiatrophy and, considering the close connexion of this condition with morphœa and scleroderma, it seems a pity that these conditions should not have been dealt with by the same writer. The articles, however, in both sections are very complete.

Dr. Bruns' and Dr. Windscheid's section on Spinal Cord Diseases is one of the most important in the volume. The section dealing with injuries is particularly good, but one statement, which requires explanation, arrested our attention, viz.—"It (a lesion) is sure to be fatal when with lesions in the dorsal and cervical cord the tendon reflexes remain absent beyond the time of a possible effect of shock and the paralysis of the leg continues flaccid." It is now well established that the reflexes may be absent for months and yet return and it can scarcely be claimed that the effects of shock persist during that time. Amongst the other articles in this section which strike the reader as particularly good are those on tumours of the cord and meninges, and on myelitis.

Professor Möbius's article on Tabes Dorsalis is a valuable

contribution to the volume. It is characterised by profound and accurate knowledge and by philosophical breadth of view and it is particularly sound in reference to treatment.

Professor Strümpell's article on the Combined System Diseases is distinctly disappointing. Dr. Witmer's treatment of the psycho-physiological problem resolves itself into an interesting dissertation on the nature of pain and other abnormal sensations. The volume is illustrated, but not profusely, and the pictures are not all worthy of the text.

A Manual on Dental Metallurgy. By ERNEST A. SMITH. Illustrated. London: J. & A. Churchill. 1898. Pp. 272 Price 6*s.* 6*d.*

THIS excellent little book will fill a want long felt and is designed primarily for students preparing for the dental examination, the subject matter being largely based on the new syllabus of dental metallurgy issued by the Royal College of Surgeons of England. The opening chapter contains a concise account of the physical properties of the metals; then follows an account of the action of certain agents on metals, and in Chapter III. an account of "alloys" including their properties and preparation is given. The metals in common use in dental practice are each described and a special chapter is devoted to the question of Dental Amalgams. With a view of rendering the book as practical as possible the author has enumerated a list of 100 experiments which may readily be carried out in a well-equipped dental laboratory, and anyone faithfully carrying out this list cannot fail to obtain a good and clear insight into the working of the various metals treated. There is a useful appendix containing information as to atomic weight, metrical measures of weight, capacity, &c.

LIBRARY TABLE.

Llangammarch Wells as a Health Resort. By W. BLACK JONES, M.D., B.S. Lond., D.P.H.—Dr. Black Jones is the resident physician to the Llangammarch Wells and so has exceptional opportunities of observing the action of the waters on patients who undergo the treatment. The most interesting constituent of these waters is a salt of barium and a full analysis was published in THE LANCET of Nov. 24th, 1894. Numerous patients suffering from dilated heart have received benefit from the use of these waters, which have also been found useful in other pathological conditions, such as gout, rheumatism, and lithæmia. From Dr. Black Jones's account of the place it would appear to be equal in attractiveness to many more distant and expensive foreign health resorts.

Allgemeine Physiologie: Ein Grundriss der Lehre von Leben. Von MAX VERWORN. Zweite Auflage. Jena: G. Fischer. (*General Physiology: An Outline of the Science of Life.* By MAX VERWORN. Second edition. Jena: G. Fischer. 1897. Price 15*s.*)—We need do little more than direct attention to the publication of a second edition of this thoughtful and remarkable work which was fully noticed in these columns on its first appearance. Its general purport is to solve the riddle of existence by reference to known facts of the nature of living matter, speculations as to its origin, and the teachings of physiological science as to its properties and phenomena. The merit of the work is that it does not deal with the subject in the abstruse manner which is deemed by some necessary to the exposition of themes of this order, but that it brings the latest teachings of science clearly and succinctly before the reader. So that in a sense it may be said to be of the class of "popular scientific" writings, which after all is no disparagement, since if science is incapable of being made plain to the multitude it is of small practical value. We learn from the preface that an English translation is in preparation and we have no doubt that the book is one which will then become more widely known in this country than it is at present.

JOURNALS.

The Practitioner for May has a delightful quotation from a French medical journal which the editor brings forward as an example of style. We have seen nothing like it since the gems which used to appear in the now, we believe, defunct *United Ireland* in the early "eighties." Dr. R. Farquharson contributes a very readable paper on the Treatment of Acute Disease from the Patient's Point of View which throws some light upon the practice of bygone practitioners, and Dr. D. J. Leech considers the Treatment of Bronchitis by Drugs. A very general mistake is, he thinks, to give diaphoretics and stimulants such as carbonate of ammonia in too small doses. He points out that in the new Pharmacopœia the dose of the liquor ammonii acetatis is given as up to six drachms. That admirable physician, the late James Andrew, used always to say that for a cold or to get relief in bronchitis there was nothing like "a good drink of H.A.A.," the "haustus ammonii acetatis" of the St. Bartholomew's Hospital Pharmacopœia.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D. Lond., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXII., No. 6. London: C. J. Clay and Sons. April, 1898. Price 5*s.*—This number completes the twenty-second volume of the Journal and contains, in addition to the Proceedings of the Physiological Society, the following articles: 1. O. F. F. Grünbaum on Intermittent Stimulation of the Retina (part ii., with 5 figures in the text). The author shows *inter alia* that on increasing the intensity of an intermittent stimulus beyond a certain point a further increase in intensity allows a decrease in frequency without destroying the sensation of fusion. 2. On Urobilin (part ii.)—The Percentage Composition of Urobilin, by F. Gowland Hopkins, M.B., B.Sc. Lond., F.I.C., and Archibald E. Garrod, M.A., M.D. Oxon., F.R.C.P. Lond. They find the percentage composition of urobilin to be C 63·58 H 7·84, N 4·11. 3. Some Improved Methods of Gas Analysis, by John Haldane, M.D. Edin., F.R.S. (with 6 figures in the text). 4. Contributions to the Physiology of Unstriated Muscular Tissue (part iv.)—The Action of Electrical Stimuli upon the Œsophagus of Aplysia depilans and Aplysia limacina, by Dr. Philip Botazzi, Docent of Physiology in Florence. The movements referred to seem to be purely myogenic and resemble those of the heart, but there is no refractory period. No nerve cells can be demonstrated histologically in the œsophagus of these animals.

In the *Phonographic Record* for May Sir William Gowers condemns the treatment of syphilis by remedies given continuously over a long period. He says that mercury should be given for from four to six weeks after the gums are affected by it, when iodide may be given systematically for four months during the first year and then every six months for three weeks for three or four years after the first symptoms. Mr. Peyton Beale puts forward a plea for the use of the horseshoe pad in hernial trusses; there is a well-reported clinical lecture on a Case of Pseudo-hypertrophic Muscular Paralysis, as well as short notes on the Duration of the Lead Line on the Gums and a Case of Spontaneous Cure of a Ranula.

ROYAL INSTITUTION.—On Friday evening, May 6th, Mr. E. A. Minchin delivered a discourse on Living Crystals, meaning thereby the spicules of calcium carbonate embedded in various species of sponge. The optical phenomena produced when those spicules are examined by polarised light are similar to those obtained with the mineral calcite.

THE LANCET.

LONDON: SATURDAY, MAY 14, 1898.

WE need not apologise for reverting to the highly important announcement made by the Secretary of State for War at the banquet given by the Lord Mayor to the medical profession at the Mansion House last week. The nation—as well as the officers of the Army Medical Staff and the profession generally—has, in our opinion, to be congratulated on the generous and statesmanlike policy so unequivocally enunciated by Lord LANSDOWNE on that occasion, for we are living at a time when "wars and rumours of wars" abound, and this country has always to be on the alert to maintain her position in the international struggle for existence. There are, moreover, few households or families which have not some member connected either with the army or the navy and it is consequently a matter of national concern that both of them should possess thoroughly efficient medical services not merely in times of war, when everyone recognises the necessity of sound surgical skill promptly applied, but in times of peace, particularly at remote and outlying stations where no other medical help is available. The functions of army medical officers do not merely embrace the treatment of disease and its prevention, but upon them is laid the entire charge of the sick and wounded, their succour and surgical aid in the field, their transport and the organisation of hospitals for their reception, in addition to the discharge of administrative and disciplinary duties of an extensive and complicated character. It cannot be denied that these are weighty and responsible duties, calling for high qualifications on the part of those undertaking them. For many years past it has been notorious that, although no complaint has been made about the pecuniary inducements offered by the army medical service, it has, nevertheless, failed to attract either a sufficient number of medical candidates or those of the right stamp. We earnestly hope and believe that that time is past. There is no need to go into the causes or the conditions which rendered the army medical service distasteful, seeing that Lord LANSDOWNE has now happily promised to alter all this and has determined, as he said, that there shall be no failure either in theory or in practice to treat medical officers with all the respect to which they are entitled.

Lord LANSDOWNE has proposed to make a fresh start and to form a consolidated army medical corps by welding together the Army Medical Staff and the Medical Staff Corps under the title, by HER MAJESTY'S command, of the "Royal Army Medical Corps." The officers of the newly-formed corps are to have actual army rank and are to bear exactly the same military titles as other officers of the army up to the rank of colonel, with the reservation—a perfectly reasonable one under the circumstances—that above that rank the compound and distinctive title of "Surgeon-General" shall be adopted, but carrying with it the rank and precedence of a general officer in the army. Sir SAMUEL WILKS and Sir WILLIAM MACCORMAC, the respective Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England, both spoke in highly appreciative terms of Lord LANSDOWNE'S announced intentions regarding the Army Medical Service. Sir WILLIAM MACCORMAC in particular expressed himself very clearly and emphatically on this point and he is in an excellent position to form an accurate and just judgment in regard to it, for he has had exceptional opportunities of knowing the requirements of the army medical officers. On a memorable occasion long ago he most successfully vindicated their labours and placed on record the admirable results which followed them in the Egyptian campaign of 1882. We have no doubt also that should Sir WILLIAM THOMSON, the President of the Royal College of Surgeons in Ireland, express his opinion upon the nature and extent of the Secretary of State's concessions he will entirely endorse the views which have been expressed on this side of St. George's Channel. Nothing could have been better than the frank and generous tone in which Lord LANSDOWNE recognised the great value of the services performed by medical officers, and the share which they took in all the risks and hardships of war. He has, in our opinion, dealt with their grievances in a wise and statesmanlike spirit and has yielded all that can be reasonably demanded to make their position secure and satisfactory. It should not be forgotten, too, that in a number of other respects several important and much needed changes have also been introduced of late in the interest of the Army Medical Staff. Assuming, then, that the declared intentions of the War Minister are to be embodied and promulgated in authoritative official form, as they undoubtedly will be, we need scarcely ask ourselves what should be the position of the profession in regard to the new order of things.

We can have no hesitation in declaring that the members of the Army Medical Staff should accept these concessions in a sincere and honest spirit and that our medical schools and the universities and the profession generally should do all in their power to make the new Royal Army Medical Corps a success. To become an officer of such a corps is a worthy object of ambition. The prospect of seeing the world, of taking part in the dramatic and chequered scenes of military life and adventure, and the probable opportunity of attaining rank and titular distinction, will always have attractions for the young, the healthy, and the enterprising. The military position of medical officers will henceforth be as good and secure as it can be made officially, and as regards social status it must always be borne in mind that every officer's position, to whatever branch of the service he may belong, must depend upon himself. It is beyond the power of any Government to confer personal qualities by any mere titular rank or distinction. All that a Government can do is to insure that a young medical officer shall occupy as good a position as any other officer of corresponding rank; for the rest he must depend upon himself. The

medical service is now an integral part of the army and the medical officer's position is henceforth to become a thoroughly recognised and established part of the military machine. This being so it is for the members of that service to show that they are proud of their medical calling and ambitious of success in the exercise of it for the benefit of all committed to their care and thereby to prove how groundless and calumnious have been the fears of those who have asserted that should the desired concessions be granted their professional duties would not be, as they assuredly should be, the first and dominating consideration. It stands to reason that commanding officers and others are only too glad to have the services of really capable medical officers for the care of themselves and the men serving under them; and as regards the latter—the rank and file of the British army—TOMMY ATKINS is never backward in recognising and in gratefully appreciating the services of those on whom he can confidently rely when he is sick or wounded. Very many years have elapsed since THE LANCET first advocated the formation of a Royal Medical Corps for the army on the lines of the Royal Engineers. This has now been accomplished and we feel assured that medical officers and the profession in general will do all in their power to aid Lord LANSDOWNE in carrying out his policy to a successful issue.

THE Lunacy Bill was read a second time in the House of Lords on Thursday, May 5th. The remarks of the Lord Chancellor in moving the second reading were conciliatory in character and indicated an evident desire on the part of the Government that the Bill should pass into law during the present session. The Bill is substantially the same as that of last year, and with few exceptions no material alteration is to be detected in its main features. Some improvements are, however, noticeable. Clause 29 of last year's Bill, with its ridiculous enactments of fine and imprisonment, has been swept away. Asylum officials are therefore no longer confronted with the remote contingency of penal custody *plus* hard labour on account of the occurrence of a clerical error in a certificate. The clause in question was so loosely drafted that no clear distinction was made between wilful mis-statement and negligence. There still appears to exist a lurking belief that the safeguards for preventing the disappearance of presumably sane persons within the walls of a lunatic asylum are not quite efficacious. This applies more particularly to the employment of urgency orders. The alleged abuse of these orders in certain cases was alluded to in condemnatory terms during the second reading debate in the Upper House. No laxity in respect to these urgency orders is likely to occur in future, for the Bill enacts that the certifying person shall be held responsible for any mis-statement and shall be compelled to state his reasons for the necessity of the order on the face of the certificate. It is well known that many medical men are averse to signing lunacy certificates of any description, and it is very questionable whether this stringent provision will conduce to the speedy removal and safe custody of dangerous homicidal and suicidal patients. The duration of an urgency order will in future be four days, instead of seven days as hitherto.

Not unnaturally the interest and attention of asylum officials will centre round the superannuation clauses. In the Bill of 1897 it was proposed to make the pension scale similar to that of the Poor-law Officers Superannuation Act, 1896. This caused great dissatisfaction, and the opposition aroused was so strong that it may be said to have led to the withdrawal of the Bill last session. The step undoubtedly was a retrograde one, and the result of its adoption could only have been to lower the general efficiency of the service. The tenour of the clauses of the present Bill is distinctly more satisfactory. The main point is that pensions are made obligatory. (The same held good in last year's Bill.) The scale of the Poor-law Officers Superannuation Act, 1896, is adhered to, but only as a minimum. In the second reading debate the Lord Chancellor was careful to point out that this minimum was only offered as a suggestion, and, by inference, that it was capable of adjustment. Good grounds therefore exist for hoping that it will be raised. By the provisions of the Bill a discretionary power seems to be vested in the visiting committees of asylums to increase the amount of pension over and above the minimum stated. It would be well if they were authorised to grant retiring allowances to their officers after fifteen years' service. On account of the peculiar nature of their duties, and the painful consequences which sometimes ensue from prolonged and close association with the insane, the medical officers of asylums have strong grounds for claiming this privilege—indeed, the Select Committee of the House of Commons, in 1860, upheld this contention. Twenty-five, or at the most thirty years' continuous service, not necessarily in the same asylum, should entitle them to a maximum superannuation allowance not exceeding two-thirds of their total pay and emoluments. A fixed scale of pension has been advocated in certain quarters—viz., one-fortieth of the total pay and allowances for each year of service to those whose duties bring them into constant and direct contact with the insane, and one-fiftieth to other officers and servants—the recipients, except in the case of incapacity from confirmed illness or infirmity, to be not less than fifty years of age, and to have at least fifteen years' service; no pension to exceed two-thirds of the total pay, &c. In the event of any fixed scale being formulated, this scheme is deserving of serious consideration. Failing the adoption of a fixed and uniform scale, the discretionary power laid down in the Bill, which allows visiting committees to increase the amount of pension at their pleasure, is likely to find most favour with those concerned. The permissive principle has worked very well in the past, with few exceptions, and asylum officials, with the certainty of assured pensions in the future, will doubtless be content to trust to the sense of fairness and justice of the visiting committees to deal liberally by them.

The attitude of the Lord Chancellor towards the superannuation question is evidently sympathetic, and he emphasised the necessity of favourably considering the claims of a deserving class of public servants, both in their own interest and in the interest of the unfortunate individuals confided to their care. He attached great importance to the principle of the superannuation clauses and expressed the hope that

amendments would be moved in Committee to give the best possible shape to the proposal. This is as it should be, and it now rests with the Parliamentary Committee of the Medico-Psychological Association to press forward their views on the subject, on the lines formulated in the report published in the *Journal of Mental Science*, October, 1897. We hope that success will attend their efforts. The provisions made for granting allowance in the case of injury or death in discharge of duty is undoubtedly in the right direction. Reviewing the Bill as a whole we cannot say that it will tend to lighten the labours or lessen the responsibility of those engaged in the care and treatment of the insane.

THE advances which have been made in recent years in the surgery of the brain and of the bowel are perhaps the most striking manifestations of the modern progress of surgery, but improvements of at least equal importance have taken place in the methods of surgical treatment of the kidney. In THE LANCET of April 30th we published the last of the Hunterian Lectures on the Surgery of the Kidney which Mr. HENRY MORRIS has recently delivered at the Royal College of Surgeons of England, and everyone who has read these lectures must acknowledge the great importance of the subject with which they deal. Renal surgery is altogether modern. Abscesses in connexion with the kidney had been occasionally incised but only when they had so closely approached the surface that they were pointing and the surgeon was doubtless greatly surprised to find that he had operated on a kidney. In the same way, too, renal calculi may have been removed after incision of a presenting pyonephrosis. These cases, however, are not really worthy of being considered cases of renal surgery at all. Further, it is true that in the sixteenth century the practicability of nephrotomy was discussed, but no application of these theoretical possibilities was ever made.

In 1869 GUSTAV SIMON of Heidelberg removed a kidney from a woman with complete success. This is the first real operation on the kidney. The possibility of life continuing in the absence of one kidney had been amply demonstrated by experiments on animals, but SIMON'S success was needed to convince surgeons that the same fact was true as regards human beings. The simpler operation of nephrotomy was, however, the renal operation which met with the greatest recognition and it was performed in no small number of cases for the relief of pyonephrosis and in a few of these a stone was removed. It was, however, not then recognised that there was an earlier stage than pyonephrosis in which surgical interference might be of advantage. In 1880 Mr. MORRIS cut into the apparently healthy kidney of a young woman and removed from it an oxalate of lime calculus. This was indeed a notable advance; it showed most conclusively that a thick layer of renal tissue could be cut through without any fear of uncontrollable or even severe hæmorrhage and that a wound of the kidney substance healed readily and thoroughly. But it showed much more than this: it showed that it was absolutely unnecessary to wait until a renal calculus had led to the complete destruction of a kidney before attempting to remove it and that it was not only possible but safe to remove a stone from a kidney otherwise quite healthy. The example thus set has been largely followed and the results have fully justified this alteration in practice. In Mr. MORRIS'S own cases of nephrolithotomy only one death occurred in thirty-four operations. The effect of this change of practice has been great, and as a consequence the operation of nephrolithotomy has largely replaced the simpler but less satisfactory nephrotomy in all cases in which the patient has applied for treatment sufficiently early. Another operation, which has done less perhaps than nephrolithotomy in the way of saving life but quite as much in removing pain and discomfort, is nephropexy, or "nephrorrhaphy" as it is frequently called. A moveable kidney has but little tendency to shorten life, yet it leads often to much suffering and may entirely incapacitate for any exertion, and in many cases the relief resulting from nephropexy is great and lasting. The latest development of renal surgery is of especial interest. When a kidney has been exposed by an incision it is occasionally found that the disease with which it is affected is limited to one part of the organ, and in a few cases it has been found possible to remove with success the affected parts only and thus to preserve a portion of an organ which otherwise would have had to have been altogether sacrificed.

If the recent advances in the surgery of the kidney have surprised those accustomed to the old order of things the modern surgery of the ureter excites still more astonishment. Numerous operations are now performed on the ureter, a structure which was quite recently considered to be wholly beyond the possibility of surgical interference. The first and probably the most important operation performed was ureterotomy for calculus, and though the operation is still rare yet it has been done by several surgeons and stones have been successfully removed from all parts of the ureter, from the pelvis of the kidney to the opening into the bladder. Strictures of the ureter have been relieved by ureterotomy and in some cases a portion of the tube has been excised with results which fully justify the operation. Ureteral anastomosis and ureteral grafting have received much attention in consequence of the frequency with which the ureter is involved in the operation of vaginal hysterectomy. Formerly the only hope which could be held out to a patient suffering from a ureteral fistula after such an operation was nephrectomy, but ureteral anastomosis and grafting bid fair to replace entirely this severe procedure. A still more extensive operation on the ureter is excision. It is only called for in cases of widespread and persistent disease, but it has been successfully performed for tuberculosis and other conditions of the ureter. Another subject considered by Mr. MORRIS in his lectures was "obstructive anuria." It is very rarely indeed that both ureters are simultaneously or almost simultaneously blocked by calculi. In most cases one kidney has been destroyed or rendered functionally useless by a stone and then later when the other kidney has taken on the double duty it too has had its ureter blocked by the impaction of a renal calculus. The symptoms which follow are identical with those met with after experimental ligature of both ureters

in animals and usually the symptoms which are commonly called "uræmic" are absent. The patient survives a few days, perhaps as many as ten, and then dies. The fatal ending is inevitable unless the obstruction is removed. It has taken many years for it to be generally recognised that obstruction of the intestines cannot be cured by the lavish administration of purgatives and that the obstructing cause must be removed or the bowel opened above the obstruction. In the precisely analogous case of obstructive anuria diuretics and exercise are still only too often relied on for treatment and a patient is allowed to succumb when an operation would have saved him. It is true that the percentage of spontaneous removal of the obstruction is greater in the case of the ureter than in the case of the intestine, but the principles involved are the same and an operation should be performed as soon as the diagnosis is established. The lectures were illustrated by an elaborate set of tables of operations on the kidney which must prove of great value in the preparation of statistics on this subject.[1] As one of the leaders in this important branch of surgery Mr. MORRIS could not have chosen a fitter subject for the Hunterian Lectures than the surgery of the kidney and he is to be congratulated on the ability which he brought to bear upon his task.

THE long-standing controversy between the advocates of cremation on the one hand and of inhumation on the other was once more revived by a lengthy and important letter published in the *Times* of April 11th. It was written by Sir FRANCIS SEYMOUR HADEN, who is well known to be an earnest advocate of earth-to-earth burial, and so uncompromising an antagonist of cremation that in his opinion, as expressed in THE LANCET of Aug. 19th, 1894 (page 381), "as a measure of public safety it ought to be at once declared a misdemeanour." Holding such views, and not sympathising with those who may prefer that their mortal remains should be submitted to the swift decomposition of combustion rather than to the fauna and saprophytes of the cemetery, he undertook to prove that "inasmuch as cremation renders the identification of the cause of death impossible, its practice cannot fail to operate as a direct incentive to crime, especially such forms of crime as are difficult of detection without prolonged and repeated methods of investigation," in the course of which argument the tenets of the Cremation Society and of Sir HENRY THOMPSON, its principal champion, were criticised with much frankness. In answer to inquiries Dr. THOMAS STEVENSON of Guy's Hospital said that "though he could not recall without great labour all the cases he had met with he had yet not only discovered poison by their exhumation but had been able to prove by it the innocence of suspected persons." The experience of Mr. THOMAS BOND of Westminster Hospital has been to the effect that "though, like Dr. STEVENSON, he could not furnish particulars of every case he had met with he had yet been concerned in the course of a single year (1891) in no less than four such cases, all of them proving by exhumation murder by arsenic; that in the very next year (1892) he had been called upon to make two such exhumations, which proved that a double murder had been committed, a man in one of them having been shot at a certain distance from behind, and a woman, also in the back, but at close range; that on another occasion—and that quite recently—he had exhumed a body after two months' burial and found that death had been caused by an illegal operation; and that he had had a similar case since." Mr. BOND also referred to the case of DE TOURVILLE and said that he "had no doubt many persons skilled in the use of poisons would more frequently resort to them if it were not for the knowledge that they were liable to be handicapped by exhumation." After a reference to several of the familiar cases recorded in the text-books Sir F. SEYMOUR HADEN concludes as follows: "There is no stronger argument against cremation than the imputation of foul play which it has in its power to cast on innocent persons. It is impossible to conceive anything more deplorable than the position of one who, having cremated, say, his wife, is afterwards laid under the imputation of having murdered her! By what right do the half-dozen enthusiasts which compose the Council of the Cremation Society—depriving him as they do of all possibility of proving his innocence—place a fellow citizen in such a light? No wrong can be greater, no martyrdom worse!" Sir HENRY THOMPSON, thus challenged, replied in the *Times* of April 13th that his book "Modern Cremation," published a few years ago, would fully resolve all the doubts and difficulties which have perplexed Sir F. SEYMOUR HADEN. The 102 exhumations in the course of twenty years were arrived at as the result of an inquiry organised by Dr. DANFORD THOMAS who sent a series of questions to the 334 coroners in England and Wales and received replies from 317 of them, embracing all the important districts. From the data thus received it was estimated that the mean number of exhumations made in a year throughout England and Wales is only five, and less than one yearly for poison. Sir HENRY THOMPSON points out the very serious defects in our present laws as regards death certification and contrasts it with the methods observed throughout France and Germany and suggests the appointment of a "médecin-vérificateur." The conditions which have to be fulfilled before cremation can be performed according to the rules of the Cremation Society of England are very stringent; an application in writing must be made stating that it was the wish of the deceased to be cremated after death or that he entertained no objection thereto; and *two* certificates from duly qualified medical men, one at least of whom must have attended the deceased, are required relative to the cause of death. These the society obtains direct, and it is therefore necessary in making application for cremation to give the names and addresses of such medical men in full. These methods of guarding against the too hasty cremation of persons who have died from violence or poison are so well devised that a committee of the House of Commons, after considering them, reported that "with the precautions adopted in connexion with cremation, as carried out by the Cremation Society, there is little probability that cases of crime would escape detection."

Everyone will admit that scientific discussions between

[1] Table I. and summaries of Tables II. to XI. will be found at p. 1310 of our present issue.

distinguished representative men ought to be conducted with at least the externals of a calm and judicial spirit, for which reason we were glad to find from the *Times* of April 14th that Sir F. SEYMOUR HADEN acknowledges that his letter printed on April 11th was characterised by "over-directness of more than one of its utterances."

Annotations.

"Ne quid nimis."

THE PARIS EXHIBITION OF 1900.

THANKS to our Paris Correspondent we were enabled to publish in THE LANCET of April 30th some interesting particulars of the plans which have been formed for the adequate illustration of all the departments which concern medicine and the allied sciences. It will have been noticed that the scheme is a most complete one and it only requires the cordial coöperation of the countries concerned to ensure the presentment of an object lesson in all that pertains to the art of healing which will show the world at large how far and how wide has been the progress during the century which that exhibition will commemorate. We note with pleasure that it is proposed to group the exhibits according to their natural affinities rather than under the head of each country, but we recognise that it will be necessary for very careful discrimination to be shown lest a prominence be given to any one nation in departments of science to which its actual share does not entitle it. In respect to Great Britain and her dependencies we would point out that prompt steps should be taken to initiate an organisation which should have for its object the ordering of the arrangements for our adequate representation in this "World's Fair." Too often these exhibitions testify more to the isolated enterprise of commercial firms than to general improvements in the arts and sciences. What is required is not an exhibition of wares, but of genuine inventions and scientific instruments of the best and latest type. It might be well for one section to be devoted to a historical series which would give the visitor a *coup d'œil* across the century and show him when such and such an invention was launched on the world, and what modifications it has undergone in the years which have followed. Thus there would be presented a picture of evolution in human ingenuity and a great tribute to the master-minds that first conceived ideas which have borne so much fruit. But it is not in mechanical inventions alone that such a mode of exhibition of the results of scientific labour could be made manifest. The same method could be well applied in every department which has to do with the prevention of disease, the care of the sick, and the preservation of health. We need not again enumerate them, they are concisely classified in the article which we published in our issue of April 30th. Nor are the triumphs of medicine in the nineteenth century confined to any one nationality. France may claim the invention of the stethoscope, Germany that of the ophthalmoscope, and England the introduction of antiseptic surgery. In each land names of almost as high eminence as those of Laennec, Helmholtz, and Lister may be cited whose work has contributed to the amelioration of the ills against which the profession of medicine strives. If England has her Jenner, France has her Pasteur, and Germany has her Koch; and one of the most remarkable features of this exhibition should be to show how bacteriology took its rise and where it has assisted in the elucidation of the nature of diseases and enhanced our means for their prevention and treatment. In order, then, that our country may be fairly and fully represented in this great display we would urge the Commission over which H.R.H. the Prince of Wales presides to take steps to secure a thoroughly representative committee or committees to fill in the details of the scheme which the authorities in Paris have outlined. To this end there might in the first place be formed a large body of delegates from State institutions, hospitals, societies, colleges, and schools, out of which might be constituted the representative committees of each of the great medical sections which will be illustrated. We are most anxious that there should be some definite and responsible organisation of experts who would control and arrange the objects to be exhibited from this country. This is a matter which ought not to be suffered to depend solely upon the chance of individual enterprise, but to be effective it should be organised and to be organised it should, we think, have State recognition and receive the aid of the Treasury in carrying out its objects. What applies to medicine may apply also to other departments and our main purpose in raising the question thus early is to stimulate public opinion on the subject and to interest our Government in it. The meeting of the International Medical Congress and of the other local congresses in Paris during the Exhibition may facilitate the creation of—at least as regards our calling—an organisation such as we have hinted at. We only throw out the suggestion; it is for others in authority to acknowledge its utility and to take steps to carry it out.

THE COUNTESS OF DUFFERIN'S FUND.

A PERUSAL of the thirteenth annual report of this fund, that for the year 1897, produces a very favourable impression of the energy, capacity, and tact with which the National Association for Supplying Medical Aid to the Women of India has carried on its work. This, it will be remembered, is an undertaking by women on behalf of women. The report abounds in every descriptive detail relating to the subject of which it treats and like most statements of its kind it is fortified by a mass of appendices, which provide the reader with information on all that concerns the conduct of medical education and treatment as carried out in the schools and hospitals under the control of the association as well as in hospitals in the Native States. It is practically, therefore, a book of reference. A mere glance at its pages, however, will suffice to show that the aid in sickness provided by the association has been much and widely appreciated. Difficulties, indeed, have had to be faced, but they have not been met in vain. In spite of caste prejudice the education of native girls in medicine has progressed, though as yet slowly. The student-roll for the past year includes 89 Europeans and natives in training for a subordinate grade of "assistant surgeon," 108 for that of hospital assistant, and 95 for those of nurse and compounder. Every effort is being made to stimulate the zeal of provincial governments and native gentry in support of the work of education done by the association and these endeavours have not been unsuccessful. Turning to the more directly practical side of the subject we find that there are 180 hospital wards and dispensaries in operation throughout India, most of them governed by, or affiliated to, the association. The fully qualified lady practitioners number 33, and there are 70 "assistant surgeons" and 117 hospital assistants or practitioners of the third grade. A point of significant importance is the fact that women of the purdah class—i.e., inmates of zenanas—are availing themselves with increasing readiness of the aid afforded to them under the new system of medical treatment. The funds available for the needs of the association have so far been generally adequate to its requirements. In some districts, however, notably in the Bombay and Madras provinces, a

marked falling off attributable to the prevalence of famine in these districts has been observed. A gratifying feature in this connexion is the liberality exhibited by several native gentlemen.

A MEDICAL SPEECH ON ALCOHOL.

MR PEARCE GOULD has been making a speech to the National Temperance League on alcohol and the advantages of doing without it both in health and in the treatment of disease. It takes a strong man to say the strong things which Mr. Gould said on the subject, especially if he happens to be a medical man. No doubt, as Mr. Gould says, the use of alcohol in medical practice is nothing now compared to what it was twenty years ago, much more forty years ago, when Dr. Todd's influence and the reaction from the so-called antiphlogistic treatment were at their height. Public opinion has been enlightened by the evidence of leaders in medicine such as Dr. Parkes, Sir William Gull, Dr. Gairdner, Dr. Sanderson, and others, and medical men have dared to treat disease without alcohol or with only small quantities of it. There are physicians and surgeons of reputation and success who are so strong in their convictions that alcohol is of little use in the treatment of disease, that it destroys tissues, lessens the resistance to microbes, deranges functions, spoils temper, and shortens life, that they are ready to testify to this effect in public in company with redoubtable champions of the temperance cause like the Archbishop of Canterbury, Sir William Whi e (Chief Constructor of the Navy), and the Bishop of Derry, who have as much prejudice to contend against in their spheres as the medical man has in his. We recognise with pleasure the good done by such testimony as Mr. Gould's. Men whose record and authority in the profession are such as his have the courage of their opinions and their honest testimony will be respected even by those who do not go quite so far in discarding alcohol as an element of diet or as a medicine. On one point the profession is unanimous—that moderation in the use of alcohol must be observed unless certain mischief is to follow; the quantities which our forefathers regarded as moderate would now be thought capable of doing much harm.

RECENT RESEARCHES IN METEOROLOGY.

AT a meeting of the Meteorological Society on April 20th Major Herbert E Rawson, R E., read a paper on Anticyclonic Systems and their Movements, commencing with the statement that cyclones and anticyclones have long been recognised as powerful weather controls, but up to the present time very little has been written in this country upon the progressive movements of the cores of the permanent high-pressure areas which are found to be associated with certain localities at different times of the year. He has come to the conclusion that if the various anticyclonic systems are considered separately and their movements investigated continuously throughout the year their cores will be found to have a distinctly marked progressive motion and that the movement of a high-pressure system is to be gathered from that of its core, as plotted on a chart from month to month. The high-pressure areas of the globe may be divided into those of the northern and those of the southern hemisphere. In the latter a well-defined system is always found in the Pacific off the west coast of Chili; another is off the west coast of Cape Colony, and another is in the Indian Ocean to the west of Australia. In the northern hemisphere there is a system in the Pacific to the west of California which persists throughout the year; there is another over the Atlantic for about ten months of the year, and there are two over the United States and over Central Asia for about six months of the year. The movements of the anticyclonic systems in the northern hemisphere are more difficult to follow than those in the southern, but there is always a progressive movement in some direction or other and the law that high-pressure areas move off the land as temperature increases and return to it or form over it as temperature falls can be recognised. There is a definite progressive anticyclonic movement westwards from Siberia and Russia towards Great Britain in the early months of the year, and eastwards back again to Siberia in the later months. Major Rawson analysed at great length the results of plottings from various weather charts, especially Buchan's isobaric charts and those of the united Danish and German meteorological offices. One of his tables showed that from 1881 to 1891 the core of an anticyclonic system was over the British Isles on 212 occasions, 130 of which were due to the Atlantic system, 41 to the Scandinavian, 17 to the Greenland, 22 to the Atlantic and Scandinavian merged, and 2 to the Atlantic and Greenland merged. The indications are in favour of the idea that the atmospheric conditions over these islands foster the formation of an anticyclonic core, and the centre of the Atlantic system is displaced accordingly in that direction, but that the cores do not continue long in the neighbourhood, owing in the first instance to the ever-varying seasonal changes of temperature and next to those brought about by the general atmospheric circulation. These two influences appear to Major Rawson to be of supreme importance in determining the direction in which any anticyclonic system will move, and he considers that if further investigation should confirm his views the result would be a valuable addition to the present method of forecasting by means of synoptic charts.

THE SANITARY POWERS OF THE BRADFORD CORPORATION.

A VERY important case, both from the point of view of the property owner and of the public health authority, was heard on April 28th before the stipendiary magistrate at the Bradford city police-court. Proceedings were taken to recover penalties from an owner, Mr. Holdsworth, in Shuttleworth-lane for neglect to comply with a notice requiring him to convert certain privy accommodation into water-closets. Mr. F. Stevens, who appeared for the corporation, stated that the summons had been issued under Section 21 of the Bradford Improvement Act of 1873, the wording of which is as follows:—

"In addition to all powers vested in the corporation the corporation may in any case where a dwelling-house within the borough shall be without a privy, water-closet, or earth-closet, or an ashpit, or without a privy, water-closet, or earth-closet, or an ashpit of a construction and size approved by the corporation, require the owner of such house by notice under the hand of the mayor or town clerk for the time being, to provide such a privy, water-closet, or earth-closet, or such an ashpit, or to make such reparation or alteration of the existing privy, water-closet, or earth-closet, or ash-pit, as in such notice shall be stated and within a period to be therein mentioned. If such owner shall neglect to comply with such notice within the time therein appointed he shall for every such offence forfeit a sum not exceeding five pounds, and a further penalty not exceeding the like sum for every day during which such offence shall continue."

Briefly stated the facts of the case were these. On Nov. 23rd, 1897, Mr. Holdsworth's property was inspected by a sub-inspector of nuisances who reported that the privies and ashpits in six houses belonging to the defendant were in a foul and dilapidated condition. On Dec. 1st the matter was reported to the sanitary committee of the city council and they passed a resolution that the houses should be provided with water-closets and ashpits of the construction and style approved by the corporation. Due notice was served on Dec. 7th but nothing was done up to Feb. 15th, 1898. Notice was given of the intention to commence prosecution but still

the privies were there and on March 28th the summons was taken out. It was allowed by the prosecution that the privies had been repaired, but they contended that they were still privies and not water-closets. The property was originally built in 1873 under the supervision of a corporation official, but for the last five or six years the corporation had ceased to sanction the erection of new privies. The stipendiary magistrate reserved his decision for a week and judgment was finally given on May 9th. He found that the contention of the corporation was good in law and he fined the defendant 20*s*. and 8*s*. costs and said he would state a case for the consideration of the High Court. As far as we can see by the wording of the Act under which proceedings were taken the corporation does not seem to have the power to order the conversion of a privy into a water-closet. The Act only says that the corporation may require the owner to make such reparation or alteration of the existing privy as shall be stated when notice is given. It can hardly be said that the conversion of a privy into a water-closet is an alteration of an existing privy. The question which of the two systems is the better from a sanitary point of view does not seem to us to be the point at issue and it was allowed by the prosecution that the defendant had improved his privies; so that had they been in as good a condition when the case arose as they are now he would probably not have been troubled in the matter.

DEATH FROM "DIPPING."

AN inquiry was held at Aston on May 5th relative to the death of a man described as an annealer and dipper. His duty appears to have been that of dipping copper cups in dilute nitric acid after they had been annealed and pickled. The medical evidence pointed to acute congestion of the lungs, a condition consistent with the statement that the deceased had inhaled acid fumes. The jury returned a verdict in accordance with this and added that they did not attach any blame to anyone, but recommended the company to supply chemically charged respirators for the men employed in work similar to that which the deceased did and to have printed notices exhibited to that effect. The product of the action of dilute nitric acid on copper is, of course, nitric oxide, which, however, in contact with air forms nitric peroxide. This dark red fume meeting the moisture of the respiratory passages would split up into nitrous and nitric acids, which are distinctly injurious to the lung tissue. While agreeing with the verdict we think that some suggestion might have been made as to the possibility of substituting a mechanical dipping arrangement, so that the operator might avoid inhaling the fumes. The dipping process appears to be so simple as to imply the adoption of an equally simple mechanical contrivance.

THE PARALYSES OF WHOOPING-COUGH.

AT a time when whooping-cough is so prevalent a peculiar and practical interest attaches to a careful study by Dr. Charles Leroux of the paralyses associated with this disease. The results of his investigations have been published in several recent numbers of the *Journal de Clinique et de Thérapeutique Infantiles*—March 31st to April 28th, 1898. The total number of cases collected by him is 38 Of these 25 were those of children under five years of age. The paralytic seizure occurred in most cases during the ascendency of the disease but in some during its decline. It was associated with severe types and sometimes with various complications, such as scarlet fever, broncho-pneumonia, &c. Dr. Leroux classifies the resulting lesions under four chief headings. 1. Cerebral paralysis. This is commonly hemiplegia, though 2 cases of monoplegia, both of the right arm, are also recorded, as well as cases of aphasia and cases of disturbance of special senses. 2. Of spinal paralysis 2 cases with paraplegia of the legs are quoted. 3. There are also 4 cases which appear to depend upon peripheral disorders, different groups of muscles being involved in each case. 4. An example of disseminated sclerosis, though possibly existent before the cough began, appeared to be distinctly aggravated by its development. Dr. Leroux draws attention to the question of prognosis. He finds the mortality to be 6 cases out of the 38 and he directs attention to the fact that very young children are particularly liable not only to die but, where this result is prevented, to retain a degree of permanent paralysis. As the age of the child increases the prospect of complete recovery from a seizure improves. The pathology of these various conditions, though more or less obscure in many cases, is decipherable with tolerable clearness by the light obtained from a limited number of necropsies. It comprises congestions, hæmorrhages—submeningeal, meningeal and cerebral—and patches of inflammatory softening. In discussing this part of his subject Dr. Leroux notes the fact that the cough paroxysm alone does not account for the nerve paralyses, as these have occurred repeatedly during the decline of the disease. He is disposed rather to regard whooping-cough as exercising a damaging influence on the coats of blood-vessels in the nervous tissues, very much in the same way as other infections have been shown to do. Whether this theory be entirely justified or not it is at least instructive to be reminded of a complication which, though rare, has long been recognised among the less regular characteristics of whooping-cough. Its bearing on treatment is obvious. In this connexion much is apt to be left to nature, but the cases above mentioned ought to impress the fact that there is a very real purpose in the maintenance of effectual sedative measures. The common practice of exposing children out-of-doors in all weathers is much to be reprobated as tending to induce those pulmonary troubles which are liable to induce convulsions and thus easily lead to other and dangerous forms of brain disturbance.

THE USE OF GLYCERINATED VACCINE LYMPH IN CHICAGO.

THE Department of Health of the city of Chicago was the first sponsor in the United States for the use of glycerinated vaccine lymph in public vaccination and is concerned to note, we learn from the March report of Dr. Arthur Reynolds, the Commissioner of Health, that not all producers and vendors of such lymph seem to be familiar with the requirements necessary to secure, first, a pure and sterile lymph—i.e., a lymph free from pathogenic bacteria; and second, a potent lymph—i.e., a lymph which shall give not less than 90 per cent. of successful typical results in primary vaccinations. The Department has learned of these defects through the frequent solicitations of producers to have their respective products substituted for that already in use and the consequent examinations thus made necessary. "In the latest instance," says Dr. Reynolds, "the lymph, put up in a 'Sternberg bulb' with much painstaking, gave an abundant growth of white pus cocci on streak agar, demonstrating that it had not been exposed to the inhibitive action of the glycerine sufficiently long. Yet the package was stamped, '*Do not use after June 1st, 1898.*' ... On the other hand, a product submitted in February last was found sterile, not only as to bacteria, but almost so as to vaccinal value. Out of twenty tubes used only nine typical vaccinations were secured. There was no indication on the package as to the age of this lymph, but the experience of the Department warrants the belief that it was more than 120 days from the calf." Glycerinated vaccine is said by Dr. Reynolds to lose its potency after about 120 days,

so that the evil done in this latter case to public vaccination, if less serious than in the case of an infected vaccine, is still of serious moment. Vaccinators in America, as with us, find it exceedingly difficult to secure the consent of the parents to another attempt at vaccination after a failure and every effort should therefore be made to reduce the percentage of failures to the minimum by using only a potent as well as a pure vaccine. The use of pure reliable vaccine has made vaccination popular in Chicago to a most gratifying extent, we learn from Dr. Reynolds's report, and the present is a very good opportunity for us to lay stress on the fact. Our readers will find in Dr. Copeman's Milroy Lectures[1] full information upon vaccination by glycerinated calf lymph, but if the lymph is bad successful results cannot follow and cause for renewed agitation will be given.

THE MANSION HOUSE AND THE LONDON HOSPITAL.

THE Lord Mayor is going to make another departure from routine in giving a dinner on May 18th at the Mansion House with a view of advocating the claims of "London's largest hospital" situated in its poorest part. His Lordship deserves every support and encouragement in this use of his influence and hospitality. No man of any means who reflects for five minutes on the work of the London Hospital, by day and night, will lightly dismiss its claims to consideration or deny himself the pleasure of helping to avert such a catastrophe as the closure of wards from financial stress would be. These claims are not too often pressed unduly on the public, but once in five years or so special appeals have to be made. Such is the nature of the present occasion, and the chairman and committee of the hospital are to be congratulated on having a Lord Mayor in such practical sympathy with them. No use of comfortable or superfluous wealth would be more beneficent than such a response to the Lord Mayor's kind appeal as will secure the committee of the hospital against anxiety for the next five years. We venture to hope that many who cannot avail themselves of his lordship's hospitality will associate themselves with his kindness as regards this great object.

AUSTRALIAN MEDICINAL PLANTS.

A CORRESPONDENT in Australia writes:—"Australia is rich in plants reputed to possess medicinal virtues, although at present only a few have been utilised, and these but to a limited extent. In New South Wales such plants are abundant, many kinds being found in the immediate vicinity of Sydney, especially in the Parramatta district. Two little plants of the gentian family, plentiful enough in the spring, have proved highly efficacious in certain stages of dysentery. The common native raspberry, like other species of *Rubus*, possesses astringent properties which may one day secure it a place in the colonial pharmacopœia, which already includes the native sarsaparilla, although, notwithstanding the latter abounds in the neighbourhood of Sydney, the bulk of the sarsaparilla used by colonial chemists is imported. The country people frequently prepare an agreeable and wholesome tonic from the native plant, which costs nothing save the labour of collecting it. It is also known by the name of sweet tea or wild liquorice. There is also a native laurel allied to the sassafras of the pharmacopœia, which possesses medicinal properties as yet but little understood. The castor-oil plant not only yields the well-known oil, but the leaves have been successfully employed as a galactogogue. The thorn apple is used in asthma, the seeds when expressed and made into an ointment with lard being said to be useful for irritable ulcers, burns, and scalds. The medicinal virtues of the various kinds of eucalypti, or gum trees, have become universally recognised, but it is not so generally known that they are shared also by the different species of tea tree and wattle. The flowers of the native pittosphorum yield a jasmine-like scent by distillation; and the boronia and other rutaceous plants abound in volatile oils. The foregoing are only a few of the many Australian native plants known to possess medicinal properties, and their luxuriant abundance during the greater portion of the year, combined with the ease with which many species can be cultivated in suitable localities, will at some future date give them considerable industrial value."

THE "JOURNAL OF TROPICAL MEDICINE."

IT is proposed, if enough support can be obtained for the scheme, to publish in London a monthly journal dealing with the diseases of warm climates, to be devoted to the publication of papers on tropical diseases and to the discussion of subjects scientific and practical affecting the interests of medical men in tropical and subtropical climates. The annual subscription, including postage, is to be 17*s*. We wish the promoters success in their new venture. They deserve it, for there is no country which has such a large interest in the tropics and the diseases common to them as our own. Any communication addressed to the Editors, *Journal of Tropical Medicine*, Messrs. John Bale, Sons and Danielsson, 85 to 89, Great Titchfield-street, London, W., will receive attention. The editors are Mr. James Cantlie and Dr. W. J. Simpson.

"INQUIRY" AT THE LEEDS GENERAL INFIRMARY.

WE are informed that an inquiry into the circumstances and means of applicants for treatment at the Leeds General Infirmary is in operation. Such inquiries are apt to be superficial and of very little use. But our information leads us to hope that the inquiry at Leeds will be of a more satisfactory character. This is desirable in the interest of the poor as well as in that of the subscribers. Nothing will resuscitate the interest in hospital work and charity and increase the support of them so much as honest and thorough investigations of the sort which we have every reason to believe are taking place at Leeds. We shall look forward to a valuable contribution to the elucidation of this subject by the managers of an infirmary which has long held a leading place among such institutions.

THE REMUNERATION (?) OF POOR-LAW MEDICAL SERVICE.

THE *Daily Telegraph* of April 29th had a paragraph stating that the medical officer of health of Luton has lately been showing that out of a salary of £80 a year he has to supply 10,000 bottles of medicine yearly and that this works out at the rate of a fraction under 2*d*. per bottle, professional service included. The statement is almost incredible—quinine, iodide of potassium, cod-liver oil, *plus* brains, medical education past and continuous, and professional status, all for 2*d*. Much is said about cheap dispensaries, out-patient departments, medical aid association rates, and so on; but in the light of such calculations as those we are noticing we must regard Poor-law guardians—at least the guardians at Luton—as the worst sweaters of the profession. How can guardians expect the poor to be well treated or soon restored to health at such rates of payment? The only answer which can be made is that the guardians rely on the humanity of their medical officer instead of on the justice of their own arrangements. This has been too long the way of bodies having to determine the remuneration of medical men, especially of guardians. It is time that this should cease. The humanity of medical men is a large store on which to draw, but it has been terribly abused and in

[1] Lecture I. was published in THE LANCET of May 7th and Lecture II. will be found at p. 1303 of our present issue.

their own interests and that of the public such abuse should no longer be allowed. The profession is not free from blame for such beggarly treatment, and a little of the independence and self-assertion which have been shown in respect of the grievances of the Army Medical Department will have the same beneficial effect in the Poor-law medical service.

THE ROYAL COMMISSION ON THE DISPOSAL AND TREATMENT OF SEWAGE.

THE constitution of the Sewage Commission was announced by Mr. Chaplin in the House of Commons on May 5th. Public health is represented by Sir Richard Thorne Thorne, K.C.B., and Dr. James Burn Russell; biology by Professor Michael Foster, and chemistry by Professor Ramsey. The names of the rest of the Commission will not be so well known; they include two officers on the retired list of the army—namely, Major-General Constantine Phipps Carey and Colonel Thomas Walter Harding—and Mr. Charles Philip Cotton and Mr. Thomas William Killick. Though it must be regarded as a strong and representative board there is not included amongst its members, oddly enough, either a bacteriological expert or an expert on sewage engineering. The Earl of Iddesleigh is to be the chairman and Mr. F. J. Willis the secretary of the Commission. The scope of the inquiry is indicated in our Parliamentary Notes on another page.

THE TRUCK ACT, 1896.

A CORRESPONDENT draws our attention to the Truck Act of 1896 and suggests certain questions respecting its bearing upon sick funds where the collections for these purposes are made by employers or by their representatives. He asks whether it will affect the position of the surgeon, whether the doctor's fund comes under that Act, whether the employer must in future abstain from making the collection of the contributions of the workpeople, and whether the fund itself must be placed in the hands of the men. These are matters of great importance and if any doubt can arise about them it is certainly most desirable that it should be set at rest forthwith by the publication of an authoritative utterance. We have perused the Statute and we confess that it appears to us pretty clear that no one of these questions can arise. The Act relates, and relates only, to deductions from the workman's wages by way of fines and penalties or of payment for the supply of materials and tools. The position of medical funds and the conditions under which they can be collected by deductions from wages were regulated by a section (23) of the old Truck Act passed in the time of William IV. and they have remained upon that footing ever since. We are unable to discover in the new Act anything which disturbs that established position and we imagine that the questions formulated by our correspondent can be answered by a comprehensive "No."

THE DANGER OF ASPIRATING THE LIVER.

ASPIRATION of the liver is performed as an exploratory operation for suspected abscess; it has also been recommended as a means of blood-letting in certain diseases of that organ. The danger of this practice, which is far from generally known, is shown in an important paper published by Surgeon-Lieutenant-Colonel Hatch in the *Indian Medical Gazette*, April, 1898. Free and even fatal hæmorrhage from the enlarged and congested liver has resulted, and this effect seems more often to have been produced when no abscess was present than when one existed. The writer of the paper has had two fatal cases in his own practice and he quotes three others. He has no doubt that most Indian surgeons have had cases but unfortunately they have not published them as a warning. About three years ago two patients suspected of having abscess of the liver were aspirated by Surgeon-Major Quicke on consecutive days. In both the symptoms of internal hæmorrhage and death followed. A necropsy was made in one case; it showed blanching of the body and a large quantity of blood in the peritoneum and no abscess of the liver. But hepatic hæmorrhage was not the only cause of death. In a sixth case an intercostal artery was nicked and gradual hæmorrhage into an abscess cavity took place and proved fatal. Surgeon-Lieutenant-Colonel Hatch concludes that aspiration of the liver should never be performed as a mere means of diagnosis, but the facts might have carried him further, to recommend its total disuse. The operation offers no advantages to compensate for its undoubted risks.

INSPECTION OF VACCINATIONS.

UNDER the present system of arm-to-arm vaccination it is essential that the vaccinator shall see the child on the eighth day in order to maintain his supply of lymph. When the use of calf lymph comes to be the rule this will not be necessary and the date of inspection might be left more to the discretion of the vaccinator. In many cases more than one inspection might be made and wherever necessary more than one inspection ought to be made. Parents ought to be informed that if they so desire the vaccinator will revisit after his first inspection. This could easily be arranged by the vaccinator at the time of his inspection handing to the parent a form of request, perhaps printed on a postcard, for sending to the vaccinator asking for a later visit. The details would be for arrangement by local authorities and their officers and legislation is probably not required, but it would be well to know that power to make such arrangement exists, or may be provided for, under order by the Local Government Board or otherwise.

DIPHTHERITIC PNEUMONIA.

THE diphtheria bacillus does not always remain confined to the diseased mucous membrane but sometimes invades the blood and internal organs—the lungs, spleen, and lymphatic glands. Of these organs the lungs are most frequently affected; according to recent investigators, Kanthack and Stephens, in 26 fatal cases the bacilli were found with ease in all and in large numbers. In 15 of these cases broncho-pneumonia was present. What is the relation of the broncho-pneumonia to the bacilli? In almost all cases of broncho-pneumonia occurring in diphtheria other organisms such as streptococci and staphylococci are found in the lesions. It has therefore been supposed that the broncho-pneumonia is due to these organisms and not to the bacilli. Dr. S. Flexner and Dr. H. B. Anderson have published experiments in the *Johns Hopkins Hospital Bulletin*, April, 1898, however, which strongly support the view that the broncho-pneumonia is a truly diphtheritic lesion. They injected pure cultures of diphtheria bacilli into the tracheas of rabbits, which caused a definite and often widespread pneumonic process; but in certain cases, notwithstanding the entrance into the lungs of numerous bacilli, pneumonia failed to be produced. The pneumonia was lobular or pseudo-lobar in character and for the most part cellular, fibrin playing a relatively small part.

THE VENTILATION OF THE UNDERGROUND RAILWAY.

WE are quite in sympathy with those people who are protesting against the construction of more blowholes upon the Underground Railway. There can be little doubt that blowholes are a source of great inconvenience and discomfort to over-ground passengers and pedestrians, as well as to many residents, and it is an open question

whether they serve as a real remedy for the choky state of the tunnels. Yet a Select Committee of the House of Commons has decided to allow an increase of blowholes and a Bill has passed the House of Commons but not the House of Lords. The nuisance must exist as long as coal is used as a source of locomotive power. Mechanical ventilation has been suggested and this probably would be more effectual and satisfactory than blowholes which after all are merely openings in the tunnels, while the sulphurous smoke could be diverted by such means or even deprived of its impurities by forced passage over wet screens. Electrical traction is the ideal way out of the difficulty, but until that becomes universal we do not see the remotest prospect of its being applied to the Underground Railway, since there are other companies having running powers over its lines and though their trains are for a time passing through the underground tunnels they are more often travelling in the open air, so that smokeless engines are not an absolute necessity throughout the greater part of the journey.

A SIGN OF THROMBOSIS OF THE SUPERIOR LONGITUDINAL SINUS.

IN a recent number of the *Revue des Sciences Médicales* is an abstract of a case published by M. Lermoyez, who calls attention to a sign of great value in the diagnosis of thrombosis of the superior longitudinal sinus. A woman, aged thirty years, entered hospital for symptoms of septicæmia consecutive to old otorrhœa. There were severe pains in the temporo-occipital region. A hard cord was formed by the thrombosed jugular vein so that thrombophlebitis of the lateral sinus probably existed. Intervention was decided on; but the situation became aggravated and a new phenomenon appeared—dilatation of all the veins of the scalp without participation of the facial veins, which enabled M. Lermoyez to diagnose thrombosis of the superior longitudinal sinus. An operation was performed and an extradural abscess was evacuated, but the sinus thrombosis was too extensive for the removal of the clot entirely. The patient died comatose the following night. The necropsy confirmed the diagnosis.

THE VACCINATION BILL.

THE Vaccination Acts Amendment Bill was read a second time in the House of Commons on Monday last. The measure having a somewhat low position amongst the orders of the day the debate came on unexpectedly; it lasted over four hours and the division, taken at midnight, resulted in a majority in favour of the second reading of 214, only 23 votes being given against the motion in a House of 260 Members. The majority of the speeches were those of opponents to the Bill, such as Mr. Hazell, one of the members for Leicester, Mr. Channing, Mr. Labouchere (who spoke against it, but apparently voted for the second reading), Mr. Ashcroft (who brought a mandate from his constituency, Oldham, to oppose the measure), Mr. Whittaker of the Spen Valley Division of Yorks, Mr. Allan, and Dr. Clark. They chiefly argued against compulsory vaccination, but some more venturesome took the pronounced anti-vaccination position and maintained that small-pox could be as effectually dealt with apart from recourse to what they characterise as a method of more than doubtful efficacy. Dr. Clark, whilst expressing his personal belief in the modifying influence of vaccination over small-pox, seemed to arrive at a similar conclusion as to the method of dealing with the disease. The speeches in support of the measure by Sir C. Dalrymple—a member of the late Royal Commission—Mr. T. P. O'Connor, Dr. Farquharson, and Mr. T. W. Russell, the Parliamentary Secretary to the Local Government Board, were certainly better furnished with argument and doubtless influenced the division. In particular Mr. O'Connor's virile and pithy contribution to the debate put the case for vaccination in a nutshell. Mr. Chaplin's motion to refer the Bill to the Standing Committee on Law was strenuously opposed mainly on the ground that its controversial character required its discussion in committee of the whole House. Mr. Chaplin, however, carried his motion by a majority of 151—201 voting for and 50 against it.

PULEX IRRITANS.

A CORRESPONDENT has written to us to know the best way of exterminating the flea pest. As the season is approaching when pulex irritans makes its presence most felt the following summary of some remarks and correspondence which appeared in THE LANCET in 1895 [1] may be useful. Thorough and systematic cleaning is, of course, a first principle in the plan of prevention. The use of common English lavender kept with clothes or in beds has been tried with good results. Paraffin is said to act similarly but its smell is disagreeable. If before retiring for the night the body be sponged with weak vinegar and water pulex irritans will often cease from troubling. The irritation caused by the bite may generally be allayed by the application of sal volatile or salt and water. Strong infusion of quassia freely used as a wash is said to cause swarms of fleas to vanish "as by magic." A little chloroform poured on the clothes over the point of attack soaks through and permanently quiets pulex irritans and allays the irritation of its bite. It is curious to remark the preference which the pest appears to evince for certain persons and, again, while some persons are extremely sensitive to its bites, enormous wheals being raised, others are merely annoyed by its peregrinations over the body.

THE PERILS OF A SANITARY INSPECTOR.

AN Englishman's house is no longer his castle in these democratic days. That comfortable doctrine is almost as dead as the belief in the Divine right of kings, and a case which recently came up at the Liverpool police-court is a good example. Hugh McCarthy, a dock labourer, was charged with assaulting Ethel Frances Burton, a sanitary inspector under the corporation. Miss Burton arrived in uniform to inspect the defendant's house and was promptly tackled by Mrs. McCarthy, who took her into an adjoining room where Mr. McCarthy was lying on a sofa. He and his wife then detained Miss Burton for the space of an hour, in the meantime examining her books to see what names were entered therein. Ultimately she was liberated at the request of one of the children. The defendant pleaded that he "had just had some words with his wife," but he was fined 20*s*. and costs. Everyone will remember that inimitable scene in "Bleak House" where Mrs. Pardiggle and the children who were members of the "Infants' Bond of Joy" visited the recalcitrant bricklayer, and had Miss Burton been a person of the Pardiggle type we should have sympathised with Mr. McCarthy, but official sanitary inspectors stand upon a very different footing. They fill a most useful part in our modern economy and at all risks must be protected against interference with their duty.

MILK PRODUCTION UNDER SCIENTIFIC CONTROL.

NOTHING could be more satisfactory than the increased attention and care now being bestowed by large dairy companies to secure the production of healthy milk. Bacteriology has from its infancy indicated the necessity of scientific control in this industry, and it is satisfactory and reassuring to know that its teachings are not ignored. Again, most large producers find it necessary in view of the advance of public education to be prepared to provide milk of definite

[1] THE LANCET, April 6th (p. 882) and 20th (p. 1018) and May 4th p. 1163), 1895.

composition for infants and invalids. Thus, to take one example, we have before us a synopsis of the appointments, equipments, and products of the dairy managed by Messrs. Welford and Sons. The staff includes medical officers, sanitary inspectors, veterinary surgeons, and an analyst. The preparations include facsimile human milk, peptonised milk, sterilised milk, sweet whey, sterilised cream, sterilised separated milk, butter milk, koumiss, asses' milk, and milk for the nursery. In addition to the steps which are taken to ensure the supply of nothing but healthy milk samples are also taken every day and analysed in the laboratory, all milk falling short of a standard quality being rejected. The procedure thus adopted by this important branch of industry might well be followed in other branches, and it is a tribute to the constant representations of bacteriological investigators that commercial enterprise has acted upon scientific teaching and has admitted the necessity of scientific control. By such a forward step the community at large gains not a little.

MEDICAL GUESTS AT THE SAVAGE CLUB.

THE members of the Savage Club have lost no time in following the admirable example set by the Lord Mayor of London in entertaining the medical profession, or at all events certain representative members of it, at dinner. Recently, we understand (and for this information we are indebted to our contemporary, the *Medical Press and Circular*), the Lord Chancellor and other distinguished members of the legal profession were present at one of the customary Saturday evening dinners of the Savage Club. This seems to have suggested to some of the members of that interesting body the happy thought of extending similar hospitality to the sister profession of medicine, and the occasion of the occupancy of the chair on Saturday last by Mr. J. Y. W. MacAlister, who, as the esteemed Librarian of the Royal Medical and Chirurgical Society, is closely associated with our profession, was evidently thought to be—as indeed it was—very appropriate to the purpose. Among the chairman's guests were Sir Samuel Wilks, President of the Royal College of Physicians of London, Sir William Mac Cormac, President of the Royal College of Surgeons of England, Sir Dyce Duckworth, Mr. Bryant, Dr. Ferrier, Dr. Church, Mr. Warrington Haward, Dr. C. J. Hare, and Mr. Thomas Wakley, Jun. Among other medical guests present were Dr. George Ogilvie, Dr. Danford Thomas, and Dr. Aldren Turner. The Savage Club has quite a fair sprinkling of medical members, amongst those present on this occasion being Dr. Abraham, Dr. Symons Eccles, Dr. Sims Woodhead, Mr. Percy Dunn, Dr. Strahan, and Dr. Gubb. That the room was full is certain; that the songs, recitations and other forms of entertainment—not forgetting a "really wonderful" (the clever performer's own description is certainly applicable) card trick—were of the very best quality is also certain; the pleasure of the medical visitors, moreover, was probably not lessened by the fact that after-dinner speeches seem to be "taboo" at the Savage Club. The only touch of local—i.e., medical—colour was an interesting Roentgen Ray demonstration by Dr. F. Low. Last week we thanked the Lord Mayor; this week we tender our thanks to the members of the Savage Club, not only for hospitality, but for the kindly thought which prompted it.

A MEETING of Convocation of the University of London was held on May 10th. The chief business was the re-election of the chairman and clerk of convocation, a motion of the Standing Committee to alter the date of the autumn meeting to the *second* Tuesday in October, and the appointment of members of the Standing Committee.

H.R.H. THE PRINCE OF WALES, who is a Vice-patron of the institution, has consented to lay the foundation stone, on Tuesday, June 21st, of the extension of the University College Hospital Buildings now in course of construction through the generosity of Sir J. Blundell Maple, M.P.

HER MAJESTY THE QUEEN has been graciously pleased to sanction the following appointments to the Order of the Hospital of St. John of Jerusalem in England: Knights of Grace: Sir Richard D. Powell, Bart., M.D. Lond., and Mr. William Hamerton Jalland, F.R.C.S. Eng.

SOME disappointment was felt at the Royal Society's conversazione on Wednesday last that Professor Dewar's recently announced achievements were not demonstrated. It is stated that he has succeeded in liquefying helion as well as hydrogen in fair quantity.

H.R.H. THE PRINCE OF WALES has fixed Wednesday, June 8th, at the Hotel Cecil, for the dinner at which he has graciously consented to preside on behalf of the National Society for the Prevention of Cruelty to Children.

THE IRISH LOCAL GOVERNMENT BILL.

I.

THE introduction of the Irish Local Government Bill, which will no doubt speedily pass into law, marks an important epoch in the history of the sister island. An attempt is being made to introduce into that country those principles and methods of democratic government in rural districts which have already been tried in England and Scotland with, on the whole, satisfactory and encouraging results. However critics may find fault with the county councils and however much the action and policy of some of those councils may have left them open to censure no one doubts that the establishment of such engines of government was an inevitable step in the onward progress of democracy and no one dreams that this step should be or could be retraced. Rural government having thus been put upon a broad popular basis in England and Scotland it was only a question of time and of a short time until similar methods should be applied to Ireland. The circumstances of the sister island are no doubt in many respects exceptional and in not a few painful and difficult, but the political instinct of the British people, which has rarely been in fault in the past, has rightly suggested that a bold effort should be made to extend to Ireland the boon of popular government in rural districts. There is a general conviction among men of the most different political opinions that the attempt is just and wise—one which must of necessity be made and one which, even if attended by some temporary dangers and inconveniences, would, as Mr. Gerald Balfour said in introducing his Bill into the House of Commons, ultimately "work through failure to success." This may be said without implying any serious censure upon the present methods of local government in Ireland. No one who knows the country and who is free from political prejudice can assert that the grand juries have been either generally inefficient or extravagant or corrupt. They are composed for the most part of the leading land proprietors in the different counties, summoned nominally by authority of the High Sheriff, but really owing their position to long prescriptive right, and their discharge of their duties has been on the whole such as might have been expected from the Irish gentry—i.e., it has been well-meaning, absolutely free from all financial corruption, and in some counties singularly efficient; but in other cases it has been slack, inefficient, and unprogressive. The grand jury system, however, stands condemned not because of any gross abuses or admitted inefficiency, but because its whole basis was illogical, one-sided, oligarchical, and entirely out of touch with the tendencies of a democratic age. It

was class government and government by a class which had managed to render itself profoundly unpopular in Ireland. As Mr. Gerald Balfour truly said, "the grand jury system has no principle of growth in it. The tendency of the present day is to throw upon local bodies a number of duties which were never considered in connexion with local administration a generation ago. You cannot put new wine into old bottles and reform of local government has become almost a condition of certain further reforms."

If the necessity for reform in local administration in Ireland be conceded, no one will deny that the present time is a singularly favourable one for passing a thorough and satisfactory measure. In these columns we take no account of party questions, but it must be evident to anyone who has followed the trend of recent politics that the present Conservative and Unionist Government is exceptionally fortunate in bringing forward a first-class Irish measure at a time when men of all shades of political opinion are prepared to give it a candid and sympathetic hearing. That irreconcilable attitude towards reform which has wrought such havoc in other countries and which has before now obstructed progress in Irish affairs seems for the present to have been abandoned by the various Irish parties, who are apparently united in their admission of the necessity for reform and their desire to make that reform thorough, consistent, consonant with the tendencies of a democratic age, and such as will hold out some reasonable prospect of permanence. This unanimity is encouraging and is of good augury for the future of the country.

The measure now before the House of Commons aims at applying to Ireland those general principles of local administration which are already at work in England and Scotland, but with certain modifications which are rendered necessary and expedient by the special circumstances of the sister island. The Scotch system differs in certain particulars from the English. The Irish will differ from both the Scotch and the English. Thus, "in England," as Mr. Balfour said, "we have county councils, district councils, and parish councils. In Scotland we have only county councils and parish councils. ..... In Ireland it is not proposed to establish parish councils. The parish has never been in Ireland an area of local administration, and to create parish councils there would merely be to add a superfluous complication to our scheme. We propose that local administration in Ireland should be distributed between county councils, urban district councils, rural district councils, and boards of guardians. ..... This fourfold division will, however, in the majority of cases be practically reduced to a threefold division, inasmuch as any person who is elected a member of a rural district council will represent the area for which he is elected not only as a district councillor, but also as a guardian, and where the union is wholly confined within the administrative county the union will be coincident with the rural district and the board of guardians will be the rural district council under another name." The county councils will take over the functions at present exercised by the grand juries and presentment sessions of counties, and the rural district councils will take over the powers of the baronial presentment sessions. Any proposed expenditure on roads or other public works payable by the rural district council will be referred by that council to the county council, which may approve or disapprove. If it approves, the work will be carried out by the county surveyor, under the direction of the county council. The county council will also be the sole rate-collecting authority in rural districts. In order to provide a link between the rural district councils and the county councils it is arranged that the chairmen of all rural district councils shall be *ex-officio* members of the corresponding county council. The franchise will in all cases be the existing Parliamentary franchise, with the additional provision that peers and women shall possess votes. Ministers of religion of all denominations are precluded from sitting upon any of the councils. This is a provision which is sure to give rise to much difference of opinion, but the preponderance of view will probably be found to be in favour of the proposal of the Government. The transfer of grand jury powers to county councils will be limited to the fiscal and administrative powers of the grand jury and will not extend to their present criminal jurisdiction or their powers in relation to compensation for malicious injuries. The present Board of Control exercising control over lunatic asylums will be abolished and the appointment by the Lord-Lieutenant of boards of governors and of officers of asylums will cease. "It will hereafter be the statutory duty of county councils to provide and maintain sufficient accommodation for the lunatic poor in the county and to manage the lunatic asylum. For this purpose they will act through a committee of the council, or where an asylum district comprises more than one county through a joint committee, in which each council will be represented in proportion to the expenditure which it has to defray in connexion with the asylum. One-fourth of the members of a committee may be appointed from persons other than county councillors." The appointment and removal of the officers of asylums will rest with the county council, acting through their committee, but the concurrence of the Lord-Lieutenant will be required in the case of a resident medical superintendent and of the assistant medical officer. To this provision, which is so important to the medical profession, we shall subsequently return. As regards the methods of dealing with cases of exceptional distress, unfortunately not an unusual condition of things in Ireland, the Bill provides that when a board of guardians considers a state of exceptional distress to exist within its union requiring relaxation of the conditions of outdoor relief they may apply to the county council. If the county council thinks that the circumstances justify the application they may request the Local Government Board to issue an order authorising the guardians, subject to the prescribed conditions, to administer relief outside the workhouse for a limited time from the date of the order to poor persons of any description resident in the distressed area. If the Local Government Board issues such an order the county will become liable for one-half of the extra expenditure incurred by the board of guardians in administering this special form of relief. These provisions are intended to obviate the necessity for passing a special Act of Parliament each time that such cases arise. The rural district councils will assume the powers and duties of the existing rural sanitary authorities. The county electoral divisions are to be fixed by the Local Government Board. Six towns and cities will be constituted county boroughs—viz., Dublin, Belfast, Cork, Limerick, Londonderry, and Waterford. The government of these boroughs will go on as before except that their councils will be elected on the Parliamentary franchise and they will obtain such powers and duties of county councils generally as they do not already possess. In the case of other towns and boroughs every place which is now or shall become an urban sanitary district will be an urban district under the Bill and its affairs will be administered by an urban district council. All urban district councils shall be the road authority for their district. The urban district councils will have the duty of levying and collecting all rates within their district. *Ex officio* Poor-law guardians are to be abolished. This was an inevitable concession to democratic ideas, although it cannot be truly said that *ex-officio* guardians abused their privileges or contributed an objectionable element to these boards. Their retention was, however, manifestly impossible. The duties hitherto allotted to the guardians as rural sanitary authority will be transferred to the district councillors. The duty of levying and collecting the poor-rate will be transferred in rural areas to the county council and in urban areas to the urban council. Dispensary committees will be abolished and their functions transferred to guardians.

The financial arrangements under the Bill are bold, novel, and ingenious. Their originality, simplicity, and the generous consideration which they show for the special exigencies of Ireland are worthy of hearty recognition, and no doubt have had much to do with the generally favourable reception which the Bill has received. The occupier is to be in future liable for both the county cess and the poor-rate, whether in towns or in rural districts. The distinction between cess and poor-rate will cease, and the two will be collected together as one consolidated rate. In readjustments of rent the financial year 1896-97 is to be taken as the standard and all adjustment of rent is to be made on the assumption that there will be no increase or decrease of poor-rate and county cess taken together as compared with the total rate in the pound for county cess and poor-rate taken together in the standard year. This arrangement secures that any decrease in the rates will go to the benefit of the occupier while any increase will go to his disadvantage. The Bill provides that there shall be distributed for the benefit of the spending authorities in each year out of the Imperial Exchequer a sum equal to one-half of the county cess and one-half of the poor-rate deemed for the purposes of

the Bill to have been paid in respect of agricultural land in the standard year. This sum is to be called "the agricultural grant." Provisions are inserted in the Bill to secure that the benefit of this contribution shall go to the occupier as regards county cess and to the owner as regards poor-rate. The general tendency of these provisions will be, on the one hand, to prevent the landlord having his rents lowered in consequence of any rise in the rates and, on the other hand, to secure the tenant from having his rent raised in consequence of the relief in respect of county cess given by the agricultural grant. When the occupier of the land is also the owner he will get a double advantage out of the grant: as occupier he will get relief in respect of county cess; as owner he will get relief in respect of poor-rate. The Bill provides for union rating and district rating. As regards the former those expenses of the guardians which are now levied separately on an electoral division will be charged on a common fund raised equally over the whole union. As regards the latter the cost of roads and public works, instead of being charged specially to particular baronies, will be charged equally over the whole of the rural district, which will in most cases comprise several baronies or parts of baronies. Each of these changes will have the effect of shifting burdens, lightening them in some quarters and increasing them in others. They must, therefore, be taken into account in calculating temporary adjustments of rent as between landlord and tenant and also the amount and distribution of the agricultural grant. The effect of these provisions will be to increase the agricultural grant by £11,000 or £12,000. The total amount of this grant is reckoned at about £730,000 annually. Certain charges will be excluded—viz., charges for extra police and compensation for criminal injuries, charges in respect of railways, harbours, navigation, and special expenses under the Public Health Acts. These charges are not to be taken into account by the Land Commission in fixing fair rents. It is proposed to follow in Ireland the precedent set by the English Act of 1888 whereby the proceeds of local licence duties were transferred to the local authorities in lieu of certain annual Parliamentary grants. In Ireland the proceeds of the local licences amount to about £200,000, whereas the grants in respect of the maintenance of lunatics and certain Poor-law charges which it is proposed should be no longer paid amount to £244,000. This deficiency it is proposed to cover, and more than cover, by adding to the proceeds of the local licences a fixed annual grant from the Exchequer of £79,000. Out of the total of £279,000 thus made up it is proposed to defray the charges now met out of the grants in aid and the following additional charges: first, one half of the salary for one trained nurse in every union in Ireland if actually employed and possessing the prescribed qualification; and, secondly, where the aggegate rate levied in any year in order to meet the amount of any existing railway or harbour charge in any area exceeds 6*d.* in the pound a sum equal to one half of such excess. An increase in the lunacy charges is expected in consequence of the contemplated transference to asylums of the lunatic poor at present in workhouses.

It is proposed that the grand juries shall meet for the transaction of fiscal and administrative business for the last time at the spring assizes of 1899. The elections for the new bodies will follow immediately afterwards in March. The interests of existing officers have been protected in various ways. Generally speaking, existing officers will either be retained or have the option of retiring with the same allowance as if their office were abolished. The existing county surveyors will not be removable except with the concurrence of the Local Government Board. All new appointments will, of course, be in the hands of the county council. As regards many formal and non-contentious matters power is given to the Lord-Lieutenant in Council to deal with such matters by means of adaptation and regulation orders. These orders must be laid upon the table of both Houses of Parliament and it will be open to either House to object to them in the usual way by an address to Her Majesty.

In the above outline of this very important measure we have closely followed the lines laid down by Mr. Gerald Balfour in his speech introducing it into the House of Commons. In a future article we shall deal more in detail with some of the provisions, especially those affecting the interests and position of the medical profession. There can be no doubt that the Bill is a broad democratic measure conferring great popular benefits and not weighted by any arbitrary or irritating safeguards. The lines of the corresponding English and Scotch measures have been followed, but not in any mechanical or slavish way, and due regard has been paid to the special circumstances of Ireland. There can hardly be any second opinion regarding the generosity and ingenuity of the financial regulations. They aim at conferring substantial pecuniary benefit upon a poor country, at restraining extravagance, and at giving the elective bodies the full benefit of any economy which they may exercise. All distinction of interest between one class of ratepayers and another is, as far as possible, obliterated. Much will depend upon the spirit in which the Act is received and administered. At present the omens are favourable. There is little active opposition to the Bill in any quarter. Some of the Irish Unionists regard it with apprehension, but others, to their great credit, heartily welcome it not only as inevitable but as likely in the long run to confer great practical benefits. The results are in the hands of the people, who may make serious mistakes but who are sure in the end to discover where their true interests lie. It is to be hoped that the gentry, whose existing privileges are to a large extent swept away by the Bill, will accept the new *régime* and seek their natural position as leaders of the people in the elective bodies about to be constituted.

LOCAL GOVERNMENT (IRELAND) BILL: MEMORIAL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following is the memorial presented by the Royal College of Surgeons in Ireland to the Chief Secretary for Ireland in respect of the Local Government (Ireland) Bill:—

To the Right Honourable the Chief Secretary for Ireland.

THE MEMORIAL OF THE PRESIDENT, VICE-PRESIDENT, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

Showeth:—That your memorialists have considered the provisions of the Local Government (Ireland) Bill, so far as they affect the Fellows and Licentiates of this College and the medical profession generally and they respectfully submit for your consideration the following expression of their opinion thereon:—

1. The College regards the existing system of election of poor-law medical being also sanitary officers as very unsatisfactory, inasmuch as it has the effect of giving, and, in fact, has given, predominance in the election of such officers to considerations other than the competency of candidates for office and the necessities of the sick poor. The College, without desiring to deprive the local authorities of their legitimate influence in the selection of medical officers, considers that it should not be open to guardians or dispensary committees to place in charge of the sick poor persons who may be entirely inexperienced and whose competency for the special duties confided to them may be entirely unguaranteed. The College, therefore, submits that all candidates for such appointments should be subjected to a previous competitive examination in which a knowledge of their special duty as medical officers, as sanitary officers, and as public vaccinators could be verified.

2. The College is strongly of opinion that in this Bill adequate provision should be made to enable Poor-law medical officers to retire upon a pension as of right, if incapacitated from duty by ill-health, or upon abolition of their offices, or after completion of the period of service required from Civil servants. The College begs to remind you that the unlimited discretion vested in guardians by the existing law has in numerous cases inflicted extreme hardship on worn-out medical officers and has had the effect of retaining such officers in their appointments long after they had ceased to be capable of efficient duty to the great disadvantage of the sick poor of their districts. The College urges that inasmuch as medical officers have been recognised by Parliament as entitled to pension and have been placed by the Local Government Board in the position of Civil servants in regard to the amount of that pension it is but right that they shall be treated in all respects as Civil servants in this matter.

3. The College submits that the occasion afforded by this Bill should be availed of to improve the sanitary service in Ireland by providing adequate supervision by superintendent

medical officers of health. It must be evident that the system of relegating the sanitation of a district to a dispensary medical officer, uncontrolled by any superior officer and altogether dependent on local guardians, has had the effect in very many instances of rendering nugatory the law provided by Parliament, and the College is of opinion that no improvement in the existing condition of things can be hoped for until a supervising medical officer devoting his whole time to his function shall be provided to superintend the sanitation of the group of districts committed to his care.

4. The College is of opinion that it is indispensable to the efficiency of the future administration of district lunatic asylums in Ireland that the experience and competency of future resident medical superintendents and assistant medical officers should be guaranteed by requiring as a qualification for these offices a sufficient proof of previous service in a public asylum, together with such other safeguard as may be deemed necessary.

5 That the College, having already addressed you on the subject of the future administration of county infirmaries in Ireland, refrains from further reference to the subject.

Your memorialists, therefore, earnestly request you to avail yourself of the opportunity afforded by this Bill to reorganise in regard to the subjects above referred to the public medical service of this country.

(Signed)
WILLIAM THOMSON, Knt., President.
ROBERT L. SWAN, F.R.C.S., Vice-President.
CHARLES A. CAMERON, Kt., F.R.C.S., Secretary of the College.
ROBERT H. WOODS, F.R.C.S., Secretary of Council.

LEAD POISONING IN POTTERIES.

IN answer to the question which Mr. Coghill put to the Home Secretary in the House of Commons on April 22nd as to whether, to prevent the serious evils arising from the use of lead in the manufacture of china and earthenware, he would appoint a small committee of scientific experts to ascertain if it were possible to use a glaze which would be entirely free from lead in its composition, the Home Secretary replied that he was taking steps to secure the services of two eminent scientific experts to test and report on the various glazes, but it must be clearly understood that the inquiry could deal only with the question of the comparative danger or safety of different materials. The further question how far materials found to be harmless, or relatively harmless, lent themselves to the practical requirements of each section of the trade, was one for the manufacturers to decide by experiment. He felt sure that he might count on their coöperation in this matter and their readiness to adopt satisfactory substitutes, if such should be found, for the dangerous glazes now in use.

We were under the impression that the subject had been fully inquired into by a thoroughly competent committee some years ago. And our impression is not wrong. We have before us a copy of a "Report to Her Majesty's Principal Secretary of State for the Home Department on the Conditions of Labour in Potteries, the Injurious Effects upon the Health of the Workpeople, and the Proposed Remedies." The report is dated July, 1893, and was presented to Mr. Asquith, the Home Secretary at that time. The members of the committee were as follows:—S. W. May (Superintending Inspector of Factories), chairman; J. T. Arlidge, M.D., F.R.C.P. Lond., W. D. Spanton, F.R.C.S. Edin., A. P. Laurie, M.A., B.Sc., F.R.S.E., J. H. Walmsley (H.M. Inspector of Factories); and W. Dawkins Cramp (H.M. Superintending Inspector of Factories), secretary. We may briefly abstract their findings and observations.

1. The proposal to substitute leadless glazes must be deemed impracticable after a careful consideration of the evidence.

2. The proposal that all the lead required in the glaze should be first fused (with borax, silica, &c.) and only this "fritted lead" be used in the glaze was worthy of careful examination, especially as the process seemed to involve no very great alteration in the present methods of manufacture.

3. Some firms are now fritting all their lead and claim that it is an improvement on the older methods; others do not regard it as practicable. The fact, however, that more than one important firm is using it for all classes of work shows that it is reasonable to suppose that the fritting of lead might ultimately be found universally practicable.

4. Mr. A. P. Laurie carried out some important experiments with a view of determining the solubility of fritts in weak hydrochloric acid. He found that all the fritts were much better than raw lead, being much less soluble in weak acid and therefore less dangerous to introduce into the stomach.

5. The committee recommended (we repeat that this was nearly five years ago) that steps should be taken by circular from the Home Office or otherwise to bring before manufacturers the advisability of experimenting with and testing the use of glazes and colours in which all the lead has been fritted and their effects upon the health of the workpeople; also that the committee should be empowered to continue investigations as to the composition of glazes and colours with a view of finding out how far it is practicable to make a glaze which shall be harmless to those employed in the manufacture and at the same time shall not injure the ware.

6. The following are quotations from the evidence of practical men and representatives of large potteries. "Fritted lead is as consistent with practical pottery as using the lead in the raw state." "The fritted lead is an easier flux than raw lead." "The workmen have no proof that fritted lead is non-poisonous, but believe it to be so." "Fritted lead can be used universally without injury to the trade, it does better for colours, and increases the brilliancy of the ware." "He never knew" (this came from a witness employed by one of the largest pottery firms) "of a single case of lead poisoning where all the lead was fritted." "Fritted glaze is better for coloured and printed ware as well as for white ware. Colours used in a glaze which has been fritted are not altered. Even the turquoise blue over glaze is fritted and the colour is not affected." The managing director of the same firm said that it would be advantageous to the manufacturers to fritt all the lead before use. When he found that fritted lead was being used for majolica and ornamental ware and that there had not been a case of lead poisoning in the department he turned his attention to the matter. Lead must be used. He found fritted lead was quite satisfactory for glazing both for china and earthenware. The ware is more brilliant and even with constant rough usage he had not observed a piece yet "crazed." He did not think a rule prohibiting the use of raw lead would injure any manufacturer. A district surgeon stated before the committee that at a majolica works in Burslem they use fritted glaze or colour and the health of the workers is good. In a letter placed before the committee two German manufacturers, after referring to the law in Germany, quoted an instance of having to pay a dipper who was affected by the lead and who lost the use of his eyes. They concluded: "We used to use our raw white lead in the glaze, but after the experience we had we now fritt it all." Two English manufacturers wrote: "There is not the slightest doubt that the lead is far less dangerous to the workpeople when vitrified. Nevertheless it is dangerous and all enamel makers have to contend with illness through lead poisoning although no free lead is used. The fact is the acids of the stomach do dissolve glass made from lead. We beg to state that we incline to the opinion of the workpeople you mention, that if the oxide of lead contained in the glaze is fritted before being ground for use the danger of lead poisoning is greatly minimised if not entirely avoided."

Against these statements there is the evidence of three English firms, manufacturers of china and earthenware. The following are extracts from their statement: "Any interference with the amount of free lead in glazes would mean absolute closing of one branch of our manufacture in which we have again and again tried to use fritted lead without success, and it would seriously cripple other branches"; "We have tried the plan of fritting the entire glaze, but without success so far"; "We have experimented for years with glazes but have not succeeded in dispensing with lead in its raw state; when fritted the character is so altered that we have failed to successfully work at it." Another firm wrote: "We have, however, made many experiments of fritted lead, &c., which are certainly encouraging and invite further effort."

Surely the Home Secretary could not have been aware of this inquiry and the unmistakeable trend of its conclusions when he gave the answer that he was taking steps, &c., to

have various glazes tested and reported upon and that he trusted he might count on the cöoperation of the manufacturers in this matter and their readiness to adopt satisfactory substitutes, if such should be found, for the dangerous glazes now in use. Surely the remedy was long ago indicated in the terms of this report which was drawn up after careful investigation nearly five years ago. We earnestly commend these facts to the Home Secretary and trust that in the name of humanity he will take steps to minimise as far as this report indicates it possible the grave liabilities to which the workpeople in potteries are exposed and of which quite recently numerous examples have occurred. We maintain that in view of this report no further inquiry is needed and every moment's delay in the Legislature's bringing reform to bear on this serious question may be responsible for further disaster. We believe that the compulsory use of fritted glaze would be a difficulty to small manufacturers, but if a system could be established by which these could be supplied with the glaze ready for use no valid objection on the score of increased working expenses or practical disadvantages could possibly be urged.

LORD CROMER'S REPORT ON EGYPT FOR 1897.

LORD CROMER'S Annual Report on the Finances, Administration, and Condition of Egypt makes its appearance this year later than usual. Dated Cairo, Feb. 27th, it was not presented to Parliament until the beginning of the present month (May). "As each successive year of the British occupation of Egypt passes by," says his lordship in conclusion, "two facts acquire an ever-increasing degree of prominence. The first is that the present *régime*, which has now lasted for fifteen years, has conferred, and is still conferring, the utmost benefit on the Egyptians and on all who are concerned in the welfare of Egypt. The second is that, whatever be the defects of that *régime*—and it cannot be doubted that, whether the matter be regarded from the English or from the Egyptian point of view, it possesses certain defects—the circumstances are such as to render it impossible to substitute any preferable system of government in its place. A satisfactory solution is certainly not to be found in any premature movement in the direction of more effective Egyptian autonomy, or in internationalising the Egyptian Government, or, lastly, in any combination of either of these two systems."

It would be impossible to state the case more clearly or more truthfully. Egypt having been sick unto death is now out of danger, if not absolutely convalescent, but she requires good food and plenty of it to enable her to grow perfectly strong and healthy. The defects alluded to by Lord Cromer are all remediable, but before they can be made to disappear it is essential that the English officials should be permitted freely and without exotic hindrance "to apply the knowledge they have acquired elsewhere to the good of Egypt." During fifteen years they have had many difficulties to contend with in addition to those indigenous to the soil, and although each year the former have been gradually lessening they still exist to a heartbreaking extent. It is really most unfair to ask the champions of law and order to continue fighting *in perpetuum* with their right arms tied behind their backs. Egypt is in many ways the country of marvels, and not the least of these is the fact that in spite of international entanglement, in spite of the glorious but expensive operations in the Soudan, our Egyptian Minister has been able to lay before Lord Salisbury "a record of appreciable progress in every branch of the Administration."

Following his customary arrangement Lord Cromer begins by explaining the accounts of the preceding twelvemonth, and notwithstanding the "intricacies of the Egyptian financial system" he contrives to convey a remarkably clear idea of his subject in wonderfully few words.[1] During the year the sums accruing to the two international reserve funds (which on Dec. 31st, 1897, showed a united credit-balance of £E.6,600,000), together with the revenue surplus of £E 433,000, amounted altogether to £E.1,443,000; but this large sum, unfortunately, was not clear gain. About £E.467,000 was realised from the sale of Daira and Domains land, which of course means a corresponding reduction in available assets, while the million remaining was more or less absorbed in order to cover extra military expenditure. Apparently the Egyptian Government still owes Her Majesty's Government the sum of £E.571,000; but when finally summing up the situation Lord Cromer is nevertheless able to say, "In spite of the expenses of the Soudan expedition, the aggregate indebtedness of Egypt has, during the past year, been decreased by £E.229,000, or £235,000," which is certainly a very satisfactory consummation.

Under the head "Medical Administration" some interesting facts are noticed. "Over 20,000 patients were received in the Government hospitals during 1897, being about 1000 in excess of the number in 1896. ..... Thirty-five new dispensaries were opened, thus extending medical aid to districts remote from a hospital. Four of the oases of the Libyan Desert, including that of Siwa, have now been provided with medical officers and dispensaries. ..... Kasr-el-Aini Hospital at Cairo, which contains accommodation for 420 patients, is now, in the opinion of competent authorities, in no degree inferior to similar institutions in the most advanced countries in Europe. ..... Four new hospitals were built in the provinces. ..... A bacteriological institute has been constructed and placed under a skilled bacteriologist." The most encouraging item of all, however, is quoted by Lord Cromer from a report by Rogers Pasha: "It is satisfactory to note not only a general improvement in organisation, but a higher tone amongst the Egyptian sanitary officials in the provinces, and now that the reorganisation of the Medical School is being seriously considered, I look for further improvement in this respect." Without a good and honourable executive no administrator can effect reforms. This elevation in tone is one of the most convincing signs of progress that we have so far observed. In this connexion Lord Cromer adds: "I hope next year to be able to report that the reorganisation of the Medical School has been carried into effect. The matter recently formed the subject of special inquiry at the hands of a highly qualified authority, Dr. Cooper Perry, who came from England for this purpose." Considerable space is also devoted to the Cairo Lunatic Asylum and hasheesh smoking.

In conclusion, although it is true that no great advance has taken place in the general sanitation of Egypt, still the subject is fully recognised as a most important one, and as soon as funds are forthcoming we shall no doubt hear of town sewerage on a large scale as well as other important sanitary works. In the meantime "some slight progress is being made"; 376 mosques have been cleansed, 465 cemeteries have been dealt with, the Khalij has been closed, a supply of pure drinking water has been provided in certain provincial towns, slaughter-houses have been built, and everywhere, but especially in Cairo, surface cleanliness has been immensely improved.

[1] The following example will suffice to exhibit the intricacy Lord Cromer alludes to: Owing to international exigencies the expenditure during 1897 had to be returned as £E.429,000 in excess of the estimate, whereas in reality it was £E.35,000 on the right side! A discrepancy of £475,000 sterling, or nearly half a million.

A FOURTH REPORT TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—In my first report to you on the work of the General Medical Council (to which you appointed me as one of your Direct Representatives) I communicated to you instances of serious unconstitutional action on the part of the President of the Council. It was generally hoped, both within and without the Council, that with the appointment of a new President a stricter observance of constitutional procedure would ensue and that the efficiency of the work of the Council would be notably promoted.

I regret to be obliged to report to you that immediately upon the recent appointment to the Presidential chair there has been committed by the President a deliberate attack on the rights of individual members of the Council and a new and very serious infringement of constitutional government.

The facts are as follows. After the November Session of last year I commenced a research among the valuable

archives of the Council to determine — first, the exact position of many legal questions concerning the practice by medical men of their profession; secondly, the methods according to which the legal work of the Council is conducted; and thirdly, the cost to the Council of such legal work.

For several months—i.e., up to April 7th last—I carried out my investigations, visited the office from time to time, and inspected such documents as were necessary for the elucidation of different points, the Registrar producing the same when requested.

In the course of my work I became aware of certain grave matters which I communicated without reserve to Sir William Turner, the then acting chairman. Upon April 7th—the President having been elected on April 5th—I suddenly received notice from the Registrar that he was instructed by the President to refuse me any access to any document or financial paper belonging to the Council unless I had previously obtained the permission of the Executive Committee or of the Council. Having ascertained that the Registrar was acting solely under the President's instruction I wrote to the President and asked him: (1) by what regulation of the Council or legal enactment he sought to debar me of my right and privilege to inspect the documents of the Council for the purpose of preparing work for the Council's session; (2) whether he included all documents in his embargo; and (3) whether he considered that he, like his colleagues, was similarly debarred from inspecting any document unless he had previously obtained the permission of the Executive Committee or Council.

I regret to have to report that the President has complicated his extraordinary action by refusing to answer any of my questions.

The constitutional point thus raised is so simple that I need not extend the position save to explain that of course the Medical Acts and Standing Orders of the Council confer no such power, as that which the President claims, upon that officer, and that I am taking all steps that may be necessary to clear away this novel and foolish hindrance to my work for the execution of which you appointed me.

Cavendish-square, W., May 6th, 1898. VICTOR HORSLEY.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT, 1897.

THE Workmen's Compensation Act of 1897 is one of considerable moment to the medical profession. Out of the vast total of serious accidents to workmen, after making due allowance for those in which the question of compensation may be dealt with by agreement, there must remain many in which dispute will arise on that score, and among these not a few in which there will be need for judicial and authoritative decision of medical points upon which the evidence is inadequate. The Act provides for the appointment of medical referees for the purpose, and the Home Secretary with the concurrence of the Treasury has now formulated the conditions of appointment and the details of the machinery by which the references are to be made. They will be received with satisfaction by the profession. We are glad to see, by the memorandum issued recently,[1] that Sir Matthew White Ridley has recognised the importance of securing the services of men of experience and professional status for this new and important office which will often involve the delicate and difficult task of deciding where medical evidence is conflicting. The medical referee is not to be a witness, but rather an assessor or *amicus curiæ*, a judicial capacity in which a man of less experience than the medical witnesses would find himself in a false position. Wisely therefore the fees have been fixed upon a scale which, though not excessive, is liberal, and the formalities of reference seem to have been carefully planned to meet as far as possible the convenience of the referee and to spare him unnecessary trouble. The references will come to him through the registrar of the county-court, so that they will be in proper order from the outset. Without some provision of the kind there must have been many misdirected applications to the wrong referee, causing loss of time and needless trouble to all concerned. For this and other practical reasons the adoption of the county-court areas seems to offer distinct advantages, and the county-court circuits are conveniently wide and well-defined. It is implied in the memorandum that most of the appointments will be given to those having special experience on the surgical side of practice, and properly so, since the questions referred, whether of diagnosis or prognosis, will usually be of a surgical character. At the same time it seems to be contemplated that a certain number of physicians, and in some districts ophthalmic surgeons also, are to be selected, as the local circumstances may require.

It is difficult to form any estimate of the amount of work which will fall to medical referees in general and still more difficult in respect of any particular circuit. Time alone can show how many disputes will arise and how many of these will call for reference. There would seem to be little probability of extensive recourse to the kind of appeal allowed by Schedule I. (11)—appeal, that is, by the workman direct to the referee for a certificate of continued disability in case the employer proposes to terminate an allowance granted under the Act. Here the workman has to pay a fee to be agreed upon between the referee and himself and in this case alone the Government, having no power to repay the fee out of public funds, have not been able to fix its amount. It may be anticipated that the most reasonable fee will seem excessive and therefore be deterrent to the workman as the weekly allowance at stake must be small. Probably some sort of general understanding as to the fee to be asked in such cases will be arrived at and half-a-guinea would seem to be a proper sum. However, the amount of work under this head is not likely to be large.

The task of selection of suitable referees for every part of the United Kingdom is a sufficiently formidable one, especially as the time is short. That it will be made carefully and with due regard to the importance of the issues at stake is certain, and there should be no lack of candidates of the right stamp in any of the districts. The appointment of medical referee will come to be regarded as one of the most honourable public offices to be held by the profession, and it is a matter of no small importance that at the outset it should be undertaken by men of high standing.

[1] Vide THE LANCET, April 23rd, 1898.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-first meeting of the Royal Commissioners was held at the Council Chamber of the Westminster Town Hall on Monday, May 10th. With the exception of Sir John Dorrington and Mr. Cripps all the Commissioners were present. The commencement of the sitting was occupied with the examination of Mr. Deacon, who, on the suggestion of Sir George Barclay Bruce, had prepared a paper giving in tabular form a digest of the evidence which he had prepared to give the Commissioners at the last meeting. This table we hope to print *in extenso* shortly. Sir Alexander Binnie, the chief engineer of the London County Council, was present at the sitting and was prepared to give evidence with regard to the diagrams which Mr. Deacon had put in at a former meeting of the Commissioners. Arrangements had, however, been made that the representatives of the several London vestries should be heard at this sitting and Sir Alexander Binnie's evidence was therefore postponed until next week. The evidence given by Mr. Deacon with regard to the reservoirs and the comparative cost of the Welsh scheme and the Staines reservoir scheme will be best understood from the study of the table which we shall publish shortly, and in the present place we record the chief facts which were given in the course of his cross-examination.

Mr. DEACON said that the length of the aqueduct from Wales to London would be about 150 miles. With regard to the distribution of the water Mr. Deacon thought that the water from Wales and from the Thames should be distributed mixed or separate as occasion required. He did not approve of a supply of water from the Thames and looked upon it as a necessary evil, for an evil it undoubtedly was. The water derived from Wales would probably be filtered before distribution and the filtration would take place at Elstree, where the chief reservoir north of the Thames would

be situated. There was no sanitary reason for the filtration of the water.

In answer to Sir GEORGE BARCLAY BRUCE the witness said that there was very little peat in the Welsh water, and in answer to Mr. MELLOR he stated that it contained only a small quantity of sand after a heavy rainfall, that this sand would be deposited in the reservoir in Wales, and that none of it would pass through the aqueduct. The height of the Welsh reservoir was to be 606 ft., and that of the reservoir at Elstree 312½ ft., above the sea level.

In answer to Mr. RICKARDS, counsel for the Chelsea Company, the witness said that the level of the filter beds at Elstree would be about 30 ft. below that of the reservoir, and water to Westminster which is at present supplied by the Chelsea Company would be supplied from Elstree. In another answer to Mr. Rickards the witness said that he did not remember the height of the Putney Heath reservoir, which is the one which at present supplies Westminster with water. With regard to the calculations he had given in his table he had not reckoned the cost of connecting the reservoir at Elstree with the reservoirs which were at present in the hands of the various metropolitan water companies. With regard to the amount of the flow of the Thames the witness pointed out that if a largely increased supply were taken from the Thames so that the flow of the river was reduced to 200,000,000 gallons a day, the amount of water passing down the Thames through London would be reduced to a greater extent than had previously been the case. It followed from that that in a year of drought during the summer and autumn months the state of the River Thames would be more impure than it is at present in consequence of the further reduction of the flow. With regard to the expenses which would be incurred in carrying out the Welsh scheme in addition to those given in the table, the witness said that he had not allowed anything for Parliamentary and legal expenses, and an allowance for these must be added to that necessary to carry out the connexions between the new reservoirs which would be made to receive the Welsh water and those already in use and belonging to the metropolitan water companies.

In answer to Sir GEORGE BARCLAY BRUCE the witness stated that the filtration of the water at present was not adequately carried out. Dr. Frankland and Dr. Koch agreed that drinking water should not contain more than 100 bacteria per cubic centimetre. At the present time water supplied by the metropolitan companies sometimes contained a great excess of bacteria; in one case as many as 16,000 instead of 100 had been found per cubic centimetre. Filters were not always in proper working order. Dr. Frankland's reports gave an example in which a filter bed belonging to the Southwark and Vauxhall Water Company had been used with unsatisfactory results, and he had also recorded a "microbial epidemic" which had affected all the London water except that supplied by the New River Company.

In answer to Major-General SCOTT the witness said that it was true that the conditions obtaining in the rockwork below the filter-beds had not been thoroughly investigated, but the witness thought that the microbes passed through the filter-beds.

In answer to the CHAIRMAN he said that the chief causes of difficulty with regard to the filtration were (1) deficiency in the area of filter beds; (2) deficient storage capacity which prevented the water from "settling" for a sufficient time before it was put on the filter beds; and (3) improper management of the filter beds. Improvements had recently taken place, but formerly it was not unusual for a workman to go round and make holes in a filter bed to allow water to pass through.

Mr. WILLIAM FRANCIS DEWEY, vestry clerk to the parish of St. Mary, Islington, gave evidence with regard to the water-supply of that district. The parish of Islington, he said, contained over 3000 acres. The population in 1895 was over 336,000 and at the present time it was computed to be 350,000. The annual rateable value amounted to nearly £2,000,000. The vestry had undertaken to supply electricity to the parish for public and private purposes and had taken over the powers of the Commissioners for Baths and Public Washhouses. The water-supply was derived from the New River Company and the supply had been found on the whole to be satisfactory "both as to quantity and quality," the vestry, however, complained of the price which they had to pay for water which was used for non-domestic purposes—for flushing sewers, for baths, and for the works connected with electric lighting. The amount of water used for baths was very considerable. At the Hornsey-road baths nearly 38,000,000 gallons were used annually and at Tibberton-square baths, 24,000,000 gallons. The price charged for this water was at the rate of 7½*d.* per 1000 gallons. For street watering nearly 64,000 gallons were used, for which the price paid was 8½*d.* per 1000 gallons. The charges made by the company were based on the New River Company Act of 1852 (15 and 16 Vict. cap. cxl.).

On referring to the Act, the CHAIRMAN suggested that if the water were taken by meter the statutory charge was 6*d.* per 1000 gallons, and that if the vestry bought the water by meter that that was the price which should be paid for it. The witness said that the vestry had protested against the price which they were asked to pay for the water and he was given to understand that the New River Company would rather not have their custom. The only grievance which the vestry had against the company was the excessive price which they had to pay. At the present time an artesian well was being sunk for the vestry and the engineer reported that there was a good supply.

Mr. BAGGALLAY, Q.C., on behalf of the New River Company, asked how it was that the vestry, if they were aggrieved as to the price which they paid, did not avail themselves of the Act of 1847 (10 Vict. cap. xvii.). Under this Act the price might have been fixed by two justices. The following may be quoted as the reasoned opinion of the vestry as to the charges at present made:—

> The vestry approves of the provisions of the Metropolitan Water Act of last year so far as those provisions extend, but is of opinion that its scope should be extended so as to provide for the constitution of a tribunal for apportioning an equitable rate of charge for non-domestic supplies and that such tribunal should also be empowered to settle disputes as to the rates of charge for such supplies similar to that provided for by Section 68 of 10 and 11 Vict. cap. 17, for determining disputes as to the annual value of a tenement supplied with water.

The CHAIRMAN suggested that this inquiry might possibly awaken the vestry to a knowledge of the present right which they had to insist on the paying of nothing in excess of the statutory charges.

Mr. HUGH ALEXANDER, chief sanitary inspector for the parish of St. Leonard, Shoreditch, gave evidence on behalf of his vestry. Resolutions to the following effect have been passed by the vestry:—

> 1. That this vestry are of opinion that the management of the water-supply of the metropolis should be under one authority, and that authority should be the London County Council. 2. That unless and until the water-supply is placed under the management of the London County Council this vestry are of opinion (*a*) that the local authorities should have the power to approve or disapprove, from a sanitary standpoint, of the cisterns or other means of storage enforced by the water companies, and to require a sufficient pressure to supply the highest dwellings in their respective districts; (*b*) that local authorities should be empowered to expend money for the purpose of having the water analysed from time to time. 3. That this vestry are of opinion that the area of supply of the East London Waterworks Company in this parish should be transferred to the New River Company (in accordance with the vestry's resolution of Sept. 15th, 1896).

Mr. ALEXANDER said that the East London Water Company had introduced a constant supply within the parish for more than twenty years. A constant service was introduced by the New River Company to the district in the year 1877 and cisterns were removed from the houses. In the summer of 1895 the East London Water Company ceased to give a constant supply. A Commission of Inquiry was appointed by the Government and Colonel Ducat and the late Dr. Barry reported that in their opinion the inconvenience experienced by consumers was much aggravated by the want of proper means for domestic storage of water; and, further, that for the protection of the consumer against unavoidable temporary intermissions of the supply they considered that there would be distinct advantage in having properly designed means for storage of water in houses; and that although nothing could be further from their intention than to advocate any return to the old defective cisterns with their moveable wooden covers they advocated the provision of "properly designed cisterns." In consequence of this report cisterns had been reintroduced, but they were not satisfactory and the vestry had no power to insist on the form of cistern which should be adopted. Mr. Alexander showed a drawing of a patent cistern and air valve which he had invented. The cistern contained 200 gallons. He wished, he said, that it had been invented by someone else so that he might have spoken more fully of its merits. He pointed out, however, that the cistern was self-cleansing, the principle being, as the Chairman remarked, that nothing accumulated at the bottom of the cistern because in consequence of its sloping arrangement all solid

particles at once went down the supply pipe to the consumer. In the course of his evidence the witness showed samples of water which he stated had been taken from the cisterns of the inhabitants of Shoreditch. One of these bottles contained a deposit of nearly an inch of solid matter and another contained a dead mouse. At the present time the witness said that both the New River and the East London companies insisted that cisterns should be supplied to houses to which they gave fresh supplies. He contended that it was impossible for vestries to ensure that cisterns should be kept carefully cleansed and that it was necessary that properly designed cisterns should be provided. The only one with which he was acquainted was that which he had himself invented. The number of supplies in the district was 15 800 and the cost of the cistern which he had invented was £10.

Towards the end of the sitting Mr. HENRY GEORGE HILLS gave evidence on behalf of the board of works of the Wandsworth district.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN extraordinary meeting of the Council was held on May 4th, Sir WILLIAM MACCORMAC, Bart., the President being in the chair.

Mr. C. S. Tomes, F.R.S., was introduced and after signing the by-laws was admitted a Fellow of the College.

A letter was read from the Secretary of State for Foreign Affairs enclosing a copy of a despatch from the British Ambassador at Rome, which reported that the Italian Government do not contemplate making any change in the laws with respect to the status of medical men of other countries in Italy.

The PRESIDENT stated that he had written to Lord Salisbury expressing the thanks of the Council for the steps he had taken in the matter.

The Council proceeded to consider the report of the General Medical Council on the Midwives Registration Bill and finally adopted in the main the conclusions at which the General Medical Council arrived, embodying their opinion in the following resolutions:—

(1) That the Council consider that it is desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risk which they now incur from the unregulated practice of midwives, many of whom are ignorant and unskilful, and most of whom pursue their calling without due medical supervision.

(2) That to this end it is desirable that every woman who, not being a registered medical practitioner, engages for gain in practice as a midwife should be subjected to legal regulation and control.

(3) That any measure which proposes merely to protect the title of "Midwife," however defined, and does not make illegal and penal the unlicensed practice of midwifery for gain, cannot be regarded as offering a sufficient safeguard in the interest of the public health.

(4) That some central body should be established by Parliament whose functions should include the framing of the conditions under which midwives may be licensed and of the regulations under which alone they shall be allowed to practise.

(5) That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued to the local sanitary authorities by the State Department which is concerned with the public health.

(6) That every woman before beginning to practise as a midwife in any district should be required to take out a licence to be granted by the local sanitary authority of the district under the prescribed conditions and regulations. That such licence should be subject to annual renewal and should be revocable at any time in case the holder is proved to have infringed any of the prescribed regulations.

(7) That any unlicensed woman, whether calling herself a midwife or not, who, not being registered under the Medical Acts, practises as a midwife for gain in any district should be made liable to a substantial penalty.

(8) That the conditions under which licences are granted should include the production of satisfactory evidence of character and of training and experience in the conduct of natural labour and in the nursing of lying-in women and new-born infants.

(9) That the regulations under which licensed midwives are required to practise should include provisions securing that the midwife shall immediately seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the new-born infant.

And that in so far as the Bill is not in accordance with these general principles the Council do not regard it as offering an adequate solution of the question under consideration and would earnestly deprecate its passing into law in its present form.

It was further resolved that these resolutions should be communicated to the Privy Council and also to those who have charge of the Bill in the House of Commons.

The Council also directed that Mr. Rowland Humphreys, the honorary secretary of the Midwives Bill Committee, should be informed of the decision of the Council.

A letter was read from the Solicitor of the College reporting that the claim of the College for exemption from corporation duty was heard on April 28th and 29th and that judgment was given in favour of the Crown except as regards the conservator's house, which was considered to be exempt from duty, this partial success relieving the College from having to pay the costs of the Crown.

The question of the desirability of appealing against the decision of the Court was postponed to the next meeting.

THE ROYAL SOCIETY CONVERSAZIONE.

THE past year of scientific work has been a busy one judging from the harvest of results exhibited in the rooms of the Royal Society at Burlington House last Wednesday. In number, interest, and variety the exhibits were, we venture to think, a distinct advance on recent years. Every branch of science seems to have contributed its own piece of evidence of the activity of the workers concerned. And the audience was an appreciative one, finding subject for reflection and fruitful discussion on every side.

Perhaps the latest advance in medicine was best represented in the instructive exhibition for which Sir Richard Thorne, K.C.B., F.R.S., and Dr. Copeman were jointly responsible. The subject of the exhibit was the bacteriology of vaccine calf lymph in which the unquestionable advantages of glycerinated lymph were convincingly illustrated. The exhibit was divided into two sections, glycerinated and unglycerinated lymph, with cultures showing the growth of adventitious microbes in the one, and the absence of development in the other. Medical visitors would be attracted, too, by the simple forms of sphygmo-manometers shown by Dr. Leonard Hill and Mr. Harold Barnard, F.R.C.S. The instruments possess the advantage that in measuring arterial pressure the charges due to temperature for barometric pressure are avoided. Photography is an ever-widening field of study and begins now to form a large portion of the annual exhibits. Mr. Mackenzie Davidson showed his ingenious and accurate localising apparatus and close by could be seen some excellent and realistic stereoscopic x-ray photographs by means of a Wheatstone stereoscope. Mr. Campbell Swinton exhibited some pretty x-ray effects. He demonstrated the existence of a positively electrified stream proceeding from the anode and in the opposite direction to the cathode stream. On the same table was a Roentgen camera showing the position, dimensions, and form of the source of the x rays in a Crookes tube. The image of the active anti-cathode area is thrown upon a fluorescent screen by means of a pinhole, and the image may be photographed. Mr. Swinton also showed a cathode ray lamp consisting of an x-ray tube containing a piece of lime. The electrical bombardment of molecules upon this substance raises it to a very high temperature and it at length becomes brilliantly incandescent and as powerful as the arc light. It is said that the efficiency of the light appears to be much superior to that obtained in ordinary incandescent electric lamps and may even exceed that of the arc. The application of the Wimshurst machine to radiography was shown by Mr. Wimshurst himself. The advances in colour photography were illustrated in Dr. Selle's process by Mr. R. B. Roxby. In this process the negatives are taken through red, blue and green glass screens respectively. From these, three collodion positives are produced, which after development in complementary colour baths are super-imposed, the result giving the complete picture. Mr. C. V. Boys showed some little glass plates made with 230 zones inscribed thereon, in consequence of which they become similar to a lens in effecting the formation of an image. Photographs taken with these lens substitutes were exhibited. The extraordinary photographic results recently obtained by Dr. W. J. Russell formed an exceedingly interesting exhibit. The pictures taken on photographic plates were produced as is now assumed by vapours from certain metals and certain organic bodies. These emit a radiation which acts upon the silver film. One very interesting application of the discovery is the intensification of faded writing by its means. Thus on wrapping a nearly illegible

piece of writing by Priestly in contact with a negative a photographic result was obtained decidedly more distinct than the original. The process is, of course, conducted in the dark.

Wireless telegraphy was practically demonstrated by Professor Oliver Lodge and Dr. Alexander Muirhead. One station was at the end of the library and the other in the secretary's room, each station receiving and transmitting alternately. The increasing application of micrography in the arts and industries was in evidence. Thus Mr. T. Andrews showed by means of micrographic illustrations the deterioration in steel rails under known conditions of main line service. This study has afforded a means of determining the microscopic structure and composition best adapted to ensure endurance and safety in rail service. A similar demonstration was given by Professor Roberts-Austen and Mr. J. E. Stead, the former also exhibiting an ingenious apparatus designed by M. Berthelot for the determination of high temperatures. Close by, Mr. A. E. Tutton showed an ingenious method particularly applicable to the investigation of the thermal expansion of crystals. An exhibit which attracted considerable interest was that of Professor W. A. Herdman and Professor R. Boyce showing the causes of the colouration of healthy and unhealthy green oysters and the connexion between oysters and disease. The presence of a copper compound was micro-chemically demonstrated. The Marine Biological Association had its usually occupied corner and this time the subject of exhibition was "The Adaptations of Marine Animals to their Environmet, illustrated by Living Examples of the Higher Crustacea." One of the largest displays was the excellent series of photographic pictures brought back by Sir Norman Lockyer from the expedition which took observations in India of the total solar eclipse of Jan. 22nd, 1898. Similar observations made by the Eclipse Committee of the British Astronomical Association were also admirably illustrated in a group of photographs. A pretty experiment, which was missed by many because it was demonstrated in a room on the ground floor, was that undertaken by Mr. C. T. R Wilson. It referred to the production of cloud by the action of ultra violet light. When the light from an arc lamp is brought by means of a quartz lens to a focus within a vessel containing moist, dust-free air, a bluish fog gradually develops along the path of the light. The effect is entirely prevented if the ultra violet rays be cut off by interposing a sheet of glass or mica, no cloud or rain resulting under these conditions even when supersaturation is brought about by sudden expansion. Possibly the small particles which give rise to the blue of the sky are produced by the ultra-violet rays of sunlight absorbed in the upper layers of our atmosphere. On the same floor was exhibited the apparatus used in the navy for determining the position of ships afar off. The accuracy of this range-finder under good conditions of working may be taken as 1 per cent. at 3000 yards. The instruments were exhibited by Professor Barr and Professor Stroud. Lastly, Mr. Joseph Gould repeated some of his instructive experiments in relation to resonance, and the latest addition consisted of a demonstration of dust-heaps vibrating under the influence of a vibrating bar of metal, and bursting in a most odd way into whirling nebulæ and ultimately condensing into gravitating systems of circular mounds.

The guests and Fellows were received by the President, Lord Lister, and there was a distinguished and very representative company present.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6351 births and 3750 deaths were registered during the week ending May 7th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 21·5 to 18·4 per 1000, further fell last week to 17·4. In London the rate was 16·9 per 1000, while it averaged 17 8 in the thirty-two provincial towns. The lowest rates in these towns were 10·9 in Croydon, 12·4 in West Ham, 12·9 in Cardiff, and 13 3 in Burnley; the highest rates were 20·8 in Newcastle-upon-Tyne, 20·9 in Huddersfield, 21·1 in Oldham, and 26·2 in Liverpool. The 3750 deaths included 408 which were referred to the principal zymotic diseases, against 473 and 468 in the two preceding weeks; of these, 157 resulted from measles, 114 from whooping-cough, 50 from diphtheria, 34 from diarrhœa, 29 from scarlet fever, 23 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Birkenhead, Burnley, Preston, or Huddersfield; in the other towns they caused the lowest death-rates in Portsmouth, Croydon, and Swansea; and the highest rates in Wolverhampton, Derby, Gateshead, Sheffield, and Liverpool. The greatest mortality from measles occurred in London, Bristol, Wolverhampton, Halifax, and Bradford; from scarlet fever in Burnley; and from whooping-cough in Liverpool, Salford, Sheffield, Gateshead, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 27 in London, 3 in West Ham, and 3 in Liverpool. One fatal case of small pox was registered in Gateshead, but none in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in those hospitals and in the London Fever Hospital was 2271 on Saturday last, May 7th, against 2384, 2334, and 2302 at the end of the three preceding weeks; 209 new cases were admitted during the week, against 217, 241, and 205 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 283 and 274 in the two preceding weeks, further declined last week to 226 and were 104 below the corrected average. The causes of 51, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Cardiff, Manchester, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Salford, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 24·2 to 21·8 per 1000 in the five preceding weeks, further fell to 21·7 during the week ending May 7th, but exceeded by 4·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·7 in Leith and 18 6 in Paisley, to 23·1 in Dundee and 34 0 in Perth. The 654 deaths in these towns included 29 which were referred to whooping-cough, 27 to measles, 24 to diarrhœa, 5 to "fever," 4 to scarlet fever, and 1 to diphtheria. In all, 90 deaths resulted from these principal zymotic diseases, against 88 and 96 in the two preceding weeks. These 90 deaths were equal to an annual rate of 3 0 per 1000, which was 1·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 25 and 34 in the two preceding weeks, declined to 29 last week, and included 18 in Glasgow, 4 in Paisley, 2 in Edinburgh, and 2 in Aberdeen. The deaths from measles, which had increased from 14 to 35 in the three preceding weeks, declined to 27 last week, of which 23 occurred in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 5 and 2 in the two preceding weeks, rose again to 5 last week, and included 4 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 151 and 137 in the two preceding weeks, further declined to 129 last week, and were slightly below the number in the corresponding period of last year. The causes of 29, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·3 and 25·4 per 1000 in the two preceding weeks, declined again to 24·5 during the week ending May 7th. During the past four weeks the death-rate in the city has averaged 25·1 per 1000, the rate during the same period being 17·8 in London and 20·1 in Edinburgh. The 164 deaths registered in Dublin during the week under notice showed a decline of 6 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 13 and 9 in the two preceding weeks; of these, 3 resulted from whooping-cough, 3 from

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1898.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1898.	NOTIFIED CASES OF INFECTIOUS DISEASES.									DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.									Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.		
LONDON	4,504,766	4	1221	744	2	122	2	23	347	—	2455	7·1	—	461	54	122	246	—	27	1	45	966	2·8	6240	18·1	137
West Districts.																										
Paddington	127,480	—	19	13	—	1	—	1	10	—	44	4·5	—	27	—	3	4	—	2	—	—	36	3·7	160	16·4	105
Kensington	172,174	—	28	19	1	5	—	—	17	—	70	5·3	—	29	2	1	3	—	—	—	1	37	2·8	224	17·0	164
Hammersmith	107,370	—	35	6	—	—	—	1	6	—	48	5·8	—	21	—	2	3	—	—	—	1	32	3·9	152	18·5	160
Fulham	126,275	—	61	22	—	—	—	—	11	—	94	9·8	—	4	1	5	8	—	—	—	2	15	1·6	139	14·5	103
Chelsea	56,713	—	26	21	—	1	—	—	4	—	52	7·0	—	14	2	5	3	—	—	—	—	24	3·2	145	19·5	115
St. George Hanover-square	80,648	—	12	14	—	4	—	1	2	—	23	5·3	—	6	—	—	1	—	2	—	—	10	1·6	91	14·7	155
Westminster	62,574	—	6	17	—	1	—	—	2	—	27	6·7	—	10	—	4	10	—	—	—	1	25	6·2	94	23·3	163
St. James Westminster	22,200	—	4	—	—	1	—	—	1	—	6	3·5	—	4	—	—	—	—	—	—	—	4	2·3	29	17·0	200
North Districts.																										
Marylebone	140,483	1	28	18	—	4	—	1	11	—	63	5·8	—	30	—	5	5	—	—	—	2	42	3·9	246	22·8	128
Hampstead	78,775	—	12	9	—	1	—	—	5	—	27	4·5	—	2	1	—	6	—	1	—	1	9	1·5	80	13·2	216
St. Pancras	243,416	—	59	33	—	6	—	4	17	—	119	6·4	—	11	2	6	6	—	—	—	—	25	1·3	343	18·4	135
Islington	244,616	—	100	60	—	12	—	1	17	—	190	7·2	—	59	3	12	27	—	2	—	3	106	4·0	469	17·7	162
Stoke Newington	34,660	—	13	3	—	—	—	2	1	—	19	7·1	—	—	—	1	3	—	—	—	1	5	1·9	42	15·8	73
Hackney	219,630	—	68	59	—	10	—	1	18	—	156	9·3	—	9	2	16	13	—	1	—	2	43	2·6	263	15·6	109
Central Districts.																										
St. Giles	37,519	—	5	3	—	1	—	—	5	—	14	4·9	—	3	—	1	1	—	1	—	1	6	2·1	59	20·5	136
St. Martin-in-the-Fields	12,424	—	1	1	—	2	—	—	—	—	4	4·2	—	—	—	—	—	—	—	—	—	—	—	11	11·5	214
Strand	23,284	—	3	16	—	—	—	—	2	—	23	12·9	—	1	1	1	—	—	—	—	—	4	2·2	41	23·0	60
Holborn	30,016	—	5	9	—	1	—	—	4	—	17	7·4	—	13	—	2	2	—	—	—	1	18	7·8	71	30·8	203
Clerkenwell	66,120	—	18	11	—	—	—	—	5	—	34	6·7	—	10	2	5	5	—	—	—	1	23	4·5	117	23·1	129
St. Luke	41,076	—	17	9	—	—	—	—	2	—	28	8·9	—	4	1	1	7	—	—	—	—	13	4·1	97	30·8	118
City of London	29,088	—	7	3	—	1	—	—	—	—	11	4·9	—	—	—	—	—	—	—	—	—	—	—	32	14·3	66
East Districts.																										
Shoreditch	121,485	—	45	20	—	4	—	1	16	—	86	9·2	—	7	4	1	10	—	1	—	3	26	2·8	192	20·6	139
Bethnal Green	129,027	—	30	20	—	8	—	—	19	—	77	7·8	—	25	—	6	16	—	2	—	1	49	5·0	219	22·1	176
Whitechapel	80,659	—	8	14	—	3	—	—	5	—	30	4·9	—	1	1	1	4	—	1	—	1	9	1·5	111	18·0	92
St. George-in-the-East	48,241	—	10	12	—	—	—	—	2	—	24	6·6	—	4	1	1	5	—	—	—	1	12	3·2	85	23·0	114
Limehouse	58,661	—	16	2	—	1	—	—	5	—	24	5·3	—	4	—	1	5	—	1	—	3	14	3·1	58	21·8	146
Mile End Old Town	112,528	—	26	20	—	2	1	—	9	—	58	6·7	—	12	1	2	5	—	—	—	1	21	2·4	153	17·7	116
Poplar	170,220	—	66	28	—	8	—	—	8	—	110	8·4	—	18	3	7	22	—	2	—	2	54	4·1	269	20·6	183
South Districts.																										
St. Saviour Southwark	24,562	—	5	4	—	2	—	—	2	—	13	6·9	—	1	—	1	—	—	—	—	—	1	0·5	40	21·2	156
St. George Southwark	60,466	—	23	12	1	1	—	1	3	—	41	8·8	—	4	3	4	2	—	—	—	—	7	1·5	87	18·8	123
Newington	123,183	—	32	22	1	1	—	1	15	—	71	7·5	—	14	—	4	1	—	1	—	4	14	1·5	183	19·4	157
St. Olave Southwark	11,288	—	3	2	—	—	—	—	3	—	8	9·2	—	1	—	1	2	—	—	—	—	2	1·4	17	19·6	188
Bermondsey	85,738	—	16	6	—	1	—	—	13	—	36	5·5	—	3	3	—	—	—	—	—	—	9	1·4	118	17·9	136
Rotherhithe	40,849	—	8	9	—	1	—	1	4	—	23	7·3	—	7	2	1	—	—	—	—	1	11	3·5	67	21·4	132
Lambeth	304,073	—	102	35	—	9	1	1	14	—	162	6·9	—	16	4	7	11	—	5	1	2	46	1·9	406	17·4	123
Battersea	171,921	—	74	42	—	2	—	2	18	—	138	10·5	—	18	2	6	5	—	1	—	—	32	2·4	218	16·8	116
Wandsworth	212,526	—	58	39	—	3	—	1	21	—	122	7·9	—	19	—	11	3	—	—	—	—	34	2·2	226	14·5	110
Camberwell	261,189	2	48	27	—	6	—	—	20	—	113	7·9	—	23	2	10	21	—	1	—	2	59	2·9	314	15·7	115
Greenwich	180,441	—	42	34	—	16	—	1	17	—	110	7·9	—	18	3	—	16	—	1	—	1	29	2·8	247	17·8	126
Lewisham (excluding Penge)	88,662	—	20	14	—	2	—	—	2	—	38	5·6	—	11	6	—	3	—	—	—	2	21	3·1	115	16·9	161
Woolwich	41,478	—	13	8	—	1	—	—	7	—	29	9·1	—	5	—	—	2	—	—	—	3	10	3·1	63	19·8	110
Lee	28,717	—	19	15	—	—	—	—	4	—	38	12·5	—	1	1	—	2	—	—	—	—	7	2·3	40	13·1	79
Plumstead	62,631	—	20	3	—	—	—	2	—	—	35	7·3	—	6	2	3	5	—	—	—	1	13	2·7	77	16·1	144
Port of London	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 28 cases of membranous croup.

† Including deaths from membranous croup.

"fever," 1 from scarlet fever, 1 from diphtheria, and 1 from diarrhœa. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 2·4 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough, which had been 2 and 3 in the two preceding weeks, were again 3 last week. The deaths referred to different forms of "fever," which had been 2 in each of the two preceding weeks, rose again to 3 last week. The mortality from scarlet fever and from diarrhœa corresponded with that recorded in the preceding week. The 184 deaths in Dublin last week included 36 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths of infants showed a further increase, while those of elderly persons were below the numbers recorded in any recent week. Five inquest cases and 1 death from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 13, or nearly 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1898.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during April in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·1 per 1000 of the population, estimated at 4,504,766 persons in the middle of this year. In the three preceding months the rates had been 8·2, 7·8, and 7·4 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, St. James Westminster, Hampstead, St. Giles, St. Martin-in-the-Fields, City of London, and Whitechapel; while they showed the largest excess in Fulham, Hackney, Strand, Shoreditch, St. Olave Southwark, Battersea, and Lee. Four cases of small-pox were notified in London during April, against 3 in each of the three preceding months; of these, 1 belonged to Westminster, 1 to Marylebone, and 1 to Camberwell sanitary areas. No small-pox patients were under treatment during last month in any of the Metropolitan Asylum Hospitals. The prevalence of scarlet fever in London showed a slight increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Poplar, St. George Southwark, Battersea, Lee, and Plumstead. The Metropolitan Asylum Hospitals contained 2770 scarlet fever patients at the end of April, against 2621, 2640, and 2358 at the end of the three preceding months; the weekly admissions averaged 218, against 232, 214, and 208 in the three preceding months. The prevalence of diphtheria in London during April showed a further decline from that recorded in the two preceding months; this disease was proportionately most prevalent in Chelsea, Westminster, Hackney, Strand, Holborn, St. George-in-the-East, and Lee sanitary areas. There were 923 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of April, against 1055, 1042, and 1009 at the end of the three preceding months; the weekly admissions averaged 111, against 132, 140, and 129 in the three preceding months. The prevalence of enteric fever in London during April showed a slight decline from that recorded in March; among the various sanitary areas this disease showed the highest proportional prevalence in St. Martin-in-the-Fields, Bethnal Green, St. Saviour Southwark, and Greenwich. The Metropolitan Asylum Hospitals contained 59 enteric fever patients at the end of April, against 106, 84, and 64 at the end of the three preceding months; the weekly admissions averaged 12, against 11 and 12 in the two preceding months. Erysipelas was proportionally most prevalent in Shoreditch, Bethnal Green, St Olave Southwark, and Bermondsey sanitary areas. The 23 cases of puerperal fever notified in London during April included 4 in St. Pancras, 3 in Stoke Newington, 2 in Battersea, and 2 in Plumstead sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, April 30th, the deaths of 6240 persons belonging to London were registered, equal to an annual rate of 18·1 per 1000, against 22·0, 21·4, and 20·8 in the three preceding months. The lowest death-rates in the various sanitary areas were 11·5 in St. Martin-in-the-Fields, 13·1 in Lee, 13·2 in Hampstead, 14·3 in City of London, and 14·5 in Fulham and in Wandsworth; the highest rates were 22·1 in Bethnal Green, 22·8 in Marylebone, 23·0 in Strand and in St. George-in-the-East, 23·1 in Clerkenwell, and 30·8 in Holborn and in St. Luke. During the four weeks of April 966 deaths were referred to the principal zymotic diseases in London; of these, 461 resulted from measles, 246 from whooping-cough, 132 from diphtheria, 54 from scarlet fever, 45 from diarrhœa, 27 from enteric fever, and 1 from an ill-defined form of continued fever. These 966 deaths were equal to an annual rate of 2·8 per 1000; no fatal cases of any of these diseases were registered during the month under notice in St. Martin-in-the-Fields or in the City of London; in the other sanitary areas they caused the lowest death-rates in Hampstead, St. Pancras, Whitechapel, St. Saviour Southwark, St. George Southwark, Newington, and Bermondsey; and the highest rates in Westminster, Islington, Holborn, Clerkenwell, St. Luke, Bethnal Green, and Poplar. The 461 fatal cases of measles were 184 above the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Paddington, Hammersmith, Westminster, Marylebone, Islington, Holborn, Bethnal Green, and Rotherhithe sanitary areas. The 54 deaths referred to scarlet fever were 11 below the corrected average number; the mortality from this disease was highest in Shoreditch, St. George Southwark, Bermondsey, and Lewisham sanitary areas. The 132 fatal cases of diphtheria were within 3 of the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Westminster, Hackney, Clerkenwell, Bethnal Green, and Lee. The 246 deaths from whooping-cough were 39 below the corrected average number; the mortality from this disease was highest in Westminster, St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, and Poplar sanitary areas. The 27 fatal cases of enteric fever were 3 below the corrected average; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 45 deaths from diarrhœa were 9 below the corrected average number. In conclusion, it may be stated that the mortality in London last month from these principal zymotic diseases was nearly 14 per cent. above the average, owing to the excessive fatality of measles, the deaths from each of the other zymotic diseases being below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was last month equal to 137 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Fulham, Stoke Newington, Strand, City of London, Whitechapel, and Lee; and the highest rates in St. James Westminster, Hampstead, Holborn, St. Martin-in-the-Fields, St. Luke, St. Olave Southwark, and Woolwich.

THE SERVICES.

NAVAL MEDICAL SERVICE.

THE under-mentioned Fleet-Surgeons have been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets: Thomas Lyle Horner; Edward Elphinstone Mahon, C.B.; and John C. Birkmyre Maclean.

The following appointments are announced:—Deputy Inspectors-General: Thomas Bolster to Hong-Kong Hospital; Thomas L. Horner to Haslar Hospital; and William Cook to the *Crescent*. Fleet-Surgeons: Richard D. White to the *Ramillies;* John Tyndall to the *Excellent;* Gerard J. Irvine to Haslar Hospital; and William B. Drew to Royal Marine Depôt, Walmer. Staff-Surgeons: Norman L. Richards to the *Dido* and William S. Lightfoot to the *Pembroke*. Surgeons: A. E. Kelsey to the *Victory*, additional; D. W. Hewitt to the *Vivid*, additional; and Algernon C. Bean to the *Triton*.

ARMY MEDICAL STAFF.

Surgeon-Major H. E. R. James succeeds Surgeon-Lieutenant-Colonel H. Grier as second in command and Instructor of the Army Medical Depôt and Training School, Aldershot. Surgeon-Captain Jameson and Surgeon-Captain Beach join at Woolwich for duty. Surgeon-Major Carl[illegible]

is transferred from Dublin to the Cork District. Brigade-Surgeon-Lieutenant-Colonel Supple has embarked in the *Dunera* for service in South Africa.

Surgeon-Major Patrick J. Nealon, M.D. R.U.I., half-pay, retires from the Service, receiving a gratuity. Surgeon-Major Francis H. Treherne, from the Seconded List, to be Surgeon-Major, vice E. D. Bringhurst-Farmar.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel Hendley, C.I.E., is appointed to be Inspector-General of Civil Hospitals, Bengal. The services of Surgeon-Major Thompson (Madras), and Surgeon-Major Kavasji Cursetji Sanjana (Madras) are replaced at the disposal of the Government of Madras. Surgeon-Lieutenant-Colonel Ranking, Secretary to the Board of Examiners, is appointed to act temporarily as Surgeon-Superintendent of the Presidency General Hospital, Calcutta, in addition to his own duties, vice Brigade-Surgeon-Lieutenant-Colonel Crombie, retired.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major G G. Sparrow resigns his commission.

VOLUNTEER CORPS.

Artillery: 1st Argyll and Bute: Thomas Harvey Thomson, M.D., to be Surgeon-Lieutenant. *Rifle:* 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment: Surgeon-Captain J. W. Martin to be Surgeon-Major. 2nd (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Major M. H. Taylor to be Surgeon-Lieutenant-Colonel.

THE ROYAL MILITARY TOURNAMENT.

The air is so full of "wars and rumours of wars" that little or nothing is necessary at the present moment to stimulate public enthusiasm in regard to things naval and military. Nevertheless we welcome the announcement that the Royal Military Tournament will for the nineteenth time be held at the Agricultural Hall on Thursday, May 19th, and be continued until June 2nd. The pageant "Shoulder to Shoulder" will be representative of the periods 1596, 1704, 1801, and 1884, when the sister services fought side by side at Cadiz, at Gibraltar, at Alexandria, and at El Teb. The "combined display," or mimic battle, at the conclusion of each performance will this year be descriptive of the capture of Benin city and among the sailors and marines taking part in the display are many who actually shared in the dangers and honours of the expedition. During the earlier portion of the tournament the military ride will be carried out by the Royal Horse Guards (the Blues), while during the latter part of the time it will be performed by the Seventh (Princess Royal's) Dragoon Guards from Norwich. The Royal Navy will be present in twice the strength of last year and not only will they take part in the pageant and combined display but they will also give performances as a field battery, armed both with 9-pounder and 12 pounder guns. That Major-General Henry Trotter and his committee will be well supported we have no doubt, but we may remind our readers that the entire profits of the tournament, with the exception of an amount sufficient for necessary expenses, are distributed among naval and military charities.

THE SOUDAN EXPEDITION.

The active Soudan policy lately inaugurated has necessarily given rise to certain corresponding disadvantages. Although the amount of money so far spent has been almost infinitesimal in comparison with the magnificent results achieved "it is, nevertheless, obviously true," in Lord Cromer's estimation, "that that money might have been spent on other objects of unquestionable utility." It is impossible to eat one's cake and have it. The Egyptian Legislative Council and Assembly approve of the Soudan expedition and in the same breath press on the Egyptian Government the desirability of reducing taxation. Sir Elwin Palmer is an able financier, but we venture to think that even his powers will be unequal to the problem of taking one from one and leaving one. The total Soudan expenditure since March, 1896 (when it was decided to advance on Dongola), inclusive of a sum of £E.213,000 which is provided for in the estimates for the current year, has been £E.1,850,000, or in round numbers £1,900,000 sterling. Of this amount about £E.750,000 has been expended on railways and telegraphs. The balance represents extraordinary military expenditure, properly so-called; and considering the magnitude of the operations—to say nothing of the complete success which has attended Sir Herbert Kitchener's arms—it is probable that never before were similar results obtained at such an inexpensive rate.

ANNUAL MESS OF THE VOLUNTEER MEDICAL STAFF.

Sir Joseph Fayrer, Bart., presided at a most successful mess of the Volunteer Medical Staff at Limmer's Hotel on May 4th. The date unfortunately clashed with the Lord Mayor's banquet to the medical profession, yet the number who sat down was only one less than last year. The toasts were "The Queen," "H.R.H. the Prince of Wales, President of the Volunteer Medical Association," "The Volunteer Medical Association," "The Visitors" and "The Chairman." Among the guests were Colonel Campbell and Colonel J. W. Smith-Neil, Scots Guards; Colonel Alt, Colonel Roberts, Colonel Hardcastle, Colonel Kellar, Colonel Leese, Colonel Lucas, and Surgeon-Major Bedford, A.M.S., &c. Major-General Trotter and Surgeon-Colonel O'Farrell, P.M.O., who had accepted invitations, were on the sick list and unable to attend. Surgeon-Captain C. Graham Grant was responsible for the excellent musical programme and Surgeon-Captain R. Fletcher for the general arrangements. Sir Joseph Fayrer, in response to the toast of his health, made an eloquent speech on the present condition and the hopes and aspirations of the Army and Volunteer Medical Services.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The official inspection and examination of the present class of regimental stretcher-bearers took place on Wednesday last at the Queen's Westminster headquarters, James-street, S.W., when a large number of officers, non-commissioned officers, and men, representatives of the volunteer corps of the Home District, went through a searching ordeal at the hands of Surgeon-Major E. M. Wilson, C.M.G., Army Medical Staff, and Surgeon-Lieutenant R. M. Cooper, Grenadier Guards. After the inspection in line the class was taken through the stretcher and hand-seat drill and then each member had a *viva voce* examination in "First aid." At the conclusion Surgeon-Major Wilson addressed the men and expressed himself very pleased with the excellent manner in which the work had been done throughout. He then presented the prizes to those who were successful at the prize competition held during the previous week. The London Scottish Rifle Volunteer Corps won the Hamilton Challenge Bowl and will hold the same until the next competition. In the unavoidable absence of Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, Surgeon-Captain R. R. Sleeman was in command.

THE SPANISH-AMERICAN WAR.

There has been really nothing of great importance to chronicle since the reception of the news of the crushing defeat of the Spanish fleet at Manila. The expected naval battle in the vicinity of Puerto Rico has not taken place. The United States are sending 5000 troops as a landing force at Manila and it is asserted that, in spite of the transport and military difficulties and the prejudicial effects on the health of the troops which will probably have to be encountered at this season, an American force will soon be sent to Cuba. The United States will naturally spare no effort to bring the war to an end if possible. Surgeon-General Senn (who ranks as a lieutenant-colonel) of Illinois has relinquished a lucrative practice to join the medical service of the United States.

THE ARMY BOOT.

With reference to the proceedings which have recently taken place in the House of Commons regarding the army boot Mr. William Hickson, President of the Northampton Manufacturers' Association, writes to the *Times* calling attention to the fact that the army contracts have not been undertaken in the borough of Northampton for several years and stating that Northampton manufacturers could, if they had the opportunity, supply any number of boots more suitable than the article now delivered.

DEATHS IN THE SERVICES.

Surgeon-Captain James Walker, A.M.S., at Jacobabad, Upper Sindh, on April 23rd, from pneumonia, aged twenty-eight years.

Deputy Surgeon-General Samuel Bowen Partridge, I.M.S. (Bengal), C.I.E., at his residence at Anerley, aged sixty-nine years. The deceased was one of Her Majesty's Honorary Surgeons and was lately a member of the India Office Medical Board. He also at one time held the post of

Professor of Surgery and Anatomy at the Calcutta Medical College and was surgeon to several hospitals in India.

HER MAJESTY'S VISIT TO NETLEY.

The arrangements made for the Queen's visit to Netley to-day (Saturday) are:—Her Majesty will leave the Windsor station of the Great Western Railway at half-past two o'clock in the afternoon by special train and will travel *viâ* Reading to Basingstoke; thence the Royal journey is over the South-Western line to Netley, which will be reached at half-past four. The Queen will leave Netley on her return at half-past five and arrive at Windsor at half-past seven.

THE LATE INDIAN BORDER WAR.

The Afridis are certainly a remarkable people; they have apparently quite accepted their position, quietly settled down, and ceased to molest us in the Khyber. The health of our troops still in the field continues to be good.

LIEUTENANT-GENERAL SIR GEORGE WHITE.

The late Commander-in-Chief in India, Sir George White, who had the misfortune to fracture his leg before leaving India, has not yet sufficiently recovered to take up the duties of Quartermaster-General of the Forces.

Surgeon Arthur R. Bankart, R N, has been appointed a Member of the Fourth Class of the Royal Victorian Order.

Correspondence.

"Audi alteram partem."

"THE DIPLOMA OF THE APOTHECARIES' SOCIETY."

To the Editors of THE LANCET.

SIRS,—The letter of Mr. Pope in THE LANCET of May 7th is so extraordinarily incorrect as to facts and issues that it must not be allowed to pass unchallenged. The statements in the letter may be summed up as follows. The action of the General Medical Council in prosecuting a certain L.S.A. Lond. for calling himself "Physician and Surgeon" is the outcome of the late election for a Direct Representative. Had a general practitioner been elected instead of Mr. Horsley the Council would, Mr. Pope suggests, have been prevented from carrying out such prosecution. I need hardly say that the conclusions at which Mr. Pope has arrived are entirely erroneous. The prosecution in question was decided upon long before Mr. Horsley's election and at the time when all the three Direct Representatives were general practitioners.

Further, to say, as Mr. Pope does, that our latest Direct Representative "has absolutely nothing in common with the general practitioner" is to make an assertion that could not be justified and one which I am sure would not be upheld by a dozen men in the whole profession. The result of the late election is in itself a striking proof of the inaccuracy of such a statement. It would be difficult, if not impossible, to find anyone in the whole profession who is more cognisant of the wants and cares of the general practitioner than Mr. Horsley. His many years' service as President of the Medical Defence Union made him daily and intimately acquainted with the troubles and dangers which surround them. For many years Mr. Horsley has worked hard in the interests of medical men generally, and to obtain for them their just rights and further protection of their practice and titles by amended legislation. He has spared neither money, valuable time, nor health and strength to ameliorate the condition of general practitioners, and whenever any action is being fought for true reform he is always found in the forefront of the battle. With regard to the unwisdom of the prosecution referred to by Mr. Pope I am sure all will agree, but he is entirely mistaken as to its origin and initiation.

I am, Sirs, yours faithfully,

A. GEORGE BATEMAN.

Devonshire-street, W., May 11th, 1898.

"PLAGUE MEASURES IN HONG-KONG."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 29th there is an annotation under the above heading in which apparently some of the Government officers are adversely criticised and, according to the writer, are presumed to be ignorant of the usual rules and regulations governing sanitation. After such a long interval it is possible that the subject will not be of much interest to your readers, but on the principle of hearing both sides of the question I trust you will see your way to publish a few remarks from one who has had eleven years' experience of the colony and most of it as assistant to the health officer of the port—more especially as your article has been published verbatim in the local newspapers. Quarantine, which incurs excessive expenditure and involves vexatious restrictions on shipping, is *per se* a relic of bygone days, and is, in my opinion, only justified when all the local conditions of each place are minutely studied and the amount of good to be derived therefrom thoroughly understood. The introduction of the recommendations of the Venice Conference *en masse* here at any rate and, I shrewdly suspect, in many other places, may well be characterised as "too ridiculous."

Hong-Kong is not, like London, a final port at which emigrants disembark and proceed to earn their living, but it is simply a port of call to which by far the larger majority come for a day or two only—some never even leaving the steamer—and then proceed on to their destination. We have the small number of 830,000 immigrants a year, or 2500 a day, to deal with, coming from places from six hours' to six days' distant and speaking every variety of dialect known and unknown to Chinese scholars. To medically inspect all these; to take the addresses of the various boarding-houses at which they are to stop—houses absolutely unknown to these ignorant coolies even after they have stopped there; to compel them to remain there until the incubation period of the disease has elapsed—which is what I take to be meant by "obtaining a guarantee that the individuals in question would remain at these addresses for a period sufficiently long to be placed under some supervision"; and to keep under observation those from a ship where a case of disease has actually occurred, seemed, and still seems, to me to be "too ridiculous" if not impossible. If this course was not recommended by the Venice Conference I am in error and quite mistaken as to the suggestions actually made. The staff of medical men, interpreters, and police required for this undertaking would be enormous and the delay and detention of vessels ruinous to all trade.

The recommendations of the Conference were to be undertaken to save the colony from small-pox, cholera, and plague. Small-pox is, as everyone knows or is presumed to know, an Eastern scourge and rages periodically all round Hong-Kong from Canton to Japan, and yet we have never had the least trouble in the way of an epidemic. Vaccination here is in full force with a Government vaccine institute and glycerinised lymph. Fifty cases (local and imported) in hospital at one time out of 250,000 inhabitants is the extent of a local epidemic. I only ask the writer to contrast this state of affairs with epidemics of this disease at home. Cholera epidemics are always prevalent in some place or other from Singapore to Shanghai and even in Japan. It is as an epidemic absolutely unknown here, thanks to our water-supply on which Government has lavishly and ungrudgingly spent millions, and the supply is now and has been for some time unequalled anywhere in the world. Plague was no doubt imported, but nothing short of the absolute intervention of Providence could have kept it out with our daily communication with China, on which we depend for our food-supply. It has come, and cases will crop up year by year as long as Chinese are Chinese, to a smaller extent in proportion as Government devote their attention to the proper housing of the natives and the sanitation of the town—far better objects on which to spend revenues than harassing shipping, which is all that quarantine ever does. I disclaim any idea of boasting, but one cannot well refrain from comparing the results of sanitary measures here carried out by various Government departments, as far as plague is concerned, with the results in India. Directly an epidemic occurs anywhere Government receives information from the consuls and medical officers at the various ports and is kept posted up to date on the subject. Bills of health are never looked at or even asked for in Hong-Kong.

I do not know what is meant by "England was forty years ago in the same position as Hong-Kong now is." As far as small-pox, vaccination, drainage, and water-supply are concerned, a great portion of England is fifty years behind this colony at the present time. Such

a state of affairs as existed at Gloucester, Maidstone, Richmond Asylum, &c., is an impossibility here. What we do and what we have done for the safety of the colony, long before the Venice Conference was ever heard of, is as follows: Whenever an epidemic breaks out in a port that port is declared infected and the governor in council may prohibit immigration and importation into this colony of all Chinese from the place infected; every vessel from thence is boarded and inspected—not by a custom-house officer (as I once saw done in London) but by a duly qualified medical man. If there are no cases of sickness the vessel is immediately released. If a case of disease exists it is promptly landed into an infectious hospital (which I venture to think compares not unfavourably with similar institutions elsewhere), the ship is disinfected and detained for twenty-four hours or longer at the discretion of the health officer of the port and if no further cases occur, released. This, I think, is absolutely sufficient and at any rate is all that is properly practicable with 2500 people a day to deal with.

I am afraid this letter is a very long one, but I for one take exception to a paper like THE LANCET inferring that this colony is behind the times in matters of sanitation, whereas in fact the responsible officers are men who in addition to professional knowledge bring also to bear on this subject a knowledge of local conditions and requirements of which the writer of the article in question seems absolutely ignorant. In conclusion, I would mention that we are so far behind England that the Government actually employs a qualified veterinary surgeon who daily inspects every animal slaughtered for food and every market in the place and I should much like to know in how many places in England such a very proper and very sanitary measure is carried out.

I am, Sirs, yours faithfully,

Medical Department, Hong-Kong, April 1st, 1898. J. BELL.

*** Whilst gladly printing the above letter we cannot pretend to agree with some of its contentions. The Venice Convention was not intended to apply merely to ports like London, but even as regards that port Mr. Bell describes conditions in Hong-Kong which agree in almost every detail with the arrival in this country of Russian and German transmigrants who passed through England to the United States during the cholera prevalence of 1892–95 and who were treated on exactly the lines which he describes as being "too ridiculous." Then again, Mr. Bell is correct, as he surmises he may be, in assigning to the Venice Convention a conclusion which finds no place in that treaty, but he is incorrect as to the diseases with which the Venice Conference had to do. It was solely concerned with plague. We are glad to endorse what he says as to the excellent sanitary work done in Hong-Kong and we know how ably the sanitary administration of the colony was utilised in the last outbreak of plague; but we hold that where such work and administration exist, the principles of the Venice Convention are adapted to deal with the introduction of such a disease as plague, although it is highly probable that they may need some modification in details.—ED. L.

"THE WALKING VALUE OF THE LESSER TOES OF THE HUMAN FOOT."

To the Editors of THE LANCET.

SIRS,—Permit me to say, with reference to Mr. Heather Bigg's quotation from "The Human Foot," that my test as to whether the toes are habitually used is a very simple one. Is the skin of the front part of the sole free from callosities? I cannot imagine this condition to exist if much walking be done, unless the toes collectively be used. When the toes are firmly pressed against the ground the long flexors, which are to the plantar arch as bowstrings or tie-rods, tend to include in it the heads of the metatarsal bones and so to uplift them. When these are borne down by the weight of the body the place of contact is determined by the position of the fixed toes; there is no sliding and therefore no friction. This advantage is of necessity lost when the tendons are attached to the heads of the metatarsal bones. Moreover, the extension of the base of support and the capacity to press on the ground all across the foot, even when the metatarso-phalangeal joints are bent, as in hill-climbing, must be of advantage, I, however, have not claimed for the smaller toes a "paramount value"; but I adhere most fully to my opinion that most people use them and that, in proportion as they are used, they are useful.

I am, Sirs, yours faithfully,

Gloucester, May 7th, 1898. T. S. ELLIS.

THE EARLY DIAGNOSIS OF MEASLES,

To the Editors of THE LANCET.

SIRS,—During the late epidemic of measles I have made one or two vain attempts to stop the spread of the disease by early isolation and have kept the other members of the family daily under observation from the time of their separation till they in turn fell ill. For a fortnight at least prior to the appearance of the influenza symptoms, although they seemed to be perfectly well and had a good appetite, the temperature persistently remained at 97°, but it at once commenced to rise directly the running of the nose and eyes commenced. I think that in cases where we are in doubt whether children have taken the infection or not this may be of service in helping us to come to a correct decision.

I am, Sirs, yours faithfully,

Surbiton, May 6th, 1898. F. P. ATKINSON.

"THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE CORPORATION DUTY."

To the Editors of THE LANCET.

SIRS,—Referring to your annotation on this subject, it is a matter of some regret that you have been unable to publish the case *in extenso*. The following extract may be of interest to some Members: "In delivering the judgment of the court in favour of the Crown Mr. Justice Wright said the section provided an exemption for property legally appropriated and applied for the promotion of science ..... On the authorities cited it could not be said that the property of the Royal College of Surgeons was legally appropriated and applied for the promotion of science at the time of the assessment. At the time of the original charter science might have been the main object, but the actual object at the present day was to be gathered from the later charters and the by-laws. *That object mainly was the granting of certificates or diplomas to persons desiring to become surgeons.* The balance-sheets showed that the largest source of income and expenditure was the examinations. The evidence brought before the court failed to show that the promotion of science was the main object."

The Council has always met proposals for reform or requests for the enforcement of certain by-laws with the stock argument that the College is a purely scientific institution and that its *sole* object is the promotion of the science and art of surgery. This fallacy has been exposed over and over again by Mr. Jonathan Hutchinson and others. The Council has, as we know, an immense respect for a judicial decision, especially when this is in its favour, as was the judgment in Steele *v.* Savory. We trust, therefore, that it will in future be kind enough to remember that the main object of the College as defined by a court of law is "the granting of diplomas to persons desiring to become surgeons," and that we shall hear no more of the "purely scientific" twaddle.

I am, Sirs, yours faithfully,

May 9th, 1898. W. G. DICKINSON.

PNEUMONIA, A MULTIPLE AFFECTION,

To the Editors of THE LANCET.

SIRS,—In a very interesting annotation on "Streptococcic Pneumonia," in THE LANCET of May 7th, p. 1275, you observe: "No attempt has been made in this country to differentiate what is ordinarily called 'pneumonia,' which is the name of a lesion and not of a disease, into the various diseases of which it may be a manifestation." That this is not correct will appear from a reference to a paper which I read before the Section of Medicine in the Royal Academy of Medicine in Ireland on Friday, Nov. 19th, 1897, on "Pneumonia, a Multiple Infection." An abstract of my paper was published in THE LANCET of Dec. 4th, 1897,

p. 1459. The paper itself was published in full in the *British Medical Journal* of Jan. 1st, 1898, and also in the *Dublin Journal of Medical Science* for January, 1898. I would ask you kindly to quote the two concluding paragraphs of the paper in question.

In conclusion, I venture to submit that there is clinical evidence to show that a true pneumonitis may occur in any one of the four diseases with which this communication deals—that is to say, erysipelas, influenza, tuberculosis, and enteric fever. Further, it is reasonable to suppose that in each case the pneumonitis is directly due to a localisation of the specific poison of the disease in the lung, whether that be a micro-organism itself or a toxin derived therefrom. Indeed, in respect of the four diseases named, the evidence, from a bacteriological standpoint, in favour of such a view is incontrovertible.

As regards enteric fever the influence of season and weather in determining pneumonic trouble is, no doubt, considerable; but it cannot be accepted as paramount or exclusive. And if it is objected that the bacilli typhi abdominalis of Eberth have not as yet been often found in the lungs or sputum of enteric fever patients I am justified in attributing this to the comparative infrequency with which, so far, search has been made for these bacteria in the pulmonary organs. Here, in any event, an almost untrodden path of investigation lies open to the adventurous footsteps and the keen perception of our Irish pathologists and students of bacteriology.

In my paper I show that the streptococcus pyogenes plays a part that is second to none in the production of influenza-pneumonia.—I am, Sirs, yours faithfully,

JOHN WILLIAM MOORE, M.D. Dub., F.R.C.P. Irel.

Fitzwilliam-square West, Dublin, May 7th, 1898.

THE DISTAL AERIAL CONVECTION OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—In your impression of April 9th attention is once more drawn to the question of distal aerial infection from small-pox hospitals, and it is evident that the last word has by no means been spoken on the subject. Since the theory of distal infection was first propounded by Mr. Power and adopted by the Local Government Board as a "good working hypothesis" it has been defended from attack with a persistence which is somewhat suggestive of a wavering faith.

There can be no doubt that a working hypothesis may be a very helpful thing, even though it may not be true; the atomic theory of light was such a one and it was superseded. "I began," said Harvey, "to think whether there might not be a motion in a circle"; that was his working hypothesis, but he did not stop there, for he proceeds to say, "this I afterwards found to be true," and that working hypothesis remains good to this day. Mr. Power and those who think with him have as yet attained the first stage only; they are thinking whether there may not be a motion in a circle, but they have not yet proved that it is so.

The recent case of Harrop *v.* the Corporation of Ossett (the *Times*, March 18th, 21st, and 23rd) shows this very clearly, for an experienced judge, after hearing such able exponents of the distal aerial theory as Mr. S. Murphy, Dr. Sinclair White, and Dr. Priestley, is not convinced, while the evidence of Dr. T. Orme Dudfield, Dr. Savill, and Dr. T. F. Ricketts serves to show that an influential body of the medical profession still finds difficulty in accepting the views so tenaciously upheld at Whitehall.

That a small-pox hospital in a poor and crowded locality may be, and usually is, a source of infection to the surrounding neighbourhood is not denied; it is when we come to inquire for the causes of the spread in its vicinity that doubt and difficulty arise, and it is impossible to agree with Dr. Priestley that so long as a small-pox hospital is allowed to be a source of danger, whether it be by aerial infection or by maladministration, it does not concern a medical officer of health as a matter of fact, for the question is not merely of academic interest, seeing that its solution must be of some importance, not as an argument for or against placing small-pox hospitals in crowded localities, but in view of the selection of a site within a mile of any human dwelling.

In every small-pox epidemic it is found that a certain percentage of cases around a hospital can be traced, apart from any question of maladministration, to ordinary known channels of infection, such as the incomings and outgoings of nurses, staff, tradesmen, patients, and friends of patients, and these are and must invariably be intensified as we approach such a centre as a small-pox hospital; but even after the most searching inquiry a residuum remains to which no clue has been discovered and of these it is said that they diminish in number as we get further from the hospital, which is not invariably the case, and that they are not in excess along the main approaches, which we should have no right to expect, for the people who walk in a street are not always those who dwell in it. The elimination of this residuum is always a matter of extreme difficulty, as has been shown by Dr. Orme Dudfield, Dr. Savill, and others, even when the investigation has taken place during the progress of an epidemic, much more after a lapse of weeks or months, yet it is upon the complete elimination of these cases that the theory of distal aerial infection is based. That the theory has never been disproved is no argument in its favour for the same might be said of the wonders worked by the diviner's rod. The main question is whether the theory fits in with the facts; if it does not, then it has not come to stay but must make way for some other that will. Facts, it may be said, are few, but if this is the case it would surely better become the Local Government Board to set in motion the wonderful machinery at its command for such inquiry in the public health service than to bolster up a theory in which few outside its own body will be found to believe. It is easy and sometimes convenient to treat matters of ten years ago as ancient history and as of little moment, but the fact remains that the discussion on the dangers of small-pox hospitals before the Society of Medical Officers of Health in 1885 is the most important one ever held on this subject and that the difficulties then suggested have never been met. The divergent views held as to the distance through which small-pox virus may be carried through the open air were well shown in the Report of the Hospital Commission and more recently in the Ossett case, but the point has never been settled even approximately, nor am I aware of any series of experiments with a view to its solution. Observations are wanted, especially in the country, where facts can be ascertained with much more precision than in a populous centre. There must be many available from medical officers of health and medical practitioners throughout the country if only they could be collected. The chief difficulty, however, in accepting the distal infection theory remains to be noticed—viz., the startling immunity which has over and over again been observed in large bodies of presumably susceptible individuals living near to small-pox hospitals and among whom, according to the distal aerial theory, small-pox should have appeared with an intensity proportioned to their nearness to the centre of infection. No explanation is offered for these remarkable exemptions from the incidence of a disease which (within limits still undefined) is acknowledged to be infectious above all others, and when it is borne in mind that by the chance discovery of its origin in a single case a clue might be given which would sweep away the better part or even the whole of the residuum on which the "circle argument" is based, the conclusion is irresistible that the theory of distal aerial infection rests on a very imperfect basis and that much more evidence is required before it can meet with general acceptance.

I am, Sirs, yours faithfully,

EDWARD T. WILSON, M.B. Oxon, F.R.C.P. Lond.

May 2nd, 1898.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Decline of Plague Mortality in Bombay.—Important Lecture by the Medical Officer of Health.—The Outbreak at Calcutta.—The Increase of Plague in Kurrachee.

THE past week has shown an improvement in the general mortality in Bombay, but there has not been a continuance of that rapid fall in the death-rate which gave so much hope the week previously. About 1200 deaths have been registered—still continuing more than double the normal number—a rate of about 75 per 1000 per annum.

A very able and suggestive lecture has been given on the Plague by Brigade-Surgeon-Lieutenant-Colonel T. S. Weir, the medical officer of health of Bombay. In the course of his address he laid down the following measures for scientifically resisting the disease: 1. Measures for the destruction or immunisation of rats or other carriers of the microbe. 2. Measures for the retreat or escape of the population from the area of invasion. 3. Measures for the immunisation or protection of the population against the

microbe. 4. Measures for the destruction of the microbe. He held that if the rat population could be destroyed or rendered immune in advance of the disease the spread of the disease might be stopped. The microbe would be starved. The simultaneous destruction of rats over a large area is very difficult, but it ought to be attempted. Brigade-Surgeon-Lieutenant-Colonel Weir states that in his opinion the influence of the rat is necessary for the occurrence and spread of an epidemic of plague and that the evidence shows that the disease is only slightly contagious and that something more than infection from sick to healthy human beings is required to explain the development and propagation of an epidemic. In this connexion may be mentioned a theory which has recently been started and which deserves further investigation. It is suggested that under normal conditions and endemically plague is a mild disease, but that under special conditions, such as by intensification in the rat, it develops into a virulent disease. It is also asserted that an epidemic of plague among human beings having subsided lingers as a mild glandular affection. These theories, however, were not touched upon in Brigade-Surgeon-Lieutenant-Colonel Weir's lecture. He holds that segregation of the healthy to be of any effect must be carried out in advance of the disease and on a large scale. There is little doubt that if a population could be moved away from an area in which plague had appeared and away from the line of migration of rats or other rodents it might be saved, but the population must be moved in advance of the disease. This may be possible in a moderate sized town or in a village, but it is not practicable in a large city like Bombay. He argues, therefore, how much cheaper, how much quicker, how much better, and how much easier to inoculate the people. Brigade-Surgeon-Lieutenant-Colonel Weir is a great supporter of M. Haffkine's prophylactic fluid for plague and he gave facts and figures which seem unanswerable. He further laid down two very important propositions: (1) that the simple glandular form of the disease is practically not infectious; and (2) that the organism of plague does not seem to be able to develop virulently or to survive where there are free currents of air. In the simple glandular form of the disease therefore he considers it is not necessary to remove the patient from a well-ventilated building. He criticised very severely some of the measures of the Plague Committee and stated that the measures were such that the living to escape detection almost ceased to call in medical men and that not 1 per cent. of the people who died had seen a medical man in their last illness. If some of the statements contained in this address can be corroborated by further investigations they will modify very considerably the measures to be adopted in future for plague epidemics.

The few cases which have been discovered in Calcutta have been instantly isolated, the "contacts" separated, and the infected buildings burnt or thoroughly disinfected.

In Kurrachee the disease seems to be increasing daily, 195 cases with 129 deaths having occurred up to date.

April 22nd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Salford and its Sewage.

AT the meeting of the Salford Council on May 4th Alderman Walmsley, M.R.C.S.Eng., J.P., stated that in July last a conference was held in the Salford Town Hall of representatives of the authorities in the watershed of the Irwell. 42 authorities intimated their willingness to send representatives and 67 persons, including members of the Salford Town Council, were present. The following motion was carried almost unanimously: "That in the opinion of this meeting of representatives of local authorities in the Irwell watershed the time has arrived when, owing to the advancement of scientific knowledge, it is no longer necessary or desirable that the Local Government Board should in all cases continue to insist on the disposal of sewage by land treatment." It was sent up to the Board, "but of course nothing had come of it." He thought that a step should now be taken and that a further conference should be held to formulate a plan which would either enable them to get an Act of Parliament or to compel the Local Government Board to alter its attitude on the land question. "The whole of the country was groaning under the condition laid down by the Local Government Board. The Salford Corporation had been tormented beyond measure over this business and so had the Manchester and other corporations." The Board seems to be a veritable Old Man of the Sea and the corporations so many poor Sinbads. Even in combination they are at present unable to shake themselves free.

Cottages for the Poor.

At the same meeting it was resolved to erect 36 cottages in King-street and Queen-street, the contract for which was £4678. It was stated that there was a strong feeling against tenement dwellings and so it was decided to build these cottages, each of which will have four rooms, 12 ft. by 12 ft., and the rent is to be 5*s.* 6*d.* a week. No doubt there will be a sufficient yard space and width of street, and if so there are many advantages on the side of separate dwellings over the ants'-nest sort of arrangement in what are sometimes called barrack dwellings. The destruction of cottage houses, partly on their merits and from the encroachment of railways and from various improvements, necessitate municipal action for making provision for the displaced population and this seems likely to become more extended in the future.

Manchester Sewage Again; Proposal to Revert to the Culvert Scheme.

At the meeting of the City Council held on May 4th Alderman Richards moved: "That the resolution passed on April 20th last in relation to the report of the Rivers Committee be rescinded and that the committee be instructed to revert to the culvert scheme." The City Council does not shine in the discussions on sewage disposal. There is a large amount of ignorant guessing as to estimates and the advocates of the culvert scheme have been captivated by its apparent simplicity. It is also a curious thing to see how difficult it seems to be for most of the chemically minded members of the council to see any good thing in the bacterial method, and this affection of the mind is not confined to the City Council, for no one has written more strongly against it than a deservedly eminent chemist from whom one would have expected something different. He blesses the culvert scheme, which is undoubtedly the outcome of chemical despair, or, to put it more accurately, of the despair of the chemical advisers of the Rivers Committee. It appears as if the chemical mind were unable to grasp the idea of vital action and was sceptical as to the enormous part it plays in the operations of nature. It would really be pitiful to go through the arguments adduced in favour of one scheme and against the other. But the matter is not yet settled and the discussion stands adjourned on the motion of Sir John Harwood.

Suggested Purchase of the Royal Infirmary Site.

A meeting of the special committee of the Manchester Corporation *re* the Royal Infirmary was held on May 9th and a resolution was moved by the Lord Mayor and carried unanimously to the effect that steps be taken to ascertain "if the trustees of the infirmary would be prepared to enter on the question of the disposal of the entire infirmary site." In January last the committee recommended the purchase of a portion of the site to be kept as an open space, leaving the shorn and mutilated infirmary building caged in the centre, at a cost of £286,000. This scheme fortunately fell through. During the discussions in the council hints were thrown out that if the whole of the site were obtained the infirmary might be removed altogether and on a portion of the land cleared a free reference library and a new art gallery might be built. In May last year the sub-committee, which has represented the infirmary trustees in the negotiations, suggested that the corporation should offer £550,000 for the whole of their land and buildings. The Corporation Committee said that they had no power to negotiate for the whole site and that they thought the price too high. Whether anything more than discussion will come from this move of the Corporation Committee the future will reveal. If, however, the present site of the infirmary cannot be extended sufficiently to allow of complete rebuilding on a liberal scale it would no doubt be the best solution of many difficulties for the infirmary to be taken elsewhere.

May 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Sir James Russell and the Plumbers' Registration Bill.

AT a public meeting held under the auspices of the District Council for Edinburgh and the East of Scotland for the National Registration of Plumbers at Edinburgh last week Sir James Russell said with regard to the Plumbers' Registration Bill that every effort would be made to have it passed through Parliament. It was, however, an unfortunate thing for the public health, not to speak of the plumbing craft, that its passage though Parliament was so difficult. Nothing but the general education of the public, he supposed, would ever lead to the passing of any Bill relating to public health.

Presentation.

On April 27th, in the Natural History Class-room, Marischal College, Dr. Alexander Brown, Lecturer on Zoology in the University of Aberdeen, was the recipient of a mahogany cabinet for microscopic slides. The gift bore the following inscription: "Presented to Alexander Brown, M.A., M.B., C.M., D.Sc., by his students in zoology on the occasion of his marriage. 14th April, 1898."

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Surgeons in Ireland.

AT a meeting of the President, Vice-President, and Council held on May 3rd, the following were elected as examiners for the ensuing year:—Anatomy—Ambrose E. I. Birmingham and Alexander Fraser. Surgery—R. Glasgow Patteson and William Stoker. Physiology and Histology—Charles Coppinger and J. Alfred Scott. Biology—J. Alfred Scott. Pathology—Edward H. Taylor and Arthur Hamilton White. Midwifery and Gynæcology—Alfred J. Smith.—On May 6th the College addressed an important memorial to the Chief Secretary with reference to the provisions of the Local Government Bill so far as they affect the Fellows and Licentiates of the College and the members of the profession generally. In this document the opinion is strongly expressed that the existing system of election of poor-law medical—being also sanitary—officers is very unsatisfactory and the suggestion is made that all candidates for such appointments should be subjected to a previous competitive examination in which a knowledge of their special duty as medical officer or sanitary officer and as public vaccinator should be verified. Secondly, the College records its opinion that in the forthcoming Bill adequate provision should be made to enable Poor-law medical officers to retire upon a pension as a matter of right if incapacitated from duty by ill-health or after completion of the period of service required from civil servants. Thirdly, the College submits that the occasion afforded by this Bill should be availed of to improve the sanitary service in Ireland by providing adequate supervision by superintendent medical officers of health, each of whom should devote his whole time and attention to the sanitation of the group of dispensary districts committed to his care. It is to be hoped that this very important memorial will receive due attention from those responsible for the medical provisions of the forthcoming Bill. Anyone familiar with dispensary elections in Ireland will be aware that local influence—sometimes clerical—avails far more than the professional qualifications or previous medical career or personal merit of the candidate. As to the need for superannuation it is notorious that boards of guardians have frequently delayed to grant an allowance to an old or worn-out Poor-law medical officer until long after his services had ceased to be of adequate value to the poor of his district. Moreover, the principle of the new Government measure is to assimilate as far as possible matters of local government in Ireland to those which exist in England. It seems very desirable that the system of appointing superintendent medical officers of health which prevails in England should be extended to this country, where the local health officer is hampered and interfered with in his duties by the board of guardians of his narrow district, by whom he is appointed and on whom he is dependent.

Presentation to Sir William Stokes.

On Saturday, May 7th, at the Royal College of Surgeons in Ireland, Sir William Stokes, F.R.C.S. Irel., was presented with a set of plate in commemoration of the silver jubilee of his professorship of surgery in the College. An address, in which recognition of his professional and social qualities was most cordially expressed, was read and presented by Sir William Thomson, the President. The meeting, which was large and representative of the profession in Ireland, was addressed by Sir William Thomson, Sir George Duffey, the President of the Royal College of Physicians of Ireland, Sir Charles Cameron, and others.

Utilisation of the Union Infirmaries for the People.

It has been recognised on all hands that the passage of the new Local Government Bill affords an opportunity for pushing forward some of the many reforms so desirable in connexion with the system of management of the union infirmaries of Ireland. Dr. Smyth and Dr. Moorhead have recently called attention to the curious anomaly that all patients admitted to a union infirmary, even those who pay for their maintenance—and are glad to do so—are obliged first to enter the workhouse as paupers. The ban of pauperism is thus attached to the workhouse hospital and its inmates. Dr. Smyth in a letter dated March 31st proposed that these institutions should cease to be identified with the poorhouses, that they should be called "district hospitals," and that the sick poor who enter them should no longer be clad in the uniform of the pauper but be treated as ordinary hospital patients and required to contribute to their maintenance when able to do so. At a meeting of the Irish Workhouse Association held on April 23rd, presided over by Mr. Edmund Deare, D.L., and including the Countess of Fingall, Sir Francis Cruise, Sir Thornley Stoker, Sir George Duffey, Mr. Power Lalor, &c., the following resolutions were unanimously adopted:—

1. The workhouse hospitals shall henceforth be called district hospitals and the duties and powers of the guardians as regards such hospitals and the administrative control thereof shall be exercised through a committee of hospital governors appointed by the guardians, consisting either wholly or partly of members of their own body. The district hospital governors, subject to the general control of the Local Government Board and of the guardians, as regards finance may act without their acts being confirmed by the guardians and may appoint the officers of the district hospitals and regulate the expenditure.
2. That Lord Monteagle, Dr. Smyth, and Mr. John Dillon be requested to urge on the Government and on the Irish Members of Parliament the necessity of having the above amendment to Clause 23 of the Local Government Bill adopted.
3. That the Leaflet on Nursing be approved subject to amendments by Lord Monteagle and Sir Thornley Stoker, and that 3000 copies be printed, and that copies be sent to the clerk of the Poor-law Board, enclosing four for the chairman, doctor, clerk, head nurse.

The Belfast Union Infirmary.

At the weekly meeting of the Belfast Guardians on May 3rd the Local Government Board forwarded a letter for consideration. It was in the form of a complaint by a person who was for a considerable time an inmate in the infirmary and he gives his name and address. The system of pauper attendance is referred to in strong terms and it is alleged that a man of eighty years of age was "deliberately felled to the ground by a pauper attendant without the slightest provocation." The pauper barber who was appointed to shave the patients was subject to "epilepsy and when seized with a fit while shaving a patient usually left his mark behind him." The communication further drew attention to a system of blackmailing which, it was stated, was carried on by pauper attendants, the want of regulations which permitted the paupers stealing rations from the infirmary and hospital patients, the unsanitary condition of the wards and draughts in the corridors, and the lack of proper supervision, which the writer said rendered the infirmary a pandemonium instead of a place for sick persons. "In short," the letter said, "the man or woman who has no money gets no attendance here." A committee was appointed to consider this letter.

The Ulster Medical Society.

At the meeting of this society held on the 5th inst. Dr. Lowry, an old Belfast student who has for several years lived in different parts of China, read a paper on Some Notes on Tropical Diseases and Bubonic Plague taken during a residence in China, 1881–1896. Dr. E. C. Bigger opened a discussion and read a short paper upon Some of the Principal Points in the Treatment of Typhoid Fever. The President (Dr. Lindsay) having read notes on a case of Hyperpyrexia during an attack of Typhoid Fever, an

interesting discussion followed the reading of the various communications.

Belfast District Lunatic Asylum.

Mr. S. Graham, assistant medical officer of the Belfast Asylum, who has been in charge of the Purdysburn Branch, has resigned on his being appointed resident medical superintendent of the new County Antrim Asylum.

Success of a Belfast Student at Cambridge.

Dr. W. Hanna, a former distinguished student of Queen's College, Belfast, at the recent examinations held by the State Medicine Syndicate of Cambridge University for the Diploma in Public Health, obtained first place in bacteriology.

May 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Skin Grafting.

AT the meeting of the Academy of Sciences held on May 2nd M. Ollier remarked that it had long been the custom since the experiments of Reverdin to hasten the healing of wounds by grafting small pieces of skin on to the raw surface. But according to M. Ollier it is quite possible to employ large grafts containing 20, 30, or even 40 square centimetres by the use of which the wound heals without showing any cicatricial characters, the skin preserving its natural appearance. M. Ollier cited as an example of this treatment the case of a patient living near Lyons who was treated by this method for an extensive burn on the inner aspect of the leg. The injury had occurred many years previously and the wound had assumed a malignant aspect, so that amputation of the leg had been advised. After the site of the wound had been carefully scraped and cleansed eight grafts, containing from 20 to 25 centimetres of skin respectively, were applied. All the grafts took and at the end of some weeks the raw surface was replaced by real skin containing sweat-glands and hairs and in every way similar to normal skin. M. Ollier was struck by one thing, namely, the apparent increase in the size of the grafts during the course of the healing of the wound, whereas it is well known that they generally shrink. He attributed the apparent growth to the mobility of the neighbouring parts, a mobility which caused *tiraillments* in every sense.

Radiography as a Means of Certifying the Existence of Death.

At the meeting of the Biological Society held on April 23rd, M. Bougarde showed three photographs of the thorax, two of them from living persons and the third from a corpse, all taken by the x-rays. In the two first the different thoracic organs and the walls of the thorax itself exhibited a hazy outline, so that their limits could not be exactly made out. This, of course, was owing to the natural movements of the parts, the pulsations of the heart and the great vessels, and the movements of the diaphragm. Even when the subjects held their breath so as to minimise movement as much as possible the outlines were still hazy and the outline of the diaphragm was seen as a shadow varying in depth and extending over the ninth and tenth intercostal spaces. The heart and great vessels were seen to occupy the centre of the chest as a dark oval mass, the shadow of which was dense in the centre and gradually faded away towards the periphery until the almost transparent lungs were reached. In the radiograph of the corpse, however, the appearance was quite different, for all the organs had sharp and well-defined edges.

The General Association of French Medical Practitioners.

The General Association of French Medical Practitioners has just held a meeting in Paris at which several provincial delegates proposed resolutions on behalf of the various bodies which they represented. The Société de la Gironde recommended that in each Faculty instruction should be given both in medical ethics and in the departments of law which have a bearing on medical practice. The Société de la Sarthe recommended that foreign medical men who had become naturalised should be required to serve in the army, the idea being that all medical men desiring to practise ought to be subject to the same military obligations, whether they be French by birth or by naturalisation, without any special exemption for the latter. Some recommendations made by the Society of Melun, Fontainebleau, and Provins and the Society of Algeria opened up questions of reciprocity and led to a comparison of the privileges accorded on the one hand to foreign medical men practising in France, and on the other hand to French medical men practising in foreign countries. Eventually a resolution was adopted to the effect that *la faculté d'émarger aux budgets départementaux ou communaux* should be granted to foreign medical men only under exceptional circumstances. The Society of Vaucluse recommended that medical students should not serve in the army until the completion of their curriculum and that they should pass a year as officers of the Army Medical Department; a concession on similar lines was also recommended for pupils of the École Centrale des Arts et Manufactures. Finally, the Société de la Gironde recommended that the university degree of Doctor should not carry with it the right to practise medicine, but that doctors of medicine of French nationality who had not been found guilty of any offence should have this right conferred on them by a jury of medical men not belonging to any teaching staff and presided over by a professor of the Faculty. The scope of the examinations conducted by this jury ought to include practical knowledge, the state of the law in relation to medicine, and medical ethics.

The Prophylaxis of Tuberculosis.

At the meeting of the Academy of Medicine held on May 3rd, M. Grancher read a report on the prophylaxis of tuberculosis, of which the following is a summary:—1. The Academy hereby confirms the resolutions arrived at in 1890 which advised the following three measures of prophylaxis: (α) all sputum should be collected in a pocket spittoon or some vessel containing solution of carbolic acid of a strength of 5 per cent. or else a little water; (β) to do away with sweeping for the removal of dust and to replace it as far as possible by washing or rubbing over with a damp cloth; and (γ) to boil all milk before drinking it, whatever be its source. 2. With reference to family practice the Academy recommends to all medical men the continued application of these prophylactic measures from the time when tuberculosis is diagnosed, and also, if possible, to keep the disease quiescent by means of an early diagnosis and proper treatment. 3. With regard to the army the Academy suggests that early cases of tuberculosis in which the expectoration does not contain bacilli should be invalided temporarily, and permanently as soon as the sputa are found to contain Koch's bacilli. The Academy makes an appeal for the earnest coöperation of the military and hygienic authorities to see that the three measures above announced are carried out in every barrack. 4. In the case of schools, workshops, shops, &c., which have to be reached through the medium of those in charge, the Academy can only ask them to consider very earnestly the importance of these hygienic questions and the very simple and easy methods which are quite sufficient to carry out a real prophylaxis against the extension of tuberculosis. 5. The Academy approves of the conclusions which the commission appointed to examine into this question with regard to hospitals arrived at—that is to say (α) all tuberculous patients shall be isolated in separate wards until separate sanatoria can be provided for them; (β) antisepsis shall be carried out both in the tuberculous ward and the general ward, especially by careful cleansing of the floors and the substitution of washing for sweeping; (γ) the health of the general staff should be improved by giving higher wages, by drawing them from a better class, and by the grant of retiring pensions; and (δ) a staff of hospital sanitary officers ought to be formed. 6. The Academy approves of the restrictions laid down in the proposed Bill and of the new regulations with regard to meat taken from tuberculous animals. Seizure and total destruction of this kind of meat will only be employed in those cases, which are not very common, of general tuberculosis and "fevered" meat. The use of tuberculin is strongly recommended to breeders and the elimination from the herd by means of the butcher of those animals which only react slightly. 7. The Academy, wishing to mark the exceptional interest which it takes in seeing the prophylactic measures against tuberculosis carried out continuously, has appointed a new and permanent commission under the name of the Commission of Prophylaxis against Tuberculosis, which will have for its objects the encouragement of, and coöperation with, any effort which may be made against the dissemination of the tubercle bacillus.

May 9th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Antitoxic Serum of Typhoid Fever.

TYPHOID fever of late years has occupied the attention of Italian physicians in proportion as the water-supply has proved less and less adequate to the increasing population, and even outside the profession, in Parliament itself, the "interpellations" addressed to the Minister of the Interior by deputies whose constituencies are scourged by that "Nemesis of impure drinking water" multiply in frequency from session to session. Signor Arcoleo, under-secretary for that department, was, for instance, on April 25th interrogated by the member for Paternopoli (Signor Del Balzo) as to whether anything was being done in view of the approaching summer to prevent another "invasion of ileo-typhoid" due to "acque potabili" which were "deplorably polluted." I mention this to explain the exceptional interest taken by the Italian delegates at the Madrid Congress in the memoir on the "Antitoxic Serum of Typhoid" read by Dr. Chantemesse, Professor of Pathology, Experimental and Comparative, in the University of Paris. That serum (it is claimed by its discoverer) "has given the best results in patients suffering from typhoid, diminishing rapidly the grave effects of the nervous phenomena, lowering the temperature and accelerating powerfully the recuperative process." In last January Dr. Chantemesse by experiments on domestic animals, especially rabbits, succeeded in isolating the microbe of the fever from which he obtained a toxin finally shown at its best by "cultivating highly virulent typhoid bacilli in a solution of peptone." After five or six days from the beginning of the culture the toxin appears in abundance, but gradually declines, so that no time can be lost in preparing from it the antitoxic serum—a preparation effected on analogous lines to that of the anti-diphtheritic serum. Within from four to five hours (says Dr. Chantemesse) after the typhoid bacillus had been in deadly quantities injected into the blood of several rabbits an injection of one-fourth of a cubic centimetre of the antitoxic serum so far controlled the fever as to "put it in full defervescence" by next day. Animals differ in their response to the serum; but in none of them under Dr. Chantemesse's treatment has the result been absolutely negative. Meanwhile, his experiments are in process of being checked at the various clinical schools throughout the kingdom and in the course of the autumn we are promised a number of independent and detailed reports as to their outcome.

May 1st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

British Troops in the Soudan.

THOUGH the telegraph wires flashed the news of the Atbara victory on April 8th in one hour to Cairo there has not yet been time for detailed written despatches to reach us from the hard-worked medical officers at the front. Daily messages are received at headquarters reporting the condition of the sick and wounded, announcing operations, and deaths, sometimes mentioning deaths. The bulk of the wounded are still at Ginanetti, but it is hoped that the first convoy northwards will start from there in a few days. Two slightly wounded colonels have already reached Cairo with the newspaper correspondents and one lady has been invited to proceed to Wady Halfa to meet her wounded husband there. There are to-day 63 wounded at Ginanetti and at Assouan. The sick returns kindly furnished me by the authorities are as follows:—Ginanetti 39, Darmali 90, Atbara 20, Wady Halfa 10, and Assouan 3. This gives a total of 162 sick, or rather more than 4 per cent. of the total strength of 3800 men. This compares quite favourably with the sick-rate of 6 per cent. in Cairo, which includes, as usual, much venereal disease. The sick-rate of the British troops before the "spoiling for the fight" was only 1 per cent. During the last week there have been 3 deaths at Ginanetti from dysentery, 3 deaths from enteric fever, and there are now seven seriously ill from the effects of that constant follower of the British army. It is satisfactory to know that enteric fever is now very rare in Alexandria, where Berkefeld filters have been provided for about two years; the disease is much less common in Cairo than it was before the introduction of efficient filters, and now for the first time an attempt has been made to supply an army in the Soudan with Berkefeld filters. The Royal Engineers have been busy this winter in preparing some metal cases for two groups each of Berkefeld candles. The case resembles in shape and weight a mountain gun and can easily be carried by one mule. The filters work by a hand pump and will turn muddy water into clean water in a few minutes. If both ends of the case work simultaneously speed is greater and less force is required, or if desired one end alone can be worked while the other is being cleaned. There is no doubt about the practical utility of this new method of utilising the Berkefeld filter as a mechanical filter, but of course every machine must be tested independently by a bacteriologist before it can be thoroughly recommended. Then will come the great practical difficulty of all these filters—how and when to render them sterile. These new filters cannot have arrived in time for the Atbara battle, for they were late in starting and were somewhat delayed in transit.

Plague at Jeddah.

The Superior Council of Health of Constantinople early this month sent a commission of three members to Jeddah to decide whether there was or was not any plague there. The two younger members, Dr. Fuad Bey, a Turk, and Dr. Nicolaides, a Greek, were chiefly occupied in surveying the disembarkation of pilgrims outside Jeddah. The Greek head of the mission, Dr. Cozzonis, very kindly allowed Dr. Bittar of the Egyptian Sanitary Department to pay a short visit to Jeddah with him. Every facility was shown him by Dr. Zantopolidis, the Greek Director of the Sanitary Office at Jeddah, who is a young, active and very intelligent official. The town of Jeddah, walled in with its five gates, can now boast of clean streets and large airy houses with windows of open lattice work instead of glass. But the 20,000 inhabitants are far from content, for they live by the pilgrimage, and this year the Turkish Government has decreed that the pilgrims shall not enter the city. A military cordon surrounds the pilgrim camp, which is about ten miles from Jeddah, but as there are no tents—the pilgrims being exposed to the fierce sun while waiting for camels or steamers—and as all food and water has to be brought to the camp from Jeddah, it is evident that there are already several causes provided for future disturbance. Unlike the previous experience of Egyptian Commissioners the Jeddah natives showed none of the fright evinced by both Hindoos and Mussulmans in Bombay. Another difference was that whereas in Bombay it was almost impossible to obtain rats or mice there were plenty forthcoming in Jeddah, and some of those found dying in the streets contained plague bacilli. There is a plague hospital in Jeddah, but it contained only one patient, an Indian without friends or money. Dr. Bittar described him as a typical septicæmic case with great enlargement of the right inguinal glands surrounded by œdematous tissue. He had great prostration, a typical tongue, a temperature of 106·7° F., a pulse of 140, and was evidently dying from plague. No necropsy was possible, but the microscope and cultures revealed plague bacilli in the inguinal glands. Two other men were convalescing from plague and buboes, but all these three were residents of Jeddah. There seems to be no evidence yet that plague has been imported this year from India or elsewhere. On the contrary, everything points to its being a recrudescence on the spot of last year's infection by stored-up rags. From March 21st to April 16th of this year 36 deaths from plague have been officially returned. If to this number we add unknown cases among women whose bodies cannot be examined and deaths returned as pneumonia we can guess that there have perhaps been 100 cases.

Cairo, April 27th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The After-care of the Insane.

A COMMITTEE of the Neurological Association recently sent a circular-letter to alienists and superintendents of hospitals for the insane for the purpose of inquiring as to the necessity for after-care of the insane. The result of

this inquiry is as follows. Fifty replies were received. Of the entire number of correspondents only 6 are either doubtful of the desirability and practicability of after-care associations for the dependent insane or are decidedly opposed to such a step. The reasons given by them are that the number of cases which are likely to be benefited by such aid is too small to be advisable, that while such a project might be desirable it is inexpedient, that while excellent in theory it would be impossible in practice, &c. On the other hand, the overwhelming majority of 44 in 50 (or 47 in 53 if the committee be included) express, and in not a few instances in the strongest terms, their decided belief in the great advantages likely to result from properly organised and conducted aid societies of this kind for discharged insane patients who are recovered, convalescent, or improved. Regarding the number likely to be benefited in this way the experience of superintendents of hospitals for the insane, as indicated in these replies, is not of much assistance, as the few who replied found it difficult to properly estimate the number of deserving patients. As to the auspices under which such associations should be conducted it is the general opinion of both the alienists and neurologists that they should by all means be begun as private organisations and so continued until their utility be demonstrated. If successful, State aid could then probably be obtained. In reply to the question regarding the advisability of establishing State homes for convalescent patients as a part of the general policy of States toward their insane there is more diversity of opinion, but the same degree of interest and careful consideration of the subject. Scarcely a member of this association has written in opposition, and of 29 hospital superintendents and other alienists 19 were warmly in favour of such an accessory provision, 5 were doubtful of its expediency, and 5 were decidedly opposed to the project. Of 4 members of lunacy and charity boards 1 is in doubt as to its utility and the rest think it would be an unnecessary and useless experiment. As a result of their inquiries the committee reports the following conclusion: It is the general and well-nigh unanimous sentiment of those who are the most conversant with the needs of the insane in this country that measures should speedily be inaugurated for the temporary relief of discharged, recovered, convalescent, and improved insane patients of the dependent class by organised outside assistance.

The New York Skin and Cancer Hospital.

At the opening of the new building Dr. Bulkley, the originator of the hospital and its present secretary, delivered an address devoted to the history of the undertaking. The first patient was admitted to the old building in Thirty-fourth-street on Feb. 26th, 1883. During these fifteen years the hospital has received about $375,000, of which $75,000 came from the board of patients and sale of drugs in the dispensary. The land and building are now practically free from debt. Since the opening of the hospital 25,031 cases have been treated, 3010 of which were in the cancer department. The greater number of patients were out-patients and the total number of visits was 118,154. The number of prescriptions filled by hospital druggists was 132,263. In the wards of the hospital there had been 2872 patients and the total number of hospital days was 165,077, of which 117,658 were free.

Railroad Accidents.

It appears from the Inter-State Commerce Commission's statistics of the casualties to persons in railroad accidents in the United States for the year ending June 30th, 1896, that the total of killed was 6448; of injured, 38,687. For nine years the average deaths were 6444 a year; the average injuries were 33,000. Of actual passengers the killed in nine years averaged 283 a year and the injured averaged 2600. The passengers killed were only one-twenty-third of all the deaths and passengers contributed only about one-thirteenth of the injured. Of all the casualties to passengers less than one-half are in train accidents. The other deaths and injuries to passengers occur at highway crossings (going to and from stations), at stations, and from other causes. The last item includes those killed and injured while getting on and off moving trains, falling between cars, sticking their arms and heads out of the windows, and in other exhibitions of carelessness. In one State the passengers killed and injured from causes beyond their own control have, for at least ten years, been less than half the total. Of the injuries much the greater part are very slight, a large percentage being so slight that even the lawyers can find in them no basis for damage suits. It may be safely said, therefore, that the railroads are responsible each year for the death of only 142 passengers and for the injury of only 1300. The passengers killed in a year are 283. But the passenger travel in 1896 was 13,049,000,000 miles, or it equalled one passenger travelling that distance. It follows that a man can travel by rail 46,000,000 miles before he is killed. In other words, if he travels night and day at 35 miles an hour he must travel 150 years before he is killed. But if the average deaths are 6444 a year and the passengers killed are but 283, if the average injuries are 33,000 and the passengers injured are but 2600, how shall we account for the other 6161 killed and 30,400 wounded? To save a confusion of figures I shall deal only with the killed henceforward; the lesson will be precisely the same as if it included the wounded also. The employés killed per year in the last nine years were 2210 and the other persons were 3951. Of the employés killed last year about 12 per cent. were killed while coupling and uncoupling trains, 25 per cent. by falling from trains and engines, 19 per cent. in train accidents, nearly 10 per cent. from overhead obstructions at highway crossings and at stations, and, finally, 34 per cent. from other causes. A very large percentage of the deaths is classified so vaguely as to vitiate analyses or deductions, but the small percentage due to train accidents is striking and extremely interesting as suggesting the safety with which trains are run. The total number of employés in the year considered was 826,620. These men did an immense amount of travelling, but those killed in train accidents were only 348, and, of course, most of these were in freight train accidents. There still remain 3951 deaths per year to account for, or 61 per cent. of the whole. These are neither passengers nor employés. Of the 3951 persons other than passengers and employés killed every year (being 61 per cent. of all the deaths) 3566, or 55 per cent. of the total or 90 per cent. of the others, are trespassers. Nearly 10 persons are killed every day in the year because they are where they have no right to be. Of these trespassers 141 are killed at highway crossings, 323 at stations, and 2957 from other causes. The trespassers are run down in small numbers at road crossings, in greater numbers at stations and in yards, and in still greater numbers out in the open road, and this shocking waste of life is going on, not through the fault of railroad officers, but because of an ignorant and apathetic public opinion.

April 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Dengue Fever in Queensland.

Two interesting papers on Dengue Fever have been published simultaneously—one, by Dr. Hirschfeld, in the *Inter-colonial Medical Journal* for March, deals with the epidemic in Southern Queensland; the other, by Dr. F. C. Hare, in the *Australasian Medical Gazette* for the same month, describes the disease as observed in Northern Queensland. Both writers agree as to the intense infectivity of the disease. According to Dr. Hirschfeld the period of incubation is about two weeks. Dr. Hare says "there is plenty of evidence to show that the incubation period does not extend beyond one week." Dr. Hirschfeld states that "infection can take place despite unfavourable conditions of climate and soil and locality," but that "where climatic and local conditions are unfavourable a further spread of the disease is rendered unlikely." It is quite likely to invade the southern colonies. In the opinion of Dr. Hare the disease is essentially tropical and is greatly influenced by temperature. The district of Herberton was exempt from the disease owing probably to its altitude and comparatively cold climate. As to immunity Dr. Hare maintains that it does not extend beyond two years after an attack, large numbers being attacked who had gone through the disease two years previously; a few cases had an attack every year. Dr. Hirschfeld admits that it is not possible to speak with final definiteness as to immunity, but so far it has been found that a patient who has once suffered from the fever will not be attacked by it a second time. When patients make statements to the contrary a close examination will reveal that the supposed former attack was not accompanied by a rash, without which the diagnosis

of dengue is not complete, and was probably influenza or a gastric attack. Both writers agree fairly as regards symptomatology, sudden onset, pains, and rash. Dr. Hare says that the pulse presents no striking peculiarities, but Dr. Hirschfeld maintains that the pulse-rate does not run parallel to the temperature and "it is characteristic of dengue that a relative bradycardia may be observed during the continuance of the fever" and an absolute bradycardia frequently appears during convalescence. Both agree that the main element in treatment is rest. Dr. Hirschfeld thinks that the exhibition of quinine from the first diminished the tendency to relapse. For hyperpyrexia he advocates lactophenin. As bearing out Dr. Hirschfeld's views as to the probability of dengue spreading to the southern colonies Dr. Casement of Kempsey, New South Wales, has made a report to the Board of Health concerning an outbreak of dengue in that town, where a great many cases have occurred, and he supposes that the disease was introduced from Queensland.

Appointment of Health Officers under the New Health Act, New South Wales.

The Government of New South Wales, acting on the recommendation of the Board of Health, has appointed two medical officers of health—one for Sydney and its neighbourhood, constituting the metropolitan combined districts; the other for Newcastle and the towns on the Hunter River, to be known as the Hunter River combined districts. The appointments are made under the new Public Health Act and though the salaries are paid by the Government the new officers are really to be attached to the municipalities, to whom they will send in regular reports. The duties attached to the positions are practically to bring the provisions of the new Act into operation in the districts named, which include about 45 per cent. of the population of the colony, and gradually to familiarise the public with the provisions of the Act. Dr. William George Armstrong has been appointed to the metropolitan district at a salary of £750 a year and Dr. Robert Dick to the Hunter River district at a salary of £700 a year. Both gentlemen are graduates of Sydney University and subsequently obtained the diploma of public health at Cambridge.

Death of a Medical Man through the Mistake of a Druggist.

On March 7th Mr. Samuel Prince Williams, L.R.C.P. and S. Edin., of Nicholson-street, Fitzroy (a suburb of Melbourne) called at a druggist's shop and asked for a solution of sulphate of morphine for hypodermic injection. The solution was made up by the son of the proprietor of the shop. Mr. Williams drove on to see a patient, whom he injected with the solution. It appears that he was accustomed to use morphia himself and after injecting the patient he gave himself an injection also. He then drove home with his wife. Before they had gone very far he was seized with violent convulsions and pain. Mr. Williams recognised that some mistake had occurred and drove to a neighbouring practitioner's house, arriving in a collapsed condition. He was found to be evidently suffering from the effects of atropine. He rallied somewhat, but died the next morning. His patient was affected with similar symptoms, but not so severely, and fortunately recovered. The mistake arose through the druggist keeping morphine sulphate and atropine sulphate in similar bottles with written labels and the dispenser had taken up the wrong bottle, Mr. Williams being in a hurry and telling him to be quick. The dispenser was committed for trial for manslaughter by the coroner.

Death of a Child from Swallowing a Bone: Alleged Neglect by Hospital Authorities.

On March 23rd the deputy coroner for Sydney held an inquiry concerning the death of a child at the Children's Hospital on March 19th. It appeared that while the father was feeding him with a spoon with some Irish stew the child began to choke and cough. He took the child to a druggist, who examined him, said that he had a bone stuck in the throat and advised the removal of the child to the Sydney Hospital. There after some little delay, Dr. Bowker, resident medical officer, examined him, but could feel no bone, and Dr. Harris, senior resident, failed also to detect the bone. The child had no difficulty of breathing. The father was told to take the child back. Instead of doing so he took him to the Prince Alfred Hospital, where he was examined by the resident on duty, by the medical superintendent, and Dr. McCormack, honorary surgeon. All failed to discover the bone. Dr. McCormack ordered the child to be kept in the hospital and an x ray photograph to be taken. The parents took the child out and had an x ray photograph taken themselves, but it did not reveal the position of the bone. The child got much worse and they took him to the Children's Hospital, where an operation was performed. While the trachea was being opened the child stopped breathing and in spite of artificial respiration and treatment died. Dr. Chisholm, honorary surgeon, said that the cause of death was septicæmia following an abscess round a piece of mutton bone which had perforated the gullet a good way down. The finding of the coroner was that the treatment adopted was proper and that the deceased died from a bone being accidentally embedded in the throat, accelerated by a necessary surgical operation under chloroform. The coroner said the case should have been reported by the authorities at the Children's Hospital and no certificate should have been given. He thought that if the parents had taken the child back to the Sydney Hospital at once his life might possibly have been saved, but that was problematical.

Thirlmere Home for Consumption.

Some seventeen years ago the munificence and philanthropy of a private citizen, Mr. Goodlet, established the Thirlmere Home for advanced cases of phthisis in destitute circumstances. Mr. Goodlet not only established, but for many years maintained, this most excellent institution. When the financial crisis came he found himself unable to continue his work and he handed the home over to the public with an appeal to the charitable to maintain it. For a time the public responded, but the subscriptions have gradually fallen off until the institution can no longer be maintained. At the Jubilee time the public subscribed £12,000 for the Queen Victoria Consumption Hospital and apparently thought it had then done enough for the phthisical patient. Now that attention has been drawn to the matter by the press the public will assuredly keep the Thirlmere Institution going.

St. Vincent's Hospital, Melbourne.

A public meeting was recently held in Melbourne, his Excellency the Acting Governor in the chair, to raise funds for the extension of St. Vincent's Hospital. The project was approved by the meeting and £2000 were subscribed for the purpose.

April 1st.

Obituary.

JAMES RHODES, M.R.C.S. ENG., L.S.A.

ON April 21st one of the best known inhabitants of Glossop passed away in the person of Mr. James Rhodes. He was born at Tintwistle, near Glossop, in 1830 and was apprenticed to the late Dr. Turton at Glossop in 1849. After attending lectures at the Pine-street School of Medicine in Manchester he took the Licence of the Society of Apothecaries of London in 1853 and the Membership of the Royal College of Surgeons of England in 1854, when he began to practise at Glossop. He was thus associated with Glossop all his life. He was the first medical officer of health of the Glossop borough and district, honorary surgeon to Wood's Hospital, Glossop, and held various other local appointments. Mr. Rhodes had an extensive private practice and worked hard at his profession, but found time to devote to scientific and philosophic subjects. He was a member of the Manchester Literary and Philosophical Society and a justice of the peace for the borough. The respect in which he was held was evidenced by the large number of borough officials, representatives of societies, and personal friends who followed his remains to the grave.

BORIC ACID IN BUTTER.—At Pontypool police-court on April 23rd a grocer of Garndiffaith was fined £5, including costs, for selling butter adulterated with boric acid. The county analyst said that the sample contained 91 grains of boric acid to the pound; he had examined over 400 samples of articles for boric acid, but the highest percentage he had observed previously to this case was 63 grains to the pound.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—**The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Members of the College :—**

Allen, Lancelot Lloyd.
Anderton, William Bury.
Ashby, Edgar.
Atal, Pandit Piarylal.
Barnes, Frank.
Barnes, John Alfred.
Bascombe, Edwin Cecil Dare.
Battersby, James.
Belfrage, Sydney Henning.
Bell, Kenneth de Risley.
Bernard-Onraët, Hugh.
Billups, Christopher Robert.
Bingham, Sydney Oliphant.
Blaker, Percy Stanley.
Bond, James Henry Robinson.
Briscoe, John Charlton.
Clapham, Stanley Cornell.
Clay, John.
Corner, Edred Moss.
Daly, James Robert.
Daniel, Alfred Wilson.
Daniel, Peter Louis.
Deller, Henry Goodridge.
Domela-Nieuwenhuis, Theodoor.
Evans, David.
Evans, Edward.
Fell, Matthew Henry Gregson.
Furnivall, Charles Hilton.
Gill, Francis Philip.
Gladstone, Arthur Edward.
Godson, Alfred Henry.
Grapel, Francis Gaspar.
Gray, Herbert Edward.
Hall, Edmund Stokes.
Hancock, Edward Dawbney.
Harris, Herbert George.
Harrisson, Alfred Everson.
Hartigan, Thomas Joseph Patrick.
Hay, William Leslie.
Hayward, Milward Cecil.
Herbert, Thomas.
Hodgkins, Albert Edward.
Hosken, James Gerald Fayrer.
Howells, John.
Hunter, Irwin Walter William.
Inkson, Edgar Thomas.
Lacey, William Walter.
Lander, Charles Llewellyn.
Langley, John Edward.
Lankester, Ralph Albert Rogers.
Le Fleming, Ernest Kaye.
Levison, Hugo Adolf.
Leyden, Charles Dominic.
Lidderdale, Francis John.
Long, James Ernest.
MacLeod, Roderick Alexander.
May, Walter John.
Matthews, Ernest Albert Churchward.
Mercer, Alexander.
Millen, Seymour Alfred.
O'Neill, Gordon.
Ormond, James Service.
Osborne, Richard Sidney.
Pearce, George Heneage.
Penfold, Thomas Cunningham.
Pershouse, Frank.
Pike, Cyprian Royston.
Porteous, Herbert Llewelyn.
Primrose, William.
Provis, Francis Lionel.
Raines, Robert.
Rees, Harry William Melville.
Richards, Ramsey Martin.
Richardson-Jones, Arthur Trevor.
Riviere, Clive.
Robinson, John Elliott.
Roderick, Henry Buckley.
Ross, Hugh Campbell.
Sargent, Percy William George.
Schölberg, Harold Alfred.
Scott, Aleck Lauriston.
Scott, Ernest Harold.
Silas, Walter Biscombe.
Smallwood, Matthew Edmund.
Smith, Charles Charnock.
Smith, Malcolm Arthur.
Smithson, Arthur Ernest.
Stratton, Percy Houghton.
Talbot, Francis Theodore.
Taylor, Henry James.
Taylor, Isaac.
Turner, Henry Watson.
Walker, George Charles.
Watson, Charles Gordon.
White, Finch.
Winkfield, Charles Frank.
Winkfield, William Bertram.
Wood, Leonard.
Woodbridge, Elliot Wilson.

UNIVERSITY OF CAMBRIDGE.—**The following candidates have satisfied the examiners in both parts of the Examination in State Medicine :—**

H. W. L. Barlow, O. Beven, H. L. Billett, J. J. Boyd, J. Brownlee, C. E. Corlette, W. E. Dixon, O. Eaton, W. M. Eaton, T. A. Ellwood, W. Hanna, A. Hudson, H. E. R. James, W. H. Jewell, A. E. Larking, W. J. Lubeck, R. P. Mackenzie (Joh.), E. J. Moore, B. N. Mullan, R. W. C. Pierce, A. E. Roberts, E. Robertson, A. Sheppard, A. C. Turner, and S. Worthington.

UNIVERSITY OF EDINBURGH.—**The following is the official list of candidates for degrees in Medicine and Surgery who have completed the first, second, and third professional examinations respectively this spring :—**

First Professional Examination.—May Agnew, W. L. L. Alston, James Arthur, A. W. Atkinson, A. K. Baxter, A. W. Beveridge, Henry Beveridge, William Black (with distinction), M. N. Bose, C. H. Bösenberg, J. R. Bosman, J. O. Boyd, F. H. Bridgman, James Brocket, R. D. Brown, D. G. Carmichael, Adam Clark, C. E. Clay, A. P. Coskey, D. M. Crooks, W. J. Crow, T. M. Cuthbert, N. S. Cuthbertson, F. I. Dawson, W. H. Elder, S. A. Ellerbek (with distinction), A. P. R. Fennell, N. C. Fischer, Stephen Garvin, Sidney Gilford, J. M. Glasse, R. A. Glegg, Wilbert Goodchild, R. M. Grant, H. W. Gush, F. M. Harper, Arthur Hutley, R. C. Irvine, Isaac Ivey, Bertha Jex-Blake, Edward Johnston, A. R Khan, James Kirkwood, P. V. Langmore, Abraham Leach, A. B. Leakey, J. G. M'Caughey, R. J. M'Clelland, F. D. S. Mackenzie, M. E. Mackenzie, Daniel Mackinnon, T. H. Mackinnon, William M'Lachlan, R. P. M'Neil, D. M. Macrae, J. B. Mason, J. K. Matheson, Paul Mathews, Robert Morison, D. N. W. Murray, Robert Murray, E. G. O. Nixon, A. C. Owen, J. L. Palmer, Sophie Palmer, John Politachi, E. T. Potts, E. C. Prichard, H. St. J. Randell, F. L. Rigby, W. A. Robinson (B.A., B Sc.), T. W. H. Ross, A. J. Rowan, C. J. Shaw, Kate Southon, W. C. Speirs, D. A. Stewart (M.A.), W. H. Swaffield, J. M. Taylor, G. C. Trotter, B. P. Watson (with distinction), John Wier, Ada Wilkinson, and David Young.

Second Professional Examination.—T. H. W. Alexander, J. D. Anderson, H. E Arbuckle, S. A. Ballantyne, J. W. Barrack, M. C. Beatty, A. L. Bennett, J. M. Benson, C. A. Bentley, Hubert Bishop, A. B. Black, J. A. Black, J. S. Bostock, J. B. Boyd, O. C. Bradley, L. P. Brassey, J. M. L. Brown (M.A.), Adam Brydon, G. F. Buist, P. C. Campariole, Malcolm Campbell (M.A.), G. S. Carmichael (with distinction), Kirkland Chapel, C. S. Clark, H. E. Coghlan, V. A. P. Coghill, W. P. Cormack, John Craig, T. A. Davies, S. L. Dawkins, W. I. Dunn, William Eadie, J. S. Enslin, D. J. Fergusson, D. C. L. Fitzwilliams, Andrew Fleming, J. G. Forsyth, Alexander Frew, W. E. Frost (with distinction), J. S. Geikie, William Girdwood, Thomas Graham, St. L. H. Gribben, G. W. Guthrie, F. S. Haldane, G. H. Hannah, N. E. J. Harding, Herbert Harris, W. E. Herbert, Davis Heron, H. O. Hobson, K. W. Hogg, H. J. Holle, J. T. Hurst, E. B. Jamieson, Langworthy Laurie, R. G. Leach, E. A. Loch, S. L. M'Elderry, A. C. N. M'Hattie, A. J. Mackenzie, D. S. Macknight, H. J. M'Lean, J. M. A. M'Milan (M.A.), Angus M'Nab, G. W. P. Maitland, A. A. Martin, A. G. Martin, Henry Mason, F. C. Matthew (M.A.), M. M. Meikle, E. T. Melhuish, E. G. D. Menzies, S. H. Morris, J. A. S. Mouat, James Munro, H. C. Nixon, Norman Patterson, John Pender (with distinction), L. C. P. Ritchie, David Robertson, J. K. A. Robertson, G. A. P. Ross, R. A. Ross (with distinction), W. C. Ross, E. A. Savage, T. B. H. Scott, W. S. Scott, E. T. Selkirk, J. F. Selkirk, H. D. Shepherd, P. W. Shepherd, T. S. Shepherd, F. D. Simpson, G. W. Smith, J. A. Smith C. B. Snow, C. E Southon, G. B. A. Speirs, E. R. Sproull, C. S. Steavenson, T. G. Stewart, M. A. Swan, F. T. Thompson, J. H. Thornley, Alexander Trotter, Alexander Tweedie, C. S. Vartan, A. G. Watson, N. S. Wells, Angus Whyte, G. D. Whyte, F. M. Wigg, W. G. Williams, A. W. Wilson, M. R Wilson, T. J. G. Wilson, W. H. Winstanley, A. M. Wood (with distinction), C. G. Wotherspoon (M.A.), Frank Young (M.A.) (with distinction), and J. C. Zuidmeer.

Third Professional Examination (New Regulations).—Ivey Aird, John Anderson, Harvey Baird, W. J. Baird, C. A. J. A. Balck, W. J. Barclay (with distinction), E. F. Bashford, J. G. Bell, F. P. Bester, P. J. Bodington, G. A Brogden, W. J. D. Bromley, A. P. L. Brown, B. A. Brown, G. H. J. Brown, T. C. Caldwell, D. A. Callender, H. G. Carlisle, J. C. Carr, L. M. Chesney, B. J. Courtney, William Darling, H. B. Dodds, C. H. Durrant, David Ewart, William Ewart, W. R. Eyton-Williams, R. R. Fasson, Hugh Faulkner, David Fenton, David Ferrier, E. G. Ford, A. S. Frank, John Fullarton, J. J. Galbraith, H. A. H. Gilmer, J. H. Gordon, T. B. Gornall, F. J. Gray, A. H. Griffith, P. W. Hampton, F. J. Hathaway, G G. Hay, A. C. Heath, I. K. M. Hermon, H. T. Holland, A. M. Holmes, James Husband, J. G. Jack (with distinction), W. T James, R. F. Jardin, J. W. Kerr, D. B. King (M.A.), G. D. Laing, L. S. Lessing, Thomas Livingstone, E. A. Loch, J. L. Louis, James Luckhoff, B. G. Macdonald, J. M. Macdonald (M.A.), P. H. Macdonald, P. N. M. Macdonald, W. R. Macdonald, Harold Macfarlane, W. M. Mackay, Maxwell MacKelvie, H. M. Mackenzie, T. C. Mackenzie, George Mackie, R. C. M'Lachlan, P. A. Maclagan, L. Maclagan-Wedderburn, G. C. M'Leavy, R. A. Macneill, William Macniven, L. W. Macpherson, A G. Martin, Jas. Masson (M.A., B.Sc.), D. B. Merry, F. N. Menzies, G. H. Menzies (M.A.), James Miller (B.Sc.) (with distinction), J. G. Mitchell, R. M. Mitchell, J. R. Munro, W. A. Murray, A. W. Naukervis, T. P. Oates, James Orr, T. S. A. Orr, William Park, A. S Parker, A. S. M. Peebles, E. J. Peill, Arthur Preston (with distinction), R. M. Pringle, S. C. Pritchard, William Purves, H. G. P. Raeburn, F. G. Ralston, William Reid (M.A.), A. C. Renwick, Robert Ritchie, T. R. Robertson, Thomas Rogerson, E. M. Rowe, Sutherland Simpson (B.Sc.), C. E. Smith, A. K. Smith-Shand, V. E. Sorapure, Stephen Southall, W. J. Stuart (M.A.), W. W. Thom, G. N. W. Thomas, J. A. Thompson, R. G. Thomson, R. B. Turnbull, N. D. Walker, C. H. Watson, C. H. J. Watson (with distinction), Angus Whyte, A. S. Whytock, H. D. Wilson, A. H. Wood, and E. M. Young.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—**The following candidate has passed the examination for the diploma in State Medicine and Public Health :—**

H. Benson Goulding, F.R.C.S. Irel.

A CENTENARIAN.—**At the meeting of the Truro Rural District held on May 4th the medical officer of health (Dr. Bonar) reported that a woman named Mary Old of Kea had died at the age of 104 years.**

MORGAN DOCKRELL *v.* DOUGALL.—**On May 5th this case came on before Mr. Justice Kekewich in the Chancery Division of the High Court. Counsel for the plaintiff, a medical man, in opening said that this was an action brought to obtain a perpetual injunction against the defendant, who traded as the Sallyco Water Co., for using the plaintiff's name on a circular which stated that he was in the habit of ordering this water for "habitual use." To this the plaintiff objected, firstly, on account of the damage which would accrue and probably had occurred to his practice because of medical men believing he was guilty of unprofessional conduct in advertising by means of the "puff direct." Further, he objected because this water contained added drugs: colchicin, one-sixtieth of a grain, salicylic acid three grains to each half pint of aerated water. Colchicin being a scheduled poisonous alkaloid, this water might prove highly dangerous if used as an ordinary drinking-water like Apollinaris and not used as the plaintiff believed it ought to be—only under careful medical supervision. It was alleged that the defendant had given and broken undertakings not to publish any more circulars. At this juncture the learned judge intervened and said that as it was a case involving damage to reputation it ought to be submitted to a jury, and the case was then, with the permission of the Lord Chief Justice, transferred to the Queen's Bench Division.**

THE LONDON OPHTHALMIC HOSPITAL. — The festival dinner of the London Ophthalmic Hospital was held at the Grand Hotel on May 6th, when H.R.H. the Duke of Cambridge presided. In proposing the toast of the evening the chairman made a strong appeal for help and asked for a liberal response to his appeal. Sir John Lubbock, M.P., in responding, spoke of the value of the hospital in promoting the knowledge of ophthalmic science. Subscriptions to the amount of £1059 were announced by the secretary in the course of the evening.

FRENCH HOSPITAL AND DISPENSARY. — The thirteenth annual dinner in aid of the funds of this institution was held on May 7th at the Hotel Cecil. In the unavoidable absence of Baron de Courcel, the French Ambassador, the chair was taken by M. Leon Geoffray, the French Chargé d'Affaires, who was supported by the Lord Mayor and Sheriffs of London and many representatives of the *corps diplomatique et consulaire*. After the usual loyal toasts, including that of the President of the Republic, the chairman proposed the toast of the evening coupling with it the names of the Lord Mayor and Baron Whettnall. The Lord Mayor recalled the pleasure which his predecessors had always felt in assisting so deserving a charity and he took advantage of the opportunity to advise the management to take care that the funds were not expended on undeserving subjects, hospital abuse being a matter at present very much before the public. During the evening subscriptions amounting to upwards of £3000 were promised.

UNIVERSITY OF OXFORD.—That Oxford is well disposed towards its medical school is proved by the fact that in Convocation last Wednesday a decree was passed empowering the University to spend a sum of £7500 on the erection of a new laboratory and lecture theatre for the joint use of the Professors of Botany and Comparative Anatomy. As the Warden of All Souls stated when he introduced the decree in Congregation this step was necessary to provide accommodation for the increasing number of medical students. That the grant was passed without a dissentient voice speaks volumes, especially when it is remembered that the University chest is in a far from satisfactory condition. It is to be hoped that future grants will be as easily obtained, for the rooms at the disposal of the University lecturers on pathology and pharmacology are already insufficient to meet the requirements of these subjects or the number of students who desire instruction.—A public lecture on Pharmacology, its Aims and Methods, was delivered at Oxford by the newly appointed lecturer on materia medica and pharmacology, Dr. J. Smith-Jerome. In the course of an interesting address the lecturer remarked that the greater part of materia medica should be relegated to its natural habitat, the druggist's shop.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting of this society was held at 20, Hanover-square on April 26th, Dr. R. L. Bowles, in the unavoidable absence of Dr. J. F. Payne, being in the chair.—Dr. T. D. Savill brought a case for diagnosis—a Vesiculo-neurotic Eruption of probably Angio-neurotic Origin in a female aged fifty-two years. The eruption was practically localised on the lower third of left forearm back and front (mainly on the extensor surface) and on the back of the hand.—Mr. Hutchinson had seen the case and had been unable to give a name to it. After six weeks' treatment in a nursing home the patient had very much improved. A series of photographs of the case was shown.—Dr. Bowles, Mr. Pernet, and Dr. Travers-Smith joined in the discussion.—Mr. Pernet inquired whether the question of malingering had been gone into.—Dr. Savill also showed a case of Telangiectasis of the Face of recent origin in a man about thirty years of age.—Mr. W. T. Freeman showed a case of obstinate Lupus Erythematosus of the Face in a man aged twenty-eight years.—Dr. Savill suggested that it should be treated by the application of pure carbolic acid.—Mr. Pernet suggested soothing local applications.—Dr. Thompson showed, for Dr. Abraham, a man, about fifty years of age, whose body and limbs were almost smothered with eruption. Dr. Abraham called it lichen ruber acuminatus, as contrasted with pityriasis rubra pilaris. There was intense itching; it had existed for some weeks.—Dr. Bowles suggested oleum duline (a petroleum oil) locally and a skim milk diet.—Mr. Pernet said the eruption looked like an irritated acute lichen planus and suggested soothing local applications and rest in bed.

THE first annual dinner of the Chelsea Clinical Society was held at the Criterion Restaurant, Piccadilly, on Tuesday last.

ADVERTISING DENTISTS.—At the Cardiff County-court on May 5th, before Judge Owen, a female plaintiff sued a firm of dentists practising in Cardiff for £50 for personal damages. Counsel for the plaintiff showed that she had been attracted by advertisements stating that the defendants would supply a set of false teeth for 1 guinea, and she accordingly ordered a set at that price. After having twenty-two teeth cut or broken off she was informed that the guinea set would not do, but that she must have a 5-guinea set, and to this she agreed. The teeth, however, soon gave her trouble, and she went from time to time to the defendants, but they only made slight alterations. Eventually she was compelled to consult a medical practitioner, who treated her and advised her to see another dentist. This she did, and that gentleman found it necessary to extract twenty-two stumps, his fee amounting to £25 and the medical attendant's to £10. Counsel added that the plaintiff had been obliged to abandon a part of her claim in order to bring it within the jurisdiction of the court. The judge decided in favour of the plaintiff for £50 with costs.

DIPHTHERIA IN LONDON. — The deaths registered from diphtheria in London in the week ended April 30th were 39 in number and 4 in excess of the corrected decennial average for the corresponding week of the period 1888-97. The deaths in the three preceding weeks had been 29, 34, and 31 respectively and thus gave place to a distinct rise. Of the 39 deaths all were of persons aged under twenty years, 8 being of infants and other 25 of children under five years of age. The sanitary areas of Chelsea, St. Pancras, Islington, and Bethnal Green had each 4 deaths, and Hackney, Poplar, and Lambeth had each 3 deaths. There were 110 admissions to hospital in the week and 930 persons remained under isolation because of the disease at the close of the week—a fall from 1061 two months earlier. In the Outer Ring 14 deaths were registered from diphtheria, of which 6 occurred in Bexley sub-district and 4 in West Ham registration district. Last week the deaths from the disease registered in London declined to 27 and were 6 below the corrected decennial average for the corresponding week of the years 1888-97. All were of persons under twenty years of age, 23 being of children aged from one to five years. As many as 133 cases were admitted to hospital, 942 persons remaining under treatment last Saturday. In the Outer Ring 13 deaths were registered, of which 6 occurred in the West Ham registration district.

FREEMASONRY.—*Esculapius Lodge, No. 2410:* The last meeting of the session was held at the Café Royal, Regent-street, on the last Wednesday in April. Thomas Dutton, M.D.Durh., I.P.M. and secretary, presided in the unavoidable absence of the Master, E. H. Ezard, M.D., D.Sc. Edin. J. W. H. Eyre, M.D., M S. Durh., was admitted to the second degree, and W. C. C. Pakes, L.R.C.P.Lond., M.R.C.S.Eng., and O. Eaton, L.R.C.P.Lond., M.R.C.S. Eng., were initiated into Freemasonry. Surgeon-Lieutenant-Colonel H. W. Kiallmark, G.J.D., was elected Master for the ensuing year and G. Danford Thomas, M.D.Brux., coroner for Central London, treasurer. After the business of the Lodge was concluded the members dined together. Allusion was made to the honour bestowed on Bro. Kiallmark, who had just had the office of Grand Junior Deacon conferred upon him by the M.W.G.M., H.R.H. the Prince of Wales.—*Rihere Lodge, No. 2546:* A meeting of this Lodge was held at Frascati's Restaurant on Tuesday, May 10th, Bro. W. J. Walsham, W.M., being in the chair. Messrs. Briggs, Arthur Heath, and Stewart Mackintosh, junior, were initiated into Freemasonry. Bro. Launcelot Jowers was elected a joining member and Bros. Christopherson, Carnall, and Hoyland were admitted to the second degree by W. Bro. West. A sum of thirty guineas was voted from the Lodge funds to the centenary festival of the Royal Masonic Institute for Boys. W. Bro. T. G. A. Burns, was elected Worshipful Master for the ensuing year, and W. Bro. Godson, P.G.D., was elected treasurer.—*Universities Lodge, No. 2352:* The annual festival of this Lodge was held in the Masonic Hall, Durham, on April 28th, when Bro. George Hare Philipson, M.D., Professor of Medicine in the University of Durham, was installed as Worshipful Master of the Lodge.

UNIVERSITY OF WALES.—At the annual extra-collegiate meeting of the court of the University of Wales Dr. Isambard Owen, the retiring senior deputy chancellor, was re-elected and Lord Tredegar was elected junior deputy chancellor.

MEDICAL MAGISTRATES.—The Lord Chancellor, on the recommendation of the Lord-Lieutenant, has appointed Dr. George P. Bate of Hackney a Justice of the Peace for the County of London.—Mr. James Grant, M.B., C.M. Aberd., of Rhynie, and Mr. James Noble, M.D. Aberd., of Braemar, have been appointed Justices of the Peace for the County of Aberdeen.

THE LATE MR. GREIG SMITH.—A bronze bust of the late Mr. Greig Smith was unveiled in the Bristol Civic Museum on May 5th by the high sheriff (Mr. Richardson Cross, F.R.C.S. Eng.), who in a sympathetic speech alluded to the various services of the late distinguished surgeon. About £500 had been subscribed towards erecting a memorial to Mr. Greig Smith, £220 of which had been expended upon the bust, pedestal, and medallion and the remaining £280 had been handed to the Bristol Royal Infirmary towards the expenses of the new operating theatre.

UNIVERSITY OF CAMBRIDGE.—A Frank Smart Studentship in Botany, of the annual value of £100, will be vacant at Caius College in June. Candidates must have passed in honours the Natural Sciences Tripos, Part I., and after their B.A. degree undertake to pursue botanical research. Applications are to be addressed to the Master of the College.—Opportunities for research in zoology at Naples and Plymouth are offered at the university tables in these stations. Students who desire to be nominated should apply to Professor Newton, F.R.S., by June 1st.—Professor Kanthack will during the long vacation hold a number of classes in Pathology and Bacteriology; and Dr. Hill with Dr. Barclay-Smith in Practical Histology.

PRIZE ESSAY ON TUBERCULOUS CYSTITIS.—The Royal Academy of Medicine and Surgery, Barcelona, will award the "Dr. Garí Prize" next year for a paper on "A Clinical Study of Tuberculous Cystitis; its Clinical Tableau and Treatment." Three thousand francs will be given for the best essay and one thousand for the second best. The essays may be in Spanish, French or Italian, and must be sent to the Academy, Baños Nuevos, No. 9, Barcelona, before Sept. 30th, 1899. No essay may be in the author's handwriting or contain his name, but each must bear a motto and must be accompanied by a sealed envelope bearing the same motto and enclosing the name and address of the author. No prize will be awarded unless in the opinion of the judges sufficient merit is shown.

THE RE-NOTIFICATION OF INFECTIOUS DISEASES.—At Stonehouse (Gloucestershire) Police-court on April 28th Dr. E. A. Howsin of Stroud was summoned for failing to comply with the requirements of the Infectious Diseases Notification Act. Evidence showed that Dr. Howsin was called to Stonehouse to attend some boys suffering from scarlet fever and that he sent the usual notification to the medical officer of health for the Stroud rural district. Subsequently the cases were removed to Haresfield, which place is in another council's district, and Dr. Howsin omitted to re-notify. He explained that his breach of the law was through ignorance and that as soon as he became aware that re-notification was necessary he complied. The magistrates accepted this explanation and only fined the defendant 2*s.* 6*d.*, including costs. The landlady who received the cases into her house was also summoned for not notifying the same. The magistrates held that as she let lodgings she ought to be acquainted with the law and fined her 10*s.*, including costs.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

THE Committee stage of the Irish Local Government Bill engaged the attention of the House of Commons on Wednesday, May 11th, to the exclusion of the Midwives Registration Bill. At the sittings on Monday and Tuesday Mr. Schwann presented a number of petitions in favour of the Bill, including petitions from the Obstetrical Society of London, the Midwives' Institute, and one "emanating," as Mr. Schwann said, "from a number of the leading members of the medical profession."

The Vaccination Bill.

At the same sitting as that on which the second reading of the Vaccination Bill was passed a number of Members handed in amendments in view of the committee stage. Mr. Channing proposes that an order directing a child to be vaccinated shall not be made on any person who makes a statutory declaration that he has a conscientious objection to the vaccination of his child and further that no vaccination officer shall initiate a prosecution under the Vaccination Acts if the board of guardians of the union shall have declined to authorise prosecution under the Acts. Mr. Labouchere's amendments are of a very sweeping character and practically involve repeal of all our vaccination laws. Mr. Hazell proposes that no order for the vaccination of a child "shall be made in any Poor-law union area wherever the guardians have, since the passing of this Act, passed a resolution by a majority of two-thirds of those present and voting to the effect that they are opposed to compulsory vaccination until such resolution shall have been rescinded by a similar resolution passed by a bare majority."

Corporal Punishment in Prisons.

The Bill of the Home Office for the reform of prison administration in England is in process of consideration by the Grand Committee of the House of Commons on Law. Several debates have taken place on the subject of corporal punishment and the outcome of them is that the Home Secretary has undertaken to draft a clause making this form of punishment permissible only in cases of mutiny and incitement to mutiny and of grave personal violence. Against the declared opinion of the Home Secretary the committee passed an amendment requiring that one of the Prison Commissioners shall be an expert in mental disease.

HOUSE OF LORDS.

THURSDAY, MAY 5TH.

Amendment of the Lunacy Laws.

The Lord Chancellor at this sitting of the House of Lords moved the second reading of the measure of the Government for the amendment of the Lunacy Laws. His Lordship explained that the Bill was substantially the Bill of last year and while wishing to meet every reasonable suggestion the Government proposed that the Bill should be passed into law before the end of the session. The main occasion for the introduction of the Bill was, he said, a feeling that the power to make urgency orders for the detention of persons supposed to be of unsound mind ought to be safeguarded. While this object was of great importance it was equally important to avoid doing anything which would interfere with the promptest treatment of proper cases. The urgency order was first devised to provide for cases where homicidal or suicidal mania occurred and where the delay occasioned by the ordinary procedure of applying to some judicial tribunal might be dangerous to the public and the patient. Although this modification of the law probably had not led to any real mischief in the way of persons not insane being shut up in asylums, yet in a large proportion of cases merely to save trouble urgency orders had been obtained when there was not the least pretence that there was any urgency at all. In one case an urgency order was made because the lady to whom it referred had peculiar views about the necessity of the marriage tie. In another case a lady was arrested under an urgency order while she was actually engaged in litigation and instructing her counsel. It was obvious that these orders were never intended for such cases and their employment in them constituted a gross abuse. It was impossible to avoid the use of these orders in the cases for which they were properly intended, but the Bill provided that any person who certified for one should be made responsible for any misstatement and should be compelled to give his reasons on the face of the certificate for the necessity of the order. Under these circumstances it would be difficult for the certifying person to avoid responsibility. The rest of the Bill dealt with points of detail which were entirely for committee, but, from the communications which had reached him, it was clear that discussion would be necessary. The question was where the line was to be drawn between local freedom of action and central control. The provision and administration of asylums were thought to be best undertaken by each county for itself; but a Central Lunacy Commission had been appointed to secure uniformity of principle in the treatment of lunatics. The best course was to trust to ability, discretion, and mutual confidence between the authorities concerned, to work out a system of this kind. But, unfortunately, cases had arisen occasionally showing that the intentions of the Acts relating to lunacy administration were not everywhere realised. There were two points illustrating this raised by Clauses 18 and 20. Under the existing law the plans for asylums had to be approved by the Secretary of State; but the Secretary of State had no power to intervene where the buildings, after completion, were used in a different way from that to which consent had been given. Cases had arisen where this had been done to an extent nullifying the Secretary of State's control. Clause 18 would make that control effective by requiring the arrangements of the asylum to remain in accordance with the approval given. He should hope to hear this clause more freely debated in Committee from a practical point of view and he should be glad to accept any amendments which would obviate ground for apprehending undue interference with local administration. The question of pensions for asylum officers was dealt with in Clause 20. When Parliament gave power to the counties to charge their funds with the expense of a pension system for asylum officers it never occurred to anyone that the power would not be universally and liberally used; but it had not, although it had been generally and satisfactorily acted upon. There was no class of public servants (as asylum officers were entitled to be

called) who deserved more consideration in this respect, both in their own interest and in that of the unfortunate persons of whom they had charge. To the principle of this clause he attached great importance, but he hoped that in Committee amendments would be moved to give the best possible shape to the proposal.—After a short debate the Bill was read a second time.

HOUSE OF COMMONS.

THURSDAY, MAY 5TH.

Enteric Fever among the Troops in India.

General Russell asked the Secretary of State for India whether the Government of India had arrived at any conclusion regarding the cause of the great increase in enteric fever among European troops in India; whether the investigations which it was promised should be made were concluded; and whether it was proposed to adopt any special measures to arrest the spread of this malady.—Lord George Hamilton replied: No definite conclusion has been arrived at as to the cause of the increase in enteric fever among British troops in India, and the investigations on this subject are still proceeding, selected medical officers having been specially detailed for this duty. Generally the measures taken to check the spread of the disease are the improvement of the water-supply, the provision of pure milk and butter, and improved sanitation of camp cantonments and barracks. One cantonment, Dragshais, where there have been serious outbreaks of enteric fever, has been completely evacuated for a year pending the installation of an improved water-supply and the disinfection of the barracks and their vicinity.

Vaccination Prosecutions.

Mr. Logan asked the President of the Local Government Board if it would be possible for a parent to be prosecuted three times on account of each unvaccinated child between the ages of twelve months and fourteen years, should the Vaccination Bill now before the House become law—viz., first, under Section 29 of 30 and 31 Vict. c. 84; secondly, by means of an application for a magisterial order under Section 31 of the same Act; and, thirdly, for disobedience of that order; and whether he had considered that the fines and costs in those three prosecutions might amount to the sum of £4 6s. 6d.—Mr. Chaplin replied: If the Vaccination Bill becomes law a parent could only be proceeded against twice for penalties in respect of the same child, once under Section 29 of the Act of 1867 and once under Section 31 of that Act; but before proceedings could be taken for a penalty under Section 31, a justice must, after summoning the parent to appear, direct the child to be vaccinated within a certain time. The maximum penalty in each of the two proceedings would be 2s. but a parent might be required to pay costs and the amount of such costs, I believe, varies in different districts.

First Aid in London.

Mr. Hubbard asked the Home Secretary whether any first aid was rendered to the wounded on the occasion of the disastrous collapse of a building in Orchard-street, Westminster, on the 21st ult. when a number of persons were injured, seven being killed, and whether any steps could be taken by the Government to develop an efficient ambulance service in London.—Sir M. White Ridley replied that the men injured by this accident were removed immediately to Westminster Hospital, only 350 yards distant. This was considered a better course than attempting to render first aid in the presence of a great and excited crowd. The five most seriously injured were, he was told, under treatment at the hospital within four minutes of the occurrence of the accident. Eight ambulances from different police stations and one horse ambulance arrived promptly on the scene, and of the 100 constables present 70 were competent to render first aid. He had every reason to think that the police ambulance arrangements were thoroughly efficient.

Royal Commission on the Disposal and Treatment of Sewage.

Mr. Chaplin made the following announcement on this subject—viz.: The Commissioners appointed are the Earl of Iddesleigh (chairman), Sir Richard Thorne Thorne, K.C.B., Professor Michael Foster, Professor William Ramsay, Major-General Constantine Phipps Carey, Dr. James Burn Russell, Colonel Thomas Walter Harding, Mr. Thomas William Killick, and Mr. Charles Philip Cotton. The Commissioners are appointed to inquire and report: first, what method or methods of treating and disposing of sewage (including any liquid from any factory or manufacturing process) may properly be adopted, consistently with due regard for the requirements of the existing law, for the protection of public health and for the economical and efficient discharge of the duties of local authorities; and if more than one method may be so adopted, by what rules, in relation to the nature or volume of sewage or the population to be served or other varying circumstances or requirements, should the particular method of treatment and disposal to be adopted be determined; and, secondly, to make any recommendations which may be deemed desirable with reference to the treatment and disposal of sewage.

The Plague in India.

Lord George Hamilton answering a question on this subject said: I have ascertained from the Viceroy that assurance has been given by the Bengal Government that wholesale quarantine against plague will not be enforced, but that arrangements will be made for inspecting travellers from infected localities, for segregating persons suspected of plague and for treating plague-stricken travellers. Members of families will not be separated when sent to segregation camps and the purdah system will be respected. Private plague hospitals and segregation camps are permitted. Inoculation is not enforced on any one, but arrangements are made for inoculating under Professor Haffkine's system persons who desire to be thus protected and special concessions have been made to encourage this form of inoculation.

FRIDAY, MAY 6TH.

Glycerinated Lymph.

Dr. Clark asked the President of the Local Government Board (1) whether his attention had been called to the report on sanitary measures in India for 1894-5 as to the use of lymph preserved with glycerine, in which it was stated that in the Madras Presidency preserved lymph was largely used, no fewer than 642,298 persons being vaccinated with lymph preserved with glycerine; that it was therefore no matter of surprise that of these only 89·2 per cent. proved successful cases of vaccination; and that the use of vaccine lymph mixed with glycerine was evidently not only an expensive procedure but disappointing in its results; (2) whether after a fair trial glycerinated lymph had been entirely discontinued in the Calcutta and Darjeeling depôts, the principal reason assigned by the sanitary commissioner of Bengal being that glycerine was a nutritive medium for the growth of putrefactive and other germs; (3) whether Sir George Buchanan also held a similar view regarding lymph preserved in glycerine; and (4) whether anything had been done to carry out the suggestion of the Royal Commission that there should be further investigation of this matter, and if so with what results.—Mr. Chaplin: In reply to the last paragraph of the question I stated in detail in the House nearly two months ago the steps which had been taken to carry out the recommendations of the Royal Commission with regard to the further investigation of this matter and also the results. Those results were eminently satisfactory and there is really nothing, I think, which I could add to what I said then. A report on the preparation and storage of glycerinated calf lymph with a full account of that investigation has also been laid upon the table. With regard to the memorandum referred to in the first paragraph of the question (relating to India in 1894-95) it does not appear how far the statements are based on reports which are described as being in many cases absolutely untrustworthy or under what conditions of laboratory precautions or otherwise the vaccine lymph at that date was mixed with glycerine. I do not understand whether the 89·2 per cent. successes referred to were insertion successes but even if they were they are in striking contrast with the successes reaching 97, 98, and 99 per cent. recorded in the report I have already referred to when the material was prepared under conditions of laboratory precautions such as are now being adopted. I am not aware that the use of glycerinated calf lymph has been discontinued on the ground stated in the districts in India which are mentioned and I am advised that it is not the fact that Sir George Buchanan held the view suggested in the question.

MONDAY, MAY 9TH.

Imported Milk.

Mr. Heywood Johnstone asked the President of the Local Government Board if his attention had been called to the recent report of Mr. Consul Gurney on the trade and agriculture of Cherbourg and district and, particularly to the paragraphs which refer to the large and increasing export of fresh milk to this country and to the statement that such milk was prepared for export by the admixture of some unknown antiseptic and that a certificate from a medical authority to the effect that the antiseptic was in itself innocuous would certainly be welcome and reassuring; and if he would take steps to obtain such a certificate and also a guarantee (as suggested by Mr. Consul Gurney) that no milk imported into this country has ever come from dairies where any of the inmates of the farm were suffering from infectious disease, and generally to insure that imported fresh milk was subject to the same sanitary safeguards and restrictions as milk produced in this country.—Mr. Chaplin replied: I am aware of the report referred to and the statements it contains. I entirely agree with my hon. friend in what I understand to be the object of his question, viz., that every precaution should be taken that milk imported into this country should be innocuous to public health. I have already taken steps for the chemical and bacteriological analysis of the milk imported from abroad, but with regard to the other guarantees that my hon. friend desires—viz., that the milk imported from France has not come from dairies where any of the inmates of the farm are suffering from infectious disease and is subject to the same sanitary safeguard and restrictions as milk produced in this country—that is a matter which at present is beyond my control. My hon. friend, however, is mistaken as to the large and increasing character of the trade from Cherbourg. The figures for the present year are as follows: January, 20,500 gallons; February, 28,500 gallons; March, 14,000 gallons; and April, 528 gallons.

Venereal Diseases in the Straits Settlements.

Mr. Duncombe asked the Secretary of State for the Colonies whether he had received a statement from the Straits Settlements Association showing that in the five years ending 1896 the ratio of venereal disease among the troops in the Tanglin district of Singapore was 434·17 per 1000, as against 144·81 per 1000 in the five years ending 1888, before the repeal of the contagious diseases ordinance, and containing statements by Brigade-Surgeon-Lieutenant-Colonel H. H. Stokes that of the sickness in his command 50 per cent. was venereal origin, and by Captain Bruce of H.M.S. *Orion*, which left Singapore in 1890, that more than half of the ship's company had been in hospital with venereal disease during the year; and what measures he proposed to take to prevent the continuance of a system under which such widespread disease involving such serious impairment of our military strength in the Straits Settlements was rendered possible.—Mr. Chamberlain said he had received this statement calling attention to a most serious state of affairs. As he had already informed the House he was in communication with the Governor of the Straits Settlements on the subject and the correspondence when completed would be laid upon the table.

The Vaccination Bill.

The debate on the second reading of the Vaccination Bill was resumed at this sitting and concluded and the measure was referred for further consideration to the Grand Committee on Law. Speeches were delivered by Mr. Hazell, Sir Charles Dalrymple, Mr. Channing, Mr. Labouchere, Mr. Ascroft, Dr. Farquharson, Dr. Clark, Mr. T. P. O'Connor, Mr. T. W. Russell, Mr. Whittaker, and others.—Dr. Farquharson suggested that the Government might have taken a somewhat stronger line, but at the same time he was prepared to support the Bill as a step in the right direction. The second reading of the Bill was carried by 237 to 23 votes.

TUESDAY, MAY 10TH.

Medals for Ambulance Work.

Mr. Cornwallis asked the Home Secretary whether he had come to a decision to recommend, in accordance with the terms of his speech at Blackpool, the bestowal of the Jubilee medal on those members of the Volunteer Medical Staff Corps (Maidstone Company) who were in previous possession of the certificate of the St. John Ambulance

Association and who did duty in London (treating 153 cases of injured people) on the occasion of the celebration of the sixtieth year of Her Majesty's reign.—Sir M. White Ridley replied: I find on inquiry that the case of these men is the same as that of the members of the Ambulance Brigade who have already received the medal, and am happy to be able to inform my hon. friend that I have given directions for the medal to be issued to them.

Smoke Nuisance at Westminster.

Mr. Labouchere asked the First Commissioner of Works whether he had noticed that a high chimney in close vicinity to the Palace of Westminster emits at all hours of the day clouds of black smoke and whether he would call the attention of the local authorities to this nuisance with a view to its discontinuance.—Mr. Akers Douglas replied that he had noticed the black smoke from this chimney and from many others elsewhere of late but the nuisance was probably due to the impracticability of getting Welsh steam coal during the strike. In any case, however, he had no authority in the matter and any representation on the subject should be addressed to the County Council.

Phosphorus Poisoning.

Mr. Pickersgill asked the Home Secretary whether, in accordance with his promise given on the 2nd inst., he had made further inquiry into the case of Cornelius Lean, lately employed at the match factory of Messrs. Bryant and May, who was poisoned by the yellow phosphorus used in the manufacture; whether he proposed to direct that proceedings should be taken against the occupier of the factory and the factory doctor respectively for neglecting to give the notices required by section 29 of the Factory Act, 1895; and whether it was intended to prosecute the factory doctor, under the Registration of Births and Deaths Act, upon a charge of wilfully misstating the cause of death upon the medical certificate.—Sir M. White Ridley said in reply: Yes; I have made further inquiries and a report of the result has been received this morning in the Home Office which requires very serious consideration. I have not yet had time to examine the report, but by Thursday I shall be in a position to say what steps I propose to take.

Midwives Registration Bill.

Mr. Hazell asked the First Lord of the Treasury whether he was aware that a large number of deaths of mothers and infants were annually proved at inquests to be the result of the employment of ignorant and untrained midwives and that this was the only civilised country in which such entirely untrained and unqualified action was permitted, and whether, under these circumstances, he would give facilities for the discussion on an early day of the Midwives' Registration Bill now awaiting its second reading.—Mr. Balfour replied that it was impossible to make an exception of this or any other private Members' Bill.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BELL, K. DE RISLEY, M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

BENSON, P. L., M.D. Irel., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Buckingham Rural District Council.

BOULTON, ARTHUR, M.R.C.S., L.R.C.P., D.P.H. Lond, has been appointed Medical Officer of Health by the Woodhall Spa Urban District Council.

BOWIE, J. C., M.B., C.M. Aberd., has been appointed Medical Officer of Public Health for the District including the Parishes of Sandsting Aithsting, Walls and Foula, and Sandness and Papa Stour in the County of Shetland.

BRISCOE, J. C., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

CHENERY, A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

DAVIES, A. O., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been re-appointed Medical Officer by the Machynlleth Urban Council.

DURRAN, D., M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Burgh of Thurso, vice J. G. Smith, deceased. Also Medical Officer for the Combination Poorhouse, Halkirk, vice J. G. Smith, deceased.

FITZGERALD, JOHN J., M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.A.H. Dub., has been appointed Fourth Assistant Medical Officer for the Cork District Lunatic Asylum.

FLUX, GEORGE, M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed Assistant Anæsthetist to the Dental Hospital of London.

GANGE, F. A., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Faversham Rural District Council.

GARDNER, THOS. HUDSON, M.R.C.S., L.R.C.P., has been appointed House Physician to King's College Hospital.

HASSLACHER, F. J., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.

HAWKESWORTH, THOS. A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

HERBERT, B. H., M.R.C.S., has been re-appointed Medical Officer of Health by the Uttoxeter Urban District Council

HUNTER, DAVID, M.A., M.B., B.C. Cantab., L.S.A. Lond., has been appointed Assistant Medical Officer for the City Asylum, Newcastle-on-Tyne.

JAMES, PHILIP, F.R.C.S. Eng., has been appointed Surgeon to the Wellington Hospital, New Zealand.

JARVIS, W. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the St. George's No. 2 Sanitary District of the Parish of St. Giles, Camberwell.

JEFFARES, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Kegworth Sanitary District of the Shardlow Union.

LEWIS, C. T., M.R.C.S., L.R.C.P., has been appointed Assistant House Accoucheur to King's College Hospital.

MARSH, J. H., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Little Hulton Urban District Council.

MARTINEAU, A. J., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon for the Nottingham General Hospital, vice W. E. Smith, resigned.

MORRISON, A. T., M.B., B.Ch. Irel., has been re-appointed Medical Officer of Health by the Aylesbury Rural District Council.

PATTERSON, G. H., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., D.P.H Lond., has been appointed Medical Officer of Health for the Ulverston Union Combined Districts.

NELL, R. F., M.R.C.S., has been re-appointed Medical Officer of Health by the Penarth Urban District Council.

RANSOME, A. S., M.B., B.C., D.P.H. Camb., has been appointed Medical Officer of Health by the Southgate Urban District Council.

SIBBALD, I. G., M.B., C.M. Edin., has been appointed a House Surgeon for the Stirling Infirmary, vice W. A. Taylor, resigned.

STEPHENSON, WM., M.R.C.S., has been re-appointed Medical Officer of Health by the Beverley Rural District Council.

STRATTON, C. R., L.R.C.P., F.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Wilton Urban District Council.

SUTTON, FREDERIC REGINALD, M.B., B.S. Durh., has been appointed a Resident Surgeon to the Birmingham General Dispensary.

WALLIS, P. E., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the East Grinstead Urban Council.

WESTBROOK, E., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Schools and Almshouses of the City of London Corporation at Brixton.

WILKIN, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Thingoe Union.

WILLIAMS, C. R., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Ashby-de-la-Zouch Urban District Council.

WILLIAMS, HOWELL, M.D. St. And., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Richmond (Yorks) Rural District Council.

WILLIAMSON, A. M., M.B., C.M. Edin., B.Sc., has been appointed Chief Sanitary Inspector for Edinburgh.

WOOD, M. A., Jun., F.R.C.S., L.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Ledbury District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £60, with board and lodging.

BURTON-ON-TRENT INFIRMARY. — House Surgeon. Salary £130 per annum, with prospect of increase, and rooms in the infirmary free, also coals and gas.

CARDIFF INFIRMARY.—Assistant House Surgeon and Assistant House Physician, for six months. Board, washing and apartments provided.

CHESTER GENERAL INFIRMARY.—Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with residence and maintenance in the house.

COUNTY ASYLUM, Whittingham, Lancashire.—Junior Assistant Medical Officer, unmarried. Salary commencing at £100 per annum, rising to £250, together with furnished apartments, board, attendance, and washing.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Senior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

EGYPTIAN GOVERNMENT.—The School of Medicine and the Kasr-el-Ainy Hospital, Cairo. Medical Officers. Applications to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, The Examination Hall, Victoria Embankment, London.

FULHAM UNION.—Assistant Medical Superintendent for the Union Infirmary, unmarried. Salary £120 per annum, increasing £10 yearly to a maximum of £150, with board, furnished apartments, attendance, and washing, and subject to statutory deduction. Applications to the Clerk of the Guardians, Union Offices, Fulham-palace-road, Hammersmith, W.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Physician or Surgeon for the Skin Department of the Hospital.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £80 per annum, with board and lodging in the hospital.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Honorary Physicians and Honorary Surgeons.

HOSPITAL FOR WOMEN, Soho-square, London.—Registrar for twelve months. Honorarium 25 guineas.

JOINT COUNTIES ASYLUM, Carmarthen.—Second Assistant Medical Officer, unmarried. Salary £100, increasing, if suitable, to £120, by increments of £10 at the end of the first and £10 at the end of the second year, with board, lodging, washing, and attendance.

LONDON COUNTY ASYLUM, Claybury, Woodford-bridge, Essex.—Junior Assistant Medical Officer (male). Salary £150 per annum, with board, furnished apartments, and washing. Applications to the Clerk of the Asylums Committee, Office, 21, Whitehall-place, S.W.

LONDON LOCK HOSPITAL, Harrow-road, W.—House Surgeon to the Female Hospital. Salary £50 per annum, with board, lodging, and washing.

LONDON THROAT HOSPITAL, Great Portland-street, W.—House Surgeon (non-resident) for six months. Salary £25.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two fully qualified Medical Women as Assistant Anæsthetists for one year.

NORTHERN EMPLOYERS' MUTUAL INDEMNITY COMPANY, 18, King-street, Wigan.—Medical Officers for the Company in Lancashire and Cheshire.

PARISH OF BIRMINGHAM.—Resident Assistant Medical Officer for the Workhouse Infirmary, for twelve months. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, laundry, and attendance. Applications to the Clerk to the Guardians, Parish Offices, Edmund-street.

PRESCOT UNION.—Resident Medical Officer for the Workhouse and Infirmary at Whiston, unmarried. Salary £80 per annum, rising to £100 by annual increments of £10, with furnished apartments and residential allowances, subject to statutory deduction. Applications to the Union Clerk, Union Offices, Whiston, Prescot.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Professors and Lecturers.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Strand, W.C.—House Surgeon. Also Clinical Assistants, for six months.

SCHOOL BOARD FOR LONDON.—Qualified Medical Practitioners to give Fortnightly Lectures on First Aid and Home Nursing. The fee will be 3 guineas for a course of six lectures. Applications to the Clerk of the Evening Continuation Schools Sub-Committee, School Board for London, Victoria Embankment, W.C.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Physician. Salary £75 per annum, with board and residence. Applications to the Secretary, Greenwich.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road, London.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance Applications to the Hon. Sec., 23, Gordon-street, Gordon-square, W.C.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

UNITED LAW CLERKS' SOCIETY, London.—Medical Officer. Applications to the Secretary, 3, Old Serjeants' Inn, Chancery-lane, W.C.

UNIVERSITY COLLEGE, Sheffield.—Lecturer in Physiology.

WEST HERTS INFIRMARY, Hemel Hempstead, Herts.—House Surgeon and Dispenser for two years. Salary £100 per annum, with furnished rooms, board, fire, lights, attendance, and washing.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Second Assistant Medical Officer. Salary £180, with board, &c., rising £10 annually to £230.

Births, Marriages, and Deaths.

BIRTHS.

CROOK.—On May 4th, at Dalby-square, Cliftonville, Margate, the wife of Herbert Evelyn Crook, M.D., B.S. Lond., F.R.C.S., of a son.

CROPPER.—On May 5th, at Mount Ballan, Chepstow, the wife of John Cropper, M.A., M.B., B.C. Cantab., of a son.

CUTTING.—On May 1st, at Chetwynd House, Stalham, the wife of Ernest B. Cutting, M.R.C.S., L.R.C.P., of a son.

DOUGLAS.—On April 4th, at Sanchez, Santo Domingo, the wife of Robert Douglas, M.B., C.M., of a son.

RODMAN.—On May 5th, at Heathcote, East Sheen, S.W., the wife of George Hook Rodman, M.D., of a son.

SANDALL.—On May 2nd, at Park-lane, Alford, Lincolnshire, the wife of T. Edward Sandall, B.A., M.B, B.C. Cantab., of a daughter.

SCOTT.—On May 7th, at Shooters-hill-road, Blackheath, the wife of Patrick Cumin Scott, M.B. Cantab., of a son.

SQUARE.—On May 9th, at Portland-square, Plymouth, the wife of J. Elliot Square, F.R.C.S., of a daughter.

USHER.—On May 1st, at Laurel Lodge, Dundrum, Co. Dublin, the wife of Isaac William Usher, L.R.C.S.I., of a daughter.

WINGRAVE.—On May 7th, at Allington House, St. Peter's-park, St. Albans, the wife of Wyatt Wingrave, M.R.C.S., of Devonshire-street, Portland-place, W., of twins (daughters).

MARRIAGES.

JOHNS—DICKINSON.—On April 26th, at Misson, by the Rev F. W. Keene, assisted by the Rev. H. McNaught, John Francis Johns, M.D., of 3, Lansdown-place, Cheltenham, to Lucie, third daughter of the late John Dickinson, Misson, Bawtry.

NORTON—NUNN.—On May 5th, at St. Mary's Church, Greenhithe, John Norton, M.D., D.P.H., of Queen Anne's-mansions, to Mabel, daughter of the late G. R. Nunn, of Lyndhurst, Hants.

RUDDUCK—TAYLOR.—On May 10th at St. Peter's, Bayswater, by Rev. E. W. Moore, assisted by the vicar of the parish, John Burton Rudduck, L.R.C.P., M.R.C.S., late of Assam, to Maude Mary Perston Taylor, late of Bethlehem and Morocco, eldest daughter of Robert Taylor, Solicitor, of 7, Bedford-row, W.C.

DEATHS.

KER.—On May 7th, at Hadley House, Cheltenham, Claudius Buchanan Ker, M.D. Edin., aged 77 years.

KINGLAKE.—On May 7th, at Wilton House, Taunton, Hamilton Kinglake, M.D.

MACKINTOSH.—On May 7th, at Chesterfield, Angus Mackintosh, M.D., Medical Officer of Health, Chesterfield Rural and Whittington, Dronfield and Clay-lane Urban Districts, aged 64 years.

PARTRIDGE.—On May 7th, at his residence, Thicket Lodge, Anerley, Deputy Surgeon-General Samuel Bowen Partridge, C.I.E., Q.H.S., Bengal Medical Service (retired), aged 69 years.

WALL.—On April 29th, after a long and painful illness, Alfred John Wall, M.D. Lond., F.R.C.S., Indian Medical Service (retired list), aged 50 years.

WILLIAMS.—On May 2nd, Arthur John Williams, M.R.C.S. Eng., L.S.A., of Upper Caterham, in his 39th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (18th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2 30 P.M.).

THURSDAY (19th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (21st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (16th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Annual Conversazione. Reception by the President. 8.45 P.M. Dr. F. Roberts: The Moscow Congress—a Holiday—with Comments on Suggested Topics.

SOCIETY OF ARTS.—8 P.M. Prof. C. Wilson: Electric Traction. (Cantor Lectures.)

TUESDAY (17th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting for the Election of Officers for the ensuing Session. Reports of the Morbid Growths Committee upon Specimens referred to it during the last six months. Dr. C. P. White and Dr. T. A. Bowes: Intestinal Obstruction due to Inflammation of the Great Omentum.—Dr. C. P. White: Sarcoma of the Kidney.—Mr. S. G. Shattock: Glanders Bacillus.—Dr. H. M. Fletcher: A Tumour of the Spinal Cord.—Dr. P. Weber: Microscopic Specimens illustrating an Apparent Thickening of the Subcutaneous Veins. Card Specimens:—Mr. H. J. Curtis: A large Lipoma of the Perineum.—Mr. S. G. Shattock: Experimental Infections in Animals.—Dr. C. P. White: Ununited Fracture of the Scapula.

WEDNESDAY (18th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Exhibition of Microscopic Aquatic Life.

SOCIETY OF ARTS.—8 P.M. Mr. J. K. Starley: The Evolution of the Cycle.

FRIDAY (20th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (16th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 3 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-pharynx.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. W. Wingrave: The Pathology and Histology of Lupus and Tubercle of the Upper Air Passages.

TUESDAY (17th).—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Leprosy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Sir W. R. Gowers: Lecture.

CITY ORTHOPÆDIC HOSPITAL.—5.30 P.M. Mr. J. J. Clarke: The Pathology and Treatment of Flat-Foot.

WEDNESDAY (18th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Whitfield: Anæmia and Allied Conditions.

MASON UNIVERSITY COLLEGE (Birmingham).—4 P.M. Mr. J. W. Taylor: Extra-uterine Pregnancy. (Ingleby Lecture.)

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Fowler: Clinical Varieties of Pulmonary Tuberculosis.

THURSDAY (19th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Jonathan Hutchinson: Clinical Lecture.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Demonstration of Skin Cases. (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Batten: Cerebral Palsies in Children.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—4 P.M. Dr. D. Grant: Chronic Catarrh of the Middle Ear.

FRIDAY (20th).—LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Anthrax and Malignant Œdema.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

THE DIFFERENCE BETWEEN "SKIMMED" AND "SEPARATED" MILK.

IN an appeal heard recently the decision of a magistrate that separated milk could not be regarded as skimmed milk was, we are glad to say, upheld. The vendor had supplied a tin of condensed milk upon the label on which were the words: "This tin contains skimmed milk with nothing added but the finest sugar." As a matter of fact the tin contained separated milk—that is, milk from which 97 per cent. of the original fat had been removed by a separator. Milk, on the other hand, when skimmed seldom yields more than 63 per cent. by the process. The decision was obviously logical and correct.

CLERICAL QUACKERY.

WE have frequently to point out in these columns that parochial clergy throw their ægis over quackery and even practise it themselves, regardless of the gravity of the possible consequences. A medical man sends us the following note which has been received by him and the original of which was, he says, in the handwriting of the clergyman of the parish, although it was signed by the patient's wife:—

C———.

DEAR SIR,—My husband is distracted with pain. Can you send anything to relieve him, or do you think it would be well to inject some morphia? If so, what quantity would you sanction? I understand Mr. R—— K—— could inject it if he had your sanction.

Yours respectfully,
J. H——.

P.S.—Please write a note.

Our correspondent informs us that Mr. K—— has on a previous occasion tried to introduce the services of a "cancer-curer" in this neighbourhood, so that it would seem that the reverend gentleman is rather bitten with the idea that he has a knowledge of medicine. We strongly advise him to leave off dabbling in what does not concern him before his willingness to administer deadly poisons to other laymen gets him into trouble. We do not say that his motives are other than kind, but his actions are very other than wise.

"SENSE OF FEELING IN A LOST LIMB."

THE following letter is taken from the *Literary Digest* published in New York:—

"The article, 'Sense of Feeling in a Lost Limb,' published in your issue of March 19th, interests me very much, and, thinking that a brief statement in regard to the same from a personal standpoint might interest your readers, I make it.

"My left leg was amputated at the middle third of the thigh over thirty-four years ago. The sensation of knee, foot, heel, hollow of foot, and toes being present is stronger than in the other limb. In fact, when at rest one is not conscious of any sensation in his limbs in a state of health; but in the stump the sensation is ever there, sometimes painfully so. This is no hallucination, but is due to anatomical and physiological reasons.

"Nerves of sensation pass out from the spinal column to every part of the surface of the body, each nerve having its own particular part to supply and each conveying to the nerve-centre knowledge that its terminal point is being irritated. Thus, a nerve terminating in the end of the big toe, no matter where it is irritated between the nerve-centre and the end of the toe, will say to the nerve-centre, 'The end of the big toe is touched or hurt.' When a leg is amputated all these nerves are gathered together and covered in by a healing of the stump, and it sometimes happens that they are firmly bound down by the cicatrix, and as it hardens, pressing upon them, sensations of pain occur, *not* at the end of the stump, but *at the point where each nerve terminated*. Just before storms, when the barometric pressure is light, the air within the tissues expands and presses on these nerve-ends, causing intense pain sometimes, and there is no relief but to reamputate the limb and see that the nerves are not caught in the cicatrix. It is generally the stump that perishe away and becomes small that gives the most annoyance.

My leg was amputated in such a position that when I stand it seems to be flexed with the foot behind me, and I have often tried to remove it from the way of persons passing, and have even tried to put it out to prevent the slamming of a door behind me, and much to my surprise the door did not stop. I have had many a fall in trying to walk, when springing up quickly I tried to put my foot to the floor. I have seen comrades whose legs were amputated below the knee, when on crutches, try to put the foot down and so come heavily on the end of the stump.

"As I grow older there is a sense of shortening in the leg, the foot seeming to come nearer the body. If I move the muscles of the stump, as in the effort to extend the knee, a sensation of great heat occurs at once in the stump, when it may be almost frozen with cold. Dry heat sometimes relieves pain in these stumps, but nothing will relieve permanently except an operation, as above stated. "H. A. DOBSON, M.D.

"Washington, D.C."

"SPIDERS, NOT COBWEBS."

AT a meeting of the Vestry of St. George-the-Martyr, Southwark, held on May 3rd, the medical officer of health, Dr. F. J. Waldo, reported as a result of an inspection made by him on the complaint of the new rector, the Rev. W. J. Somerville, that he was of opinion that "the close proximity of human remains (scattered in the form of bones and between 1000 and 2000 leaden coffins) in the crypt beneath the parish church of St. George's, where living beings are in the habit of congregating, is likely at any time to prove a danger to health." Dr. Waldo added that he had found extensive cracks in the ordinary brickwork of the walls and arches of the unventilated crypt, in which the air was musty, oppressive, and probably septic, and that Mr. Somerville's official request to inspect was the first and only one he had ever received. After a lengthened and heated debate (lasting upwards of two hours) the vestry resolved "to refer the matter back to the public health committee, with power to act and to take what steps they may deem necessary." Mr. Hilton, an old churchwarden and former chairman of the public health committee, urged as a proof

of the badness of the air and the need therefore of speed in action the fact that for some years past no spiders could be found in the belfry of the church tower. The atmosphere was so foul that they could not manage to live there. Mr. Redman, a prominent member of the health committee and a guardian, however, said that he had that day, in company with the two churchwardens, on inspecting the crypt been surprised by a living black cat which had jumped out of one of the gaping coffins. He had also found abundant evidence of cobwebs. Mr. Hilton retorted that he had said spiders, not cobwebs.

"GOUNA."

To the Editors of THE LANCET.

SIRS,—Gouna, as far as I know, is a drug little used in this country. It was brought to my notice some time ago by a gentleman on his return from the Cape of Good Hope and I have found it simply invaluable in obstinate ulcerations of mucous membrane on which the ordinary antiseptics, astringents, and other remedies had produced little or no effect.

Gouna is the Hottentot name for a species of mesembryanthemum and is said to be a domestic remedy used by the natives of the South African seaboard for a variety of ailments both internally and as a lotion or gargle. Internally it is used in the sore mouth of children during teething, in diphtheria, in chronic diarrhœa, scurvy, &c. Externally as a gargle in sore throat, white mouth, bleeding gums, and ulceration of the tongue and lips. I should be glad to hear the experience of others who may have used the drug in this country regarding its action and uses in their hands. I should add that I have satisfied myself that gouna is not a proprietary medicine.

I am, Sirs, yours faithfully,

JAMES ADAM, M.D. St. And.

West Malling, Kent, March 28th, 1898.

P.S.—Since writing the foregoing I have received the following further particulars from the Cape: "The 'gouna' is a very good remedy. The plant is the Mesembryanthemum edule (Linn). The prescription I make up is as follows: The expressed sap of the gouna leaves is evaporated to half the quantity; leave standing for ten days, boil again, and dissolve into it potass. chlor., add sp. vini rect. and filter. ℞ Succ. mesembryanthemi, ℥v.; potass. chlor., ʒiss.; sp. vini rect., ℥i.; M."

THE LATE MR. ARTHUR JEFFARES BARLOW: AN APPEAL.

AN earnest appeal is made by the following medical men to fellow practitioners and others on behalf of the young widow of Mr. Arthur Jeffares Barlow, who died suddenly on March 11th last at the early age of thirty-seven years. He was the eldest and only surviving son of the late Frederick Archer Barlow of 14, North Great George-street, Dublin, and will be remembered by many old friends and fellow students at Trinity College, Dublin. Unfortunately his position through ill health prevented his making any provision for his widow, who is without any means whatever and has no friends to assist her. She is in delicate health caused by long strain of nursing her husband and the shock of his sudden death. It is hoped that a generous response will be made to the appeal and that substantial aid may be given to such a sad and deserving case. Subscriptions will be received by Dr. J. W. Moore, 40, Fitzwilliam-square West, Dublin; Dr. John Barton, 26, Upper Merrion-street, Dublin; Dr. C. J. Clibborn, 76, Owen-terrace, University-street, Belfast; Dr. L. H. Ormsby, 92, Merrion-square West, Dublin; Dr. Henry, 2, Lewisham-park, Lewisham, London; Dr. A. Mateon, 619, Holloway-road, London. The following subscriptions have been received or promised:

	£	s.	d.		£	s.	d.
A Friend	5	0	0	Dr. J. W. Moore	1	1	0
Dr. John Barton	2	2	0	Sir W. H. Porter, Bart. ...	1	1	0
Dr. A. W. Baker	2	2	0	Dr. Clibborn	1	1	0
Mr. H. R. Swanzy	2	2	0	Dr. A. Mateon	1	1	0
Dr. J. Little	2	2	0	Dr. Henry	1	1	0

JOHN PAGE HENTSCH APPEAL.

To the Editors of THE LANCET.

SIRS,—The following further contributions have been received:—Mr. Sers, £1 1s.; Mr. J. W. Coles, 10s. 6d.; Mr. A. S. R. Wainwright, £10.

I am, Sirs, yours faithfully,

G. DAVID KNIGHT.

410, Brixton-road, S W.

Tibia.—The number of books on anatomy, physiology, medicine, and surgery is endless and there is not much difference between them. We offer our correspondent the following suggestions as to books for the Naval Medical Service examination:—Physiology: Foster's "Text-book," in four parts, or Waller's "Introduction to Human Physiology." Anatomy: Gray or Morris, and for surgical applied anatomy the excellent little book by Treves. Medicine: Pagge's "Text-book." Clifford Allbutt's "System" will be found very useful to consult upon particular subjects. Surgery: The "Systems" of Erichsen or Treves. Materia Medica: Lauder Brunton, "Text-book"; Mitchell Bruce, "Hand-book." French: This cannot be learned from a book. The best way to learn it is by the Gouin System and by reading French books of good literary style. Chemistry: Lewes, "Service Chemistry." Our correspondent is advised to refer to THE LANCET for Sept. 5th, 1896, where he will find fuller information than we have space for here.

Electro.—We have received no previous communication. There are certain conditions in which the process is useful, so that to practise it cannot be considered derogatory. We know of no pamphlet on the subject, but it is dealt with in all treatises on the use of electricity in medicine. A paper on the Electrolytic Administration of Drugs was read before the Harveian Society some years ago by the late Dr. Cagney and will be found in THE LANCET of Dec. 21st, 1889, p. 1285. For further references our correspondent is advised to consult Neale's "Digest."

Verax.—1. The Council have a perfect legal right to do as they have done, though it appears to us that their action is unnecessary. 2. We cannot express any opinion upon the views of the councillor mentioned without knowing the motives which impelled him to vote as he did. 3. Has the newly appointed medical attendant accepted the appointment?

Mr. Thomas Pyke.—We strongly protest against the introduction of alum into food, especially in a way unsuspected by the consumer. The new Food and Drugs Act adequately provides against the use of alum in baking powders but there is little prospect of the measure becoming law for some time yet.

Subscriber asks if any reader of THE LANCET can give him suggestions for a mechanical appliance "to prevent nocturnal masturbation," or can tell him of any preventive measures recommended in medical literature. The patient is mentally afflicted.

Mr. R. Martin.—The "worms" consist of little threads of dental pulp. Possibly the cleansing of the tooth and the removal of pulp by the process give relief. The idea of "worms" being ejected is mythical.

Cuba.—If our correspondent wants this information for medical purposes his medical adviser is the person to supply it. If he wants it for other purposes we are not the persons to supply it.

R. G.—It is not proposed to offer another Carmichael Prize. The present scheme has been found unworkable and application is being made to have it altered.

Mr. James Parker.—If the half of what you tell us were true you would be unable to write to us. You are recommended to consult your medical man.

Dr. Alfred Cox.—We shall notice our correspondent's communication next week.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 12th, 1898.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
May 6	29·86	N.W.	...	112	63	48	50	54	Hazy
" 7	30·34	N.E.	0·03	106	65	44	47	52	Fine
" 8	30·32	S.W.	0·03	68	57	50	49	51	Raining
" 9	30·03	N.W.	0·05	94	65	50	52	57	Cloudy
" 10	29·87	S.W.	0·08	79	63	51	51	52	Cloudy
" 11	29·26	N.W.	...	111	60	51	48	54	Cloudy
" 12	29·19	N.	...	68	52	47	48	50	Cloudy

During the week marked copies of the following newspapers have been received: *Carlisle Express, Louth Times, Newark Herald, Lancaster Standard, Times of India, Pioneer Mail, Warwick Times, New Ross Reporter, Citizen, Architect, East Essex Advertiser, Northampton Mercury, Dundee Advertiser, Builder, Newcastle Chronicle, Galloway Gazette, Cambridge Independent Press, South Wales Daily News, Eastern Daily Press, Herald of Wales, Maidstone Journal, Bristol Mercury, Liverpool Daily Post, Western Mail, Scotsman, Sheffield Weekly Telegraph, Manchester Courier, Nottingham Express, Leeds Mercury, Grantham Times, Leicester Post, Sussex Daily News, Glasgow Herald, Leinster Express, Surrey Times, Caithness Courier, West Middlesex Herald, St. Mary's Hospital Gazette, Local Government Chronicle, Nottingham Daily Guardian, Reading Mercury, City Press, Mining Journal, Hertfordshire Mercury, Coventry Herald, Guy's Hospital Gazette, Bristol Times and Mirror, Surrey Advertiser, Local Government Journal, Weekly Free Press and Aberdeen Herald, Hong Kong Weekly Press, Tamworth Mercury, Bromsgrove Weekly Messenger, West Yorkshire Pioneer, Bradford Observer, Birmingham Gazette, Yorkshire Post, Kentish Observer, West Middlesex Herald, Newry Reporter, Ramsey Courier, Wells Journal, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. B. Anningson, Cambridge; Messrs Arnold and Sons, Lond.; Dr. R. H. Ashwin, York; Mons. J. Astier, Paris: A. B., Lond.; Dr. C. Andrews, Lond.; Dr. R. Y. Aitken, Blackburn; Messrs. Armour and Co., Lond.

B.—Mr. J. Brown, Glasgow; Mr. L. A. Bidwell, Lond.; *Birmingham Daily Gazette*; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. E. M. Bowden, Lond.; Mr. A. A. Bradburn, Devonport; Dr. C. Bolton, Lond.; Mr. F. L. Benham, Lond.; Mrs. Blackmore, Wandsworth; Messrs. Brown, Gould, and Co., Lond.; Bristol Eye Hospital, Secretary of; Bolingbroke Hospital, Lond., Committee of.

C.—Dr. J. H. Clarborne, Petersburgh, U.S.A.; Mrs. Victoria Clarke, Peterborough; Central London Throat and Ear Hospital, Secretary of; Mr. T. Cooke, Lond; Mr. A. Cox, Lond.; Dr. P. M. Chapman, Hereford; Mr. W. N. Clemmey, Bootle; Cardiff Infirmary, Secretary of; Cortland Wagon Co., Lond.; Mr. P. Carmody, Lond.; Messrs. Cassell and Co., Lond.; Dr. T. K. Clarke, Huddersfield; Mr. J. Clegg, Rochdale; Dr. C. Clapham, Rotherham.

D.—Mr. F. Davidson, Lond.; Dr. C. V. Dingle, Middlesbrough; Messrs. Downie, Aiton, and Aiton, Glasgow; Dumfries and Galloway Royal Infirmary, Treasurer of; Dunelm, Lond.; Dorset Soda Water Co., Weymouth; Mr. J. Dell, Great Berkhampstead; Mr. N. C. Dobson, Bristol; Dr. G. H. R. Dabbs, Lond.

E.—Mr. T. S. Ellis, Gloucester; Esmond Cycle Saddle Co., Lond.; East Suffolk Hospital, Ipswich, Secretary of.

F.—Mr. H. Frode, Lond.; Dr. J. Ferguson, Paisley; Messrs. Ferris and Co., Bristol; Fides, Lond.; Mr. E. P. Field, Lond.

G.—Dr. Gould, Philadelphia; Dr. Gubb, Lond.; Dr. J. R. Garland, Manchester; Gem, Lond.; Mr. C. A. Gillig, Lond.; Great Eastern Railway Co., Lond., Continental Traffic Manager of; Messrs. Gale and Co., Lond.; G. P., Lond.

H.—Mr. V. Horsley, Lond.; Dr. T. E. Hayward, Haydock; Dr. L. E. Holt, Lond.; Mr. A. W. Harris, Southampton; Dr. J. P. Henry, Lond.; Mr. S. Haigh, Matlock Bridge; Mr. J. Heywood, Manchester; Dr. S. W. Haynes, Birmingham.

I.—Messrs. Ingram and Royle, Lond.

J.—Mr. T. V. Jackson, Wolverhampton; Mr. N. B. Jenkins, Knoxville, U.S.A.; Mr. P. Jones, Devikalam, India; Jenner Society, Gloucester, Secretary of; Joint Counties Asylum, Carmarthen, Secretary of.

K.—Dr. H. Kenwood, Lond.

L.—Mr. E. S. Langworthy, Lond.; Llanelly Hospital, Secretary of; Mr. B. Lawrence, Lond.; Dr. A. P. Luff, Lond.; Dr. A. List, Magdeburg.

M.—Mr. J. D. Malcolm, Lond.; Mr. J. Maberly, Capetown; Mr. E. Merck, Lond.; Mr. H. G. Mallam, Rotherham; Messrs. C. Mitchell and Co., Lond.; Mr. W. Martindale, Lond.; Dr. Mackern, Buenos Ayres; Mr. M. McKay, Partick; Metropolitan Machinists' Co., Lond.; Morganwg, Lond.; Mr. C. A. Morton, Bristol.

N.—Newark-on-Trent Hospital, Secretary of; Dr. G. Nalmes, Lond.

O.—Mr. A. D. Owen, Enkeldoorn, S.A.; Messrs. Offord and Sons, Lond.; Sir Francis Osborne, Lond.

P.—Mr. F. Page, Newcastle-on-Tyne; Mr. G. Pragnell, Eltham; Mrs. Parkin, Lond.; Pluck, Lond.; Plumbers' Co., Lond.; Mr. Thomas Pyke, Kingston; Mr. J. B. Pike, Loughborough; Miss R. Paget, Lond.; Peritus, Lond.; *La Puglia Medica*, Bari, Italy, Editors of; Messrs. Pearce and Ellis, Wigan; P. C., Lond.

R.—Mr. W. Roocroft, Wigan; Mr. J. Riley, Pendleton; *Revue de Laryngologie*, Bordeaux, Publisher of; Mr. M. Robson, Leeds; Dr. T. M. Rotch, Lond.; Royal Microscopical Society, Lond., Secretary of; Royal London Ophthalmic Hospital, Secretary of; Messrs. Reynolds and Branson, Leeds.

S.—Dr. P. B. Smith, San Remo; Messrs. Street and Co., Lond.; Messrs. Sharland and Co., Lond.; Messrs. Swain and Son, Lond.; Surgeon-Captain R. R. Sleman, Lond.; Mr. R. Sibbitt, Coventry; Dr. T. G. Stevens, Lond.; Dr. W. G. Spencer, Lond.; Mr. J. E. R. Stephens, Lond.; Messrs. Shelley and Co., Lond.; Mr. T. Smith, Lond.; St. Peter's Hospital, Lond., Secretary of; Signa, Lond.; Dr. D. S. Skinner, Willesden.

T.—Mr. E. T. Tallerman, Lond.; Tradesmen's National Union, Lond., President of; Tallerman-Sheffield Institute, Lond., Secretary of; Thresh's Disinfector Co., Lond.; T. B., Lond.; Mr. J. W. Taylor, Birmingham; T. B., Lond.

U.—University of Edinburgh, Dean of; *Undertakers' Journal*, Lond., Editor of.

V.—Vinolia Co., Lond.; Volunteer Medical Association, Lond., Secretary of.

W.—Dr. Weber, Homburg; Colonel H. D. W. Ward, Lond.; Whittingham County Asylum, Supt. of; Mrs. E. Wright, Croydon; Mr. A. T. Wilkinson, Manchester; Dr. Waldo, Lond.; Mr. R. H. Woods, Dublin; Dr. H. Woods, Lond.; Miss M. M. Wall, Lond.; Messrs. Whittaker and Co., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. E. Appleton, Thornaby-on-Tees; Mr. J. S. Allen, Altrincham; Messrs. Allen and Hanburys, Lond.; Ashwood House, Kingswinford, Medical Superintendent of; Mr. G. N. Adam, Hetton-le-Hole; Anglo-Swiss Condensed Milk Co., Lond.; Ariel, Lond.; Alpha, Lond.; Apollinaris Co., Lond.

B.—Mr. W. A. H. Barrett, Ottery St. Mary; Mr. A. L. Bartram, Cambridge; Bury Corporation, Treasurer of; Dr. G. F. Blandford, Lond.; Mr. A. Butler, Epsom; Mr. J. Bibby, Bamber Bridge; Dr. P. H. Boyden, Thorpe Hamlet; *Bath Chronicle*, Proprietor of; Bradford Children's Hospital, Secretary of; Mrs. K. Behnke, Lond.; Mrs. L. A. Brooks, Grays; Birmingham General Hospital, House Governor of; Dr. H. S. Byers, Cleator; Mr. C. Beesley, Darton; Box, Lond.; Brit, Liverpool; Bristol Royal Infirmary, Secretary of; Messrs. J. L. Bullock and Co., Lond.; B., Lond.

C.—Dr. J. Clarke, Ballyjamesduff; Mr. J. Cropper, Chepstow; Mr. J. Cantlie, Lond.; The Coppice, Nottingham, Medical Superintendent of: Dr. Cotton, Darsham; Mr. W. F. Clay, Edinburgh; Mr. G. W. Crookes, Eckington; Cash, Lond.; Chirurgus, Lond.; Catlin, Lond.; Centum, Lond.

D.—Dr. T. Dewar, St. Helens, Aucklanp; Dorchester Asylum, Medical Superintendent of; Derbyshire Royal Infirmary, Derby, Secretary of; D. A., Lond.; Mr. J. T. Davenport, Lond.; Dr. D. Durran, Thurso; D. M., Newcastle-on-Tyne.

E.—Dr. W. B. Edwards, Senny Bridge; *Essex County Standard*, Colchester; Messrs Evans, Gadd, and Co., Exeter; Epsilon, Lond.; Expertus, Lond.

F.—Mr. J. J. Fitzgerald, Cork; Finis, Lond.; F.R.C.S., Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.

G.—Dr. W. Y. Grant, Berwick-on-Tweed; Glasgow Eye Infirmary, Secretary of; G., Lond.; Messrs. Gilyard Bros., Bradford; Messrs. Giles, Schacht, and Co., Clifton; Mr. R. Gardner, Fauldhouse.

H.—Mr. T. G. Horder, Cardiff; Surgeon Major F. W. Hawkins, Moradabad, India; Homo, Lond.; Harvard Co., Lond.; Mr. J. W. Hudson, Millom; Mr. F. B. Hannah, Lond.

I.—Ickringills, Keighley, Secretary of; Index, Lond.; Inverness, Lond.

J.—Mr. F. F. Jones, Llanfyllin; Mrs. Johns, Cheltenham.

K.—Dr. E. W. D. Kite, Hillabro'; K. L., Lond.; Messrs. Keith and Co., Edinburgh.

L.—Mr. H. K. Lewis, Lond.; Locum, Lond.; Luscombe, Lond.

M.—Dr. A. MacGregor, Lond.; Mr. J. Merryweather, Guisborough; Dr. D. A. MacGregor, Clayton West; Medicus, Lond.; Manchester Children's Hospital, Secretary of; M. Z., Lond.; Dr. D. Mackintosh, Lond.; Dr. H. J. May, Lond.; Messrs. Moseley and Co., Sheffield.

N.—Miss G. Newbery, Glasgow; Nightingale Home for Nurses, Southsea; North of England Medical, &c., Association, Leeds; Nuntius, Lond.; Nucleus, Lond.; Northern Employers' Mutual Indemnity Co., Wigan, Secretary of; *New Orleans Medical and Surgical Journal*, U.S.A., Editors.

P.—Mr. H. J. Palmer, Long Eaton; Messrs. Powneeby and Co., Lond.; Messrs. Potter and Sacker, Lond.; Palatine-road (27), Withington; Public Health, Lond.; Prospect, Lond.

R.—Mr. C. Randolph, Milverton; Rus, Lond.; Rose, Keswick; Messrs A. Riddle and Co., Lond; Mr. J. W. Roberts, Knayton; Dr. L. Roberts, Caersws; Dr. J. O. Roe, Rochester, N.Y., U.S.A.; R. P. O., Lond.; Lady Russell Reynolds, Lond.; Mr. J. B. Rudduck, Epping; Riverside, Lond.

S.—Mr. C. H. Sers, Lond.; Messrs. Savory and Moore, Lond.; Stockport Infirmary, Secretary of; Sheffield Children's Hospital, Secretary of; Mr. E. S. Sanderson, Otterburn; Statim, Lond.; *Sheffield Independent Press*; Dr. S., Derby; Surgeon, Lond.; S., Lond.; Super, Lond.; Sigmoid, Lond.; Shropshire, Lond.; Messrs. Shirer and Haddon, Cheltenham; Dr. J. Shaw, Lond.; Scotia, Lond.

T.—Mr. J. Thin, Edinburgh; Dr. W. E. Thomas, Ystrad-Rhondda; Theta, Lond.; Tact, Lond.; Toddington Orchard Co., Winchcombe.

V.—Victoria Hospital, Folkestone, Secretary of; Vesta, Lond.

W.—Mr. P. L. W. Williams, Dunster; Weston-super-Mare Hospital, Secretary of; Messrs. Watkins and Osmond, Lond.; Mr. J. H. Woods, Batley; Mr. W. Webb, Eye Green; W. H. B., Lond.; Messrs. G. G. and A. F. Whitwell, Shrewsbury.

Z.—Zeta, Lond.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

The Milroy Lectures

ON

THE NATURAL HISTORY OF VACCINIA.

Delivered before the Royal College of Physicians of London on May 3rd, 5th, and 10th, 1898,

BY S MONCKTON COPEMAN, M.A., M.D. CANTAB., M.R.C.P. LOND.,

MEDICAL INSPECTOR TO HER MAJESTY'S LOCAL GOVERNMENT BOARD; LECTURER ON PUBLIC HEALTH IN THE MEDICAL SCHOOL OF WESTMINSTER HOSPITAL.

LECTURE III.[1]

Delivered on May 10th.

ANIMAL VACCINATION.

MR. PRESIDENT, CENSORS, AND GENTLEMEN,—By the term "animal vaccination" as it is now applied is meant the employment for the vaccination of the human subject of the virus of cow-pox as propagated upon a succession of calves or heifers, the original virus having been derived from pocks upon the cow spontaneously affected with the natural disease. The late Dr. Ballard in his prize essay on Vaccination gives a most interesting and valuable historical account of the introduction of the practice. In this essay he states that the practice of animal vaccination appears to have originated with M. Negri in Naples, who was seemingly the first to propagate natural cow-pox by successive inoculations upon the heifer. Prior to his time, says Dr. Ballard, cows had been, in various places and by various persons, inoculated with vaccine virus derived from the human subject, the lymph obtained from pocks thus produced being used for human vaccinations. This practice has been termed "retro-vaccination." There appears to be no great difficulty or uncertainty attending retro-vaccination so long as animals sufficiently young are made its subjects and the human lymph is taken under circumstances favourable to its activity. The general result of reinoculation of it upon the human subject has been that the character and activity of the virus thus retransferred remained unaffected by its transmission through the system of the cow. This was the practice first pursued at Naples by Troja in 1805 shortly after the introduction of vaccination into Italy, and also pursued by his successor Galbiati. When, however, M. Negri, in 1842, succeeded to the practice on the death of Galbiati, he soon gave up retro-vaccination and began to propagate the virus by inoculation from one cow to another, that first propagated being of human origin. Subsequently, on the occasion of an outbreak of cow-pox in Calabria the use of this virus was abandoned and M. Negri propagated thenceforth that obtained from the natural cow-pox. It is said that on two occasions he thus availed himself of natural cow-pox matter obtained in Italy but that on a third occasion, in 1858, on which he renewed his supply, it was derived from London.

A good deal of doubt has been thrown upon the origin of this third renewal of virus and it has been questioned whether it was virus from natural cow-pox at all. However, it appears that it is this virus which M. Negri propagated subsequently to 1858. In 1864 M. Lanoix, a young French physician, visited Naples in order to study the practice of animal vaccination as pursued there. On his return he brought back with him to Paris a calf inoculated with the virus then in process of transmission by M. Negri, and in concert with M. Chambon he set up a private establishment for the propagation of the virus from calf to calf, and for the supply of animal vaccine in Paris. In his report on vaccination in France during 1864 M. Depaul, in the name of the Academie de Médecine, gave an account of the observations made in Paris on this subject, and in February, 1866, the French Government placed a sum of 6000 francs at the disposal of the Académie for the purpose of experiment in the matter. A Commission was appointed, the report of which was drawn up by M. Depaul. This report was favourable to the practice of animal vaccination. The Commission, however, were much divided in opinion, and the Académie did not then recommend that the practice should be adopted. At first the virus used by the Commission was that in use by MM. Lanoix and Chambon, and which they had previously obtained from Naples. But after four transmissions of this lymph had been made, a new source of virus from natural cow-pox was discovered at Beaugency (Loiret), and then the use of the Neapolitan strain was abandoned and this new and undoubted cow-pox virus was alone employed. MM. Lanoix and Chambon also adopted the use of this strain to the exclusion of that which they had before employed, and having in the autumn of the same year (1866) met with another case of natural cow-pox at St. Mandé, near Paris, they introduced this lymph also into their practice of animal vaccination. They saw no advantage in keeping these two lymphs distinct, and the strain which they have employed from 1866 onwards is a mixture of the two natural sources discovered at Beaugency and at St. Mandé.

Whatever the origin of the Neapolitan virus may have been therefore there can be no question that the inoculations made by the Commission (after the first four) and those afterwards made in Paris by MM. Lanoix and Chambon were transmissions of the virus of a cow-pox of spontaneous origin. From Paris the practice of animal vaccination extended in many directions. Thus in February, 1865, it was introduced into Brussels by Dr. Warlomont, whose first supply of lymph was obtained from M. Lanoix (Neapolitan source). At a later period he obtained from Paris virus in course of propagation from the Beaugency source, and still later he introduced a third source obtained in July, 1868, at Esneux (Liège). In September, 1866, at the request of the Minister of the Interior the Royal Academy of Belgium referred the whole question to a Commission consisting of MM. Bellefroid, Thieruesse, and Marinas, who reported favourably upon it. And, in consequence, in July, 1868, an "Institut Vaccinal de l'État" was established at Brussels, under the direction of Dr. Warlomont, for maintaining the practice of animal vaccination and distributing gratuitously lymph obtained from the animals or lymph taken from children who had been vaccinated direct from the animals, according to the preference of the vaccinators or other practitioners demanding it. The practice was introduced into Berlin by Dr. Pissin in June, 1865, and the establishment which he founded is still carried on as a private speculation. Animal vaccination appears to have been introduced into Vienna in a similar manner about the same time and many of the great capitals of Europe rapidly followed suit. Thus early in 1868 the Society for Promotion of Cow-pox Inoculation at Rotterdam determined to open a station for the practice of animal vaccination and they commenced operations in April of that year, distributing lymph throughout Holland and its colonies. A similar course was adopted in the following year by the corresponding society of Amsterdam.

Switzerland also owes the comparatively recent introduction of animal vaccination into that country to private enterprise, what is now known as the Institut Vaccinal Suisse having been founded in 1882 by M. Charles Haccius, the present Director of the establishment. Originally a private venture, the institute, which is situated at Lancy on the outskirts of Geneva, is now recognised by the various cantonal governments, M. Haccius, in consideration of an annual subvention, supplying to public vaccinators throughout Switzerland, free of cost, all the lymph required by them in the performance of their duties. This establishment I have recently (1897) had the opportunity of visiting in the course of a tour of inspection at the instance of the Government of certain of the chief calf vaccine establishments on the Continent of Europe. At Paris we found that, as is the case with the establishment of M. Haccius at Lancy, the Institut de Vaccine Animale is practically a private concern, although the municipality of the city of Paris contract with the Directors to carry out all such public vaccinations within their jurisdiction as may be necessary. This institution, which is now carried on by M. Chambon and Dr. St. Yves Ménard, was founded, as already mentioned, by M. Lanoix. Originally situated in the Rue Massillon, it was subsequently transferred to the Rue Ballu, where what was formerly a dwelling-house has been adapted to its present purpose.

In Germany all the establishments visited by Sir Richard Thorne and myself, at Berlin, Dresden, and Cologne respectively, are under Government control. Of these, that at

[1] This lecture was illustrated by means of a lantern demonstration. Lectures I. and II. were published in THE LANCET of May 7th and 14th, 1898, respectively.

Cologne is the most recent of its kind and its buildings with their fittings are of the most modern description. This institution, of which Dr. Vanselow is the Director, was erected in 1889 for the production of animal lymph to meet the needs of the Rhine province and Hohenzollern districts. The building adjoins the central meat market, a matter of convenience for the obtaining and subsequent disposal of calves. On the ground floor of the building are the collecting room, calf stable, slaughter room, director's and clerks' rooms, corridors, and offices; while on the first floor is a bacteriological laboratory, fitted up with all needful apparatus, which is reached from the collecting room by an iron spiral staircase. At Brussels the propagation, storage, and distribution of calf lymph is carried out at the École Véterinaire under the supervision of Professor Dégive, the Director of the establishment. The accommodation provided in the present building is regarded as very insufficient for the purpose and accordingly, as Professor Dégive informed us, a new vaccinal institute is about to be erected in the construction of which all modern scientific requirements will be amply provided for. The private establishment originally founded by Dr. Warlomont and which is now carried on by his son-in-law, an officer in the Belgian Army, we had not the opportunity of visiting.

Although the practice of animal vaccination is now practically universal throughout Europe, in England up to the present time it has been employed to a very limited extent. At the Government Animal Vaccine Establishment at Lamb's Conduit-street, which was founded in 1881 as the result of investigations by the late Sir George (then Dr.) Buchanan and Dr. Cory, direct vaccinations of children from calf to arm have been carried out from that date onwards to the present time. From the calves vaccinated at Lamb's Conduit-street lymph has also been supplied to public vaccinators in quantity sufficient to enable them to start their periodical vaccinations, and provision has also been made for supplying a comparatively small amount of lymph to private practitioners in addition. The lymph thus sent out has for the most part been preserved by drying on ivory "points," although a certain proportion has been stored in the liquid form in capillary glass tubes. Until quite recently, however, all public vaccinations in this country, with the few exceptions just mentioned, were required to be performed by direct transmission of the virus from arm-to-arm, stational attendance at fixed periods having been arranged for in order to render feasible such method of operating, weekly attendance having been provided in large towns, while quarterly or even half-yearly periods suffice for the required purpose in scattered country districts. As the result, however, of the findings of the Royal Commission on Vaccination legislative measures are about to be introduced by which arm-to-arm vaccination will be entirely superseded, in public work at any rate, by animal vaccination; and the adoption of the use of preserved glycerinated calf lymph having been determined on, the necessity for stational attendance will disappear except in so far as may appear desirable for purposes of control or in order to provide facilities for teaching. The principal grounds on which the practice of animal vaccination has been advocated are, firstly, the opinion, widely though not universally held, that the results of vaccination from arm to arm are not such as they used to be in the earlier years of the practice of vaccination; in fact, that by repeated human transmission the virus has become weakened and that the pocks produced by the introduction of lymph which has passed through a large number of human beings are not so fine or so perfect as those which result from the use of animal lymph. Jenner himself, indeed, appears to have been under the apprehension that lymph-stocks would be liable to degenerate as the result of long-continued transmission through the human subject. In the present state of our knowledge, however, such enfeeblement of the specific virus can hardly be regarded as probable, except under such conditions as may be obviated by reasonable skill and care on the part of the operator. Jenner early discovered that vaccine lymph only exhibited its full degree of activity when taken at the stage of maturation of the vesicle and before its contents became at all purulent. If this precaution be observed, together with strict cleanliness in removal and insertion of the lymph, experience has shown that no appreciable degeneration can be demonstrated. Secondly, the opinion that certain other human diseases may be propagated together with vaccinia when vaccinations are performed from arm to arm. Galbiati, who was one of the first, if not the first, to vaccinate with bovine lymph, adduced this belief as his reason for practising vaccination from the cow, arguing that on vaccinating the cow from the human subject vaccinia alone would be communicated to her, any other morbid germs which might be introduced along with it remaining without effect. He considered apparently that in practising retro-vaccination according to the method which he devised he, as it were, filtered human vaccine material from any possible contamination. As the result of all the evidence brought before them during the lengthy period of seven years the English Royal Commission on Vaccination have reported that the risks incurred from arm-to-arm vaccination "are undoubtedly real and not inconsiderable in gross amount," although "when considered in relation to the extent of vaccination work done they are insignificant." And they add that "there is reason further to believe that they are diminishing under the better precautions of the present day and with the addition of the further precautions which experience suggests will do so still more in the future." It is, indeed, acknowledged on all hands that cases of syphilis can be and unfortunately have been occasionally conveyed from one human being to another as the direct result of vaccination; and although the number of cases which can be authenticated are extraordinarily small in number there is advantage in the adoption of a method which while equally efficacious entirely obviates the possibility of so lamentable an occurrence. Erysipelas and tuberculosis are also two of the not inconsiderable number of diseases with the spread of which vaccination has been credited. No doubt the greater proportion of cases of erysipelas following on the process are of what has been termed "late" origin. These are due to infection of the vaccination wound at or about the time when it has been customary to open the vesicle. The general use of animal vaccination by obviating the necessity for opening the vesicle may be expected to be followed by a diminution of cases originating in the manner suggested, though accidental injury to the arm or the use of improper dressings will doubtless prevent the complete disappearance of erysipelas or other septic diseases. Invaccinated erysipelas, however, we may anticipate will shortly become in great measure, at any rate, a thing of the past; and fortunately the possibility even of the invaccination of tubercle may be eliminated as the result of the treatment of calf vaccine with glycerine after a method which I first advocated some years ago and which has now been officially adopted by the Government.

GLYCERINATED LYMPH.

In a paper presented to the International Congress of Hygiene held in London in 1891, and subsequently published in the Transactions of that Congress, I called attention to a special method for the bacteriological purification and preservation of vaccine lymph. This method consisted in the intimate admixture of a given amount of lymph, or rather vesicle pulp, with a sterilised 50 per cent. solution of chemically pure glycerine in distilled water and in subsequent storage of the resultant emulsion in sealed capillary tubes for several weeks. For some years antecedent to 1891 I had been engaged in investigating the nature and mode of action of the specific virus contained in vaccine lymph, chiefly from the bacteriological point of view. Early in the course of my experiments it struck me that the exuberant growth commonly manifested by what were so evidently "extraneous" organisms might be very possibly interfering with, if not superseding, the more important and essential organism which I was seeking. I therefore turned my attention to the discovery, if possible, of some means of so treating vaccine lymph as to inhibit the multiplication in it of all "extraneous" organisms and eventually to destroy them altogether, without at the same time injuring its potency for vaccination. These bacteria evidently find in the lymph, especially when removed from the body, a suitable medium for their subsequent multiplication, while at the same time it would appear that growth and multiplication of them has the result of gradually inhibiting the specific effect proper to the vaccine virus itself. Upon all grounds, then, the obvious indication for my guidance was not only to prevent such multiplication of "extraneous" organisms subsequent to storage in the usual manner, but if possible to remove them altogether as soon as the lymph was taken from the living subject, without injury to the actual contagium of vaccinia. Without detailing the various experiments adopted with this object in view it is necessary here to state

briefly the lines on which the work was carried out. In the first place, trial was made of the method of exposure of lymph for definite periods to a temperature considerably above blood-heat, which had in the hands of Kitasato met with conspicuous success in the isolation of the bacillus of tetanus. Proceeding in this manner, and in every experiment observing the precaution of making control cultures, I presently arrived at a temperature, exposure to which is apparently incompatible with the continued existence of those micro-organisms which can ordinarily be grown when vaccine lymph is inoculated into nutrient jelly. The temperature in question ranged between 38° C. and 42° C., but the method did not in practice prove advantageous. Thus if plate cultures were made of lymph after exposure for an hour at the lower register a few points of growth occasionally after the lapse of a day or so made their appearance; and, on the other hand, the higher temperature, though it inhibited all extraneous microbes, appeared sometimes to exert an injurious effect on the lymph as far as regards the normal vesiculation which should result from its inoculation in the living animal. Some method of readier application and requiring less delicate manipulation was therefore obviously desirable. This I at length found in the addition to the lymph, or rather to the vesicular pulp, obtained from a vaccinated calf, of a sterilised 50 per cent. solution of chemically pure glycerine in distilled water prior to storage of the mixture in capillary tubes which had themselves been previously sterilised by heat.

Admixture of glycerine and vaccine lymph is, of course, no new device. Indeed, my attention has recently been directed to a letter by the late Mr. R. Cheyne which appeared in the *Medical Times* as long ago as March, 1850, in which he advocates the superiority of lymph which has been kept in the fluid state by addition of "the least portion" of glycerine over that which has been dried on points. As Mr. Cheyne's work appears to have been overlooked until quite recently, it may be of interest to set out in his own words his mode of procedure. "My method," he says, "is to take all the lymph I can get from the eighth-day vesicle on a glass stopper (elongated in a narrow tongue-shaped form for about an inch below the neck of the small bottle into which it fits) and, having accumulated it on both surfaces of the stopper near its end, I mix it well with the point of the probe, with the glycerine held by the latter. Then after the stopper is put into the bottle (which is always to be kept standing up) the lymph, then assisted by gravity, will collect itself into a distinct drop on each surface of the stopper, to be ready for use, as I know by experience, during a very long period and in any number of cases that would not exhaust the stock." In a further letter Mr. Cheyne acknowledges his indebtedness to the late Mr. Startin's advocacy of the therapeutic applications of glycerine, by which he learnt of the suitability of this substance for the object he had in view and sets out practically in the wording of Mr. Startin's paper the distinctive properties of this substance, among others, that of its being an antiseptic. He goes on to say: "I mixed glycerine with vaccine lymph in the way detailed ..... with the satisfactory result, better than any theory, of discovering that in addition to its known property of preventing fermentation and mouldiness in vegetable substances it had also that of keeping vaccine lymph, an animal product, undecomposed in a fluid state for months." Three years later (in 1853) Mr. Cheyne showed to the Presidents of the Royal Colleges of Physicians and Surgeons a child whom he had successfully vaccinated with lymph which he had previously kept for six months after treatment with glycerine.

It was left for Müller of Berlin in 1869 to demonstrate the further point that the quantity of matter available could be increased by the addition of glycerine without injuriously affecting the potency of the mixture. He showed that vaccine lymph might be diluted with three times its bulk of glycerine and still retain its properties unimpaired—a fact which has been taken advantage of at many of the continental vaccine stations and by more than one purveyor of lymph. Curschmann writing on the subject of small-pox in Ziemssen's Encyclopædia refers to this method as follows: "Müller has the great credit of having discovered the fact that by mixing vaccine matter with glycerine in certain proportions the activity of the former is not diminished, so that we have here a means of *increasing the volume of the lymph* when the quantity is small or when there is an unusual demand for it. ..... The lymph and glycerine mixture *appears to keep as well as the unmixed lymph.*"[2] But from this statement it is quite obvious that the sole object of employing glycerine in the manner described was to increase the amount of material available for vaccination. Also with this end in view glycerine was used by Dr. Stephen Mackenzie at the London Hospital in the epidemic of 1870–71, the mixture of lymph and glycerine being made up immediately before it was required for a large series of revaccinations. Similar means for increasing their amount of available lymph have been frequently employed by public vaccinators (among the earliest my present colleague, Dr. Bruce Low) and others in times of stress. In 1882 Dr. Warlomont patented in England a method of admixture of glycerine with vaccine lymph, but no mention of the use of glycerine in this connexion was made in the advertisements of his agents until within the last few months. Until recently, moreover, there would seem to have existed no appreciation of the inhibitory action exerted by glycerine in bringing about bacteriological purification of the lymph, when the mixture is stored for some time prior to use under conditions preventing access of air and light. When, however, a glycerine emulsion is properly prepared after the method I have advocated it is found that the growth of extraneous aerobic bacteria is at once greatly inhibited, while after a longer or shorter period they are practically all killed out. This effect is best demonstrated by making a series of plate cultivations from tubes of glycerinated lymph at gradually increasing intervals of time, a control plate being poured in each instance from a specimen of the lymph material prior to the admixture of the glycerine. These observations of mine, since their publication in 1891, have received ample corroboration from a number of observers in various parts of the world as follows:

In 1892 a paper dealing with this question was published by MM. Chambon and St. Yves Ménard in which they relate their experience of the use of glycerinated calf-lymph when kept for a considerable period in capillary glass tubes (previously sterilised) closed by the blow-pipe. Not only were the results they obtained with originally active lymph highly satisfactory, but lymph which in its fresh state had given mediocre results produced, after 15 days' admixture with glycerine, a passable vesicle, and after 40, 50, or 60 days a typical one. The improvement in the activity of such lymph seemed to them to be due to the gradual extinction of extraneous microbes under the combined influence of glycerine and time. Professor Straus, who made plate cultures with their glycerinated lymph, found that when fresh it gave rise to numerous colonies of various microbes, especially staphylococcus pyogenes aureus and staphylococcus albus, but that when it had been stored from 50 to 60 days, plate cultures therefrom remained absolutely sterile as regards these extraneous microbes. Samples tested at intervals between these two extremes presented fewer and fewer microbes as they became older. These experiments were repeated many times and invariably with similar results. This evidence, so entirely corroborative of my own work, is the more important as it appears certain from a perusal of their original paper that the authors were ignorant that similar results had been previously arrived at and that these had been published nearly twelve months before the appearance of their article.

The value of glycerine in this connexion is also strongly advocated by Leoni in a paper read before the Medical Congress held at Rome in April, 1894, and afterwards published in the *Révue d'Hygiène*. He finds that vaccine lymph as freshly collected is apt to contain large numbers of micro-organisms, some of which, he says, are capable of exerting pathogenic properties when inoculated into the system along with the true vaccine virus. And he states that these microbes disappear completely from, or that at least their number is vastly decreased in, vaccine which having been prepared with glycerine is afterwards preserved for a period of from one to four months before use. His conclusions may perhaps be best given in his own words: "Le vaccin récemment recueilli est un vaccin contaminé." "Les agents de la contamination s'épuisent dans le vaccin conservé pendant quelque temps dans la glycérine." "Le vaccin conservé dans la glycérine pendant 1 à 4 mois après la récolte, représente le type du vaccin *pur* d'une *virulence uniquement spécifique.*" "C'est de cette qualité de vaccin que l'hygiéniste doit aujourd'hui tenir compte dans la prophylaxie de la variole." Dr. Klein also bears witness to the power

[2] The words italicised do not so appear in the original.

exerted by glycerine in freeing vaccine lymph from bacteria. In speaking of the organism specific to vaccinia as being probably a spore-bearing bacillus he says: "..... It is established that the active principle of vaccine is preserved in glycerine, although, as is also known, pure glycerine acting for long times is a germicide for cocci and sporeless bacilli."

In 1896 a Commission under the presidency of Dr. Schmidtmann—and including Dr. Koch, Dr. Pfeiffer, and Dr. Frosch, together with the directors of the vaccine institutes of Berlin, Cologne, and Stettin—was appointed by the German Government to inquire and report as to the best methods for the collection, preservation, storage, distribution, and use of vaccine lymph. In their report, which has been recently published, the Commissioners arrive at the conclusion among others that fresh lymph contains numerous microbes, the number of which, on the addition of glycerine, diminishes as the age of the mixture increases. To determine to what extent glycerine is efficacious in destroying the vitality of various definitely pathogenic microbes numerous streptococci and diphtheria bacilli were mixed with specimens of lymph. As a result the streptococci were killed in eleven days and the diphtheria bacilli in twenty days. Attempts by these experimenters, as also by Kitasato in Japan, to make other chemical agents serve for rendering vaccine lymph free from bacteria led to no results of value, as although the lymph could thus be rendered free from extraneous bacteria it was found to be inefficacious as vaccine. Their next procedure was to determine the amount of glycerine that could be added to lymph so as to exert a powerful action in purifying it from extraneous microbes without in any way interfering with its specific action when employed for the vaccination of children or calves, and they came to the conclusion that the mixture of glycerine with distilled water could be employed to the extent of from 15 to 20 times the weight of vesicle pulp collected without interfering with the value of the material for the purpose of vaccination.

By consent, therefore, of numerous observers fully qualified to judge of the matter we have in glycerinated calf lymph properly prepared a vaccine material which, while even more efficient as vaccine than the original lymph, can be produced practically free from the extraneous organisms which at one time or another have been isolated from fresh or stored lymph by the method of plate-cultivation. Of not least importance is the fact that, as shown by Dr. Blaxall and myself, vaccine lymph may by this method of preparation with glycerine be rendered free also from pathogenic bacteria, such as those of tubercle and erysipelas, even when these have previously been added in considerable quantity for experimental purposes. The fact that the growth of the tubercle bacillus is well known to be encouraged in a nutritive medium containing about 5 per cent. of glycerine in no way detracts from the value of this substance when used in a strength of from 40 per cent. to 50 per cent. as a means of obtaining lymph free from pathogenic organisms. That particular drugs when introduced in small quantities into the human economy seemingly stimulate and encourage certain of its functions, whereas when introduced in large quantity they discourage or even annul them, is a fact familiar to every practitioner, and it is also well known to bacteriologists that micro-organisms are profoundly affected by variations in one or another direction of the amount of one and the same chemical constituent of the particular medium in which they are placed. The question of quality of vaccine lymph naturally engaged the attention of the English Royal Commission on Vaccination at a time when they were taking the evidence of witnesses and among the recommendations contained in their final report is one to the effect that no persons should be required to submit to vaccination by means of any other lymph than that derived from the calf. The reason for this recommendation appears to be avoidance of even remote risk of inoculation, in the process of vaccination, of infections other than cow-pox — such, for instance, as those of syphilis and leprosy (Section 433)—as also the desirability of minimising the opportunity for infection by erysipelas by obviating the necessity for opening vaccine vesicles involved in arm-to-arm vaccination (Section 447). The succeeding section of the report which deals specially with the subject now being discussed may be set out in full. It is as follows:—

"448. We think that safety would be increased by preserving the lymph in tubes instead of on 'dry points.' There is some difference of opinion on this matter among those with whose opinions we have been furnished. On the whole, however, we think the weight of experience as well as reason is in the direction we have indicated. In connexion with this subject our attention has been drawn to the experiments recently made by Dr. Copeman as to the effect of the storage of vaccine lymph in glycerine. The conclusions at which he arrives are that the addition of glycerine, whilst it leaves the efficacy of the lymph undiminished, or even increases it, tends to destroy other organisms. If it be the fact that the efficacy of the lymph remains unimpaired its storage in glycerine would largely diminish the difficulties connected with the use of calf lymph which are inseparable from calf to arm vaccination. The investigation has not reached a point at which it is possible to pronounce with certainty whether the anticipated results would be obtained. And it was at one time suggested that the introduction of glycerine was likely to be mischievous. The question is one a further investigation of which is obviously desirable. If lymph is to be preserved in glycerine due care would be requisite to ensure its purity and the absence of contamination in its introduction. We think that, whether mixed with glycerine or not, each tube should contain only sufficient lymph for the vaccination of one person.

In this Section (448) of the Royal Commissioners' report a sentence occurs to which some special reference is desirable. This is as follows: "And it was at one time suggested that the introduction of glycerine was likely to be mischievous." The reference made is to an outbreak of disease having the clinical characters of impetigo, which occurred in the summer of 1885 in villages situated on the island of Rügen in the Baltic, after the vaccination of 79 children in the latter part of June of that year. This outbreak forms the subject of a paper by the late Sir George Buchanan in the Transactions of the Epidemiological Society for 1885–86. He states that for the vaccination of these 79 children only two tubes of lymph (of human origin) were available and consequently their contents were further mixed with glycerine (glycerinum purissimum) before use. Thymol to the extent of one-third had also been mixed with the lymph previously to its having been sent out from the Government establishment at Stettin. Sir George Buchanan states that the principal misgivings of the Commission appointed to inquire into the outbreak had concern with the glycerine, but adds that several points in the circumstantial evidence, however, suggest that the Stettin mixture *before glycerine had been added* may have been responsible for some irritation. He further says, however: "I do not know of any experience in England of inoculation with thymol or thymol and glycerine, but I have heard of dilutions of lymph with glycerine always from people complaining of the lymph." In giving evidence before the Royal Commission on Vaccination in 1893 I was asked whether this statement did not condemn my suggested use of glycerine in connexion with lymph supplies. I pointed out, however, that in the first place dilution of lymph with an indefinite quantity of "glycerine" of unknown composition just before employing the mixture for vaccination, was a very different matter from storing lymph with chemically pure glycerine in definite amount and of definite strength, the whole being protected from light and air for a length of time before use and that in addition what at the time of the outbreak in question may have been termed glycerinum purissimum would in all probability at the present day be considered by no means deserving of that term. This latter statement I made on the authority of Messrs. Price, the chief manufacturers of glycerine in this country, whose manager at the request of the directors was good enough to put at my disposal his extensive practical knowledge of the details and the literature of this subject. The information thus obtained has been published in the appendix to the last volume of evidence recently issued by the Royal Commission on Vaccination. The glycerine which has been employed in my investigations is that manufactured in this country by Messrs. Price, but in Germany, where this method of purification and preservation is now carried out in all the Government establishments for the supply of vaccine lymph, a glycerine made by Sarg of Vienna is used. This is said by Dr. Schultz, the director of the Berlin establishment, to be of a less "drying" nature than English glycerine. In order to obtain an authoritative opinion as to the degree of chemical purity obtained in the manufacture of glycerine at the present time and also an accurate estimate of the difference, if any, in the nature of the English and Austrian brands, I requested Dr. Wilson Hake to analyse samples of glycerine manufactured by Messrs. Price and by Sarg respectively, and also samples of a new English brand which had just been placed on the market by Messrs. Lever Bros. The result of the chemical examination of these samples, which Dr. Hake was kind enough to make for me, proves incontestibly that all three samples exhibit a high degree of purity, most

markedly so in the case of Messrs. Price's manufacture. In all there is complete absence of metallic contamination of any kind, while the amount of organic impurity is insignificant. The main difference observed is the slightly greater degree of concentration obtained in the English products as opposed to that of Austrian manufacture.

In accordance with the suggestion contained in Section 448 of the Report of the Royal Commission the Local Government Board instructed me to make arrangements with Dr. Blaxall, the lecturer on Bacteriology at Westminster Hospital, and now Bacteriologist to the Government vaccine laboratories, to carry out a further series of experiments on the lines indicated by me in the evidence which had been tendered to the Commission, with the object of elucidating more fully the exact value of my glycerine method for the purification and preservation of vaccine lymph. The results of this series of experiments are set out in the report of the medical officer to the Local Government Board for the year 1895–96, published in the autumn of 1897. Although devoting our attention mainly to the results which ensued on the employment of glycerine, it was thought desirable that investigation should be made concurrently as to the possible value for the preservation and purification of vaccine material, of lanoline and vaseline, substances which within quite recent years have been introduced by two officers of the Indian Medical Service, Surgeon-Lieutenant-Colonel King and Surgeon-Major Bamber respectively, as being superior in their opinion to glycerine as agencies for the preservation of vaccine.[3] Neither of these observers, however, has as yet brought forward any bacteriological evidence as to a possible germicidal action of the substance they advocate, as will be seen on reference to their original papers. And Dr. Blaxall has shown that from this point of view at any rate neither lanoline nor vaseline can be regarded as possessing any value whatever. Indeed, it would appear that the extraneous organisms originally present in the lymph with which these substances are admixed, so far from exhibiting as time goes on any diminution in numbers, tend on the contrary to become largely increased as shown by the test of plate-cultivation. Lanoline and vaseline are thought by their advocates to possess superiority over glycerine mainly for the following reason. These officers note that glycerine emulsion tends to become mouldy after a short period, whereas this they do not find to be the case when either lanoline or vaseline is employed. That glycerinated lymph should have suffered deterioration in the way they indicate suggests either that it was not properly prepared or that it was left exposed to the air. That the occurrence of a similar accident is not an impossibility with lanoline and vaseline preparations has been demonstrated by Dr. Blaxall's recent experience of their use.

The advantages of glycerinated calf lymph may be set out as follows: 1. By employing the method of glycerination of lymph-pulp great increase in quantity can be obtained without any consequent deterioration in quality, the percentage insertion success following on its use being equal to that obtained with perfectly active fresh lymph. 2. Glycerinated lymph does not dry up rapidly as does unglycerinated lymph, thus simplifying the process of vaccination. 3. Glycerinated lymph does not coagulate, so that it never becomes necessary to discard a tube on this account. 4. Glycerinated lymph can be produced absolutely free from the various streptococci and staphylococci which are usually to be found in untreated calf lymph and which are considered by Crookshank and others as liable to occasion suppuration. 5. In like manner the streptococcus of erysipelas, in the event of its having been originally present in the lymph material, is rapidly killed out by the germicidal action of the glycerine. 6. The tubercle bacillus is effectually destroyed even when large quantities of virulent cultures have been purposely added to the lymph. 7. The possibility of inoculation of syphilis is eliminated, as the calf is not subject to this disease. 8. The necessity for collecting children together, with the attendant risk of spread of infectious diseases, or of transporting a calf from place to place, is obviated, while the danger of "late" erysipelas in the child is minimised by reason of there being no necessity to open the mature vesicles for the purpose of obtaining lymph. 9. The bacteriological purity and clinical activity of large quantities of the lymph can be readily tested prior to distribution. 10. By reason of the possibility of keeping large stocks of glycerinated lymph on hand for considerable periods of time without appreciable deterioration, any sudden demand such as is likely to arise on outbreak of epidemic small-pox can be promptly met. 11. The expense of producing glycerinated lymph is proportionally small, since the amount obtainable from each calf is enormously increased.

[3] The use of vaseline as an excipient for vaccine material had apparently been advocated by Professor Layet of Lyons some years previously to Surgeon-Major Bamber's first communication on the subject.

THE PREPARATION OF GLYCERINATED CALF LYMPH.

The method best adapted for the production of glycerinated calf lymph which shall be free from all extraneous organisms, of perfect efficacy, and yet affording material for the vaccination of many more children than the original unglycerinated calf lymph, is briefly as follows.

The preparation of the calf.—A calf of suitable age, about from three to six months old, should be kept in quarantine for a week, after which, if found to be quite healthy, it may be removed to the vaccination station. It is there placed on a tilting table and the lower part of the abdomen, reaching as far forward as the umbilicus, having been shaved is thoroughly washed with a solution of carbolic acid and then rinsed with sterile water and dried with soft sterilised towels.

Inoculation of the calf.—With a sterilised sharp scalpel, incisions parallel to the long axis of the body are made on this clean-shaved area. The depth of the incision should be such as to pass through the epidermis and to open the rete Malpighii, if possible without drawing blood. As these incisions are made, glycerinated calf lymph, which by examination has been proved to be free from extraneous organisms, is run into them by means of a sterilised blunt instrument and the point of the scalpel is also from time to time dipped into the vaccine emulsion.

Collection from the calf.—After 5 days, or 120 hours, the vaccinated surface of the calf is first thoroughly washed with warm water and soap, rubbed over it by the clean hand of the operator, and finally the whole area is carefully cleansed with sterile water. The remaining moisture is then removed by sterilised sheets of blotting-paper. The vaccinated incisions will now appear as lines of continuous vesicles raised above the surface, each line separated from its neighbour by about ¼ in. of clear skin. Any crusts which appear in the vesicular lines are picked off with a blunt sterilised instrument. The vesicles and their contents are then removed by means of a sterilised Volkmann's spoon and transferred to a sterilised bottle of known weight. By going over the lines only once with the spoon it is quite easy to remove the whole of the pulp without any admixture of blood. The abraded surface is carefully washed and may be dusted over with fine oatmeal or starch and boracic powder. Subsequently the calf is transferred to the slaughter-house and the carcass is examined by the veterinary surgeon, who forwards a certificate of its condition. Should this not be satisfactory the vaccine pulp obtained from the animal is destroyed.

Preparation and glycerination of the lymph-pulp.—The bottle containing the vaccine pulp is taken to the laboratory and the exact weight of the material ascertained. A calf vaccinated in this way will yield from 18 to 24 grammes, or even more, of lymph-pulp. This material is then thoroughly rubbed up in a sterilised mortar or in a mechanical triturating machine. When it has been brought to a fine state of division it is mixed with six times its weight of a sterilised solution of 50 per cent. chemically pure glycerine in distilled water. The resulting emulsion is then transferred to small test tubes, which are then aseptically sealed and should be stored in a cool place protected from light. When required for distribution it is drawn up into sterilised capillary tubes which are subsequently sealed in the flame of a spirit lamp.

Bacteriological examination of the lymph emulsion.—As soon as the vesicular pulp is thoroughly emulsified with the glycerine solution agar-agar plates are established from it and after suitable incubation for seven days the colonies that have developed on the plates are counted and examined (see Figs. 1 to 5). Week by week this process is repeated and invariably the number of colonies diminishes with the age of the emulsion, until at the end of the fourth week (see Fig. 6) after the collection and glycerination of the lymph material the agar-agar plates inoculated at that time show no development of colonies. The lymph is then subjected to further culture experiments and if these results of freedom from extraneous organisms are confirmed the emulsion is ready for distribution. The elimination of the extraneous organisms in our experiments has occurred with

marked regularity at the end of the fourth week. The only exception to this rule arises when the lymph originally contained a considerable number of spores or bacilli of the hay bacillus or bacillus mesentericus. These organisms are very resistent to the action of glycerine, but if the precautions detailed are carried out in the treatment of the calf their presence may generally be excluded.

FIG. 1.



Photograph of agar plate incubated for seven days subsequently to inoculation with *one loopful* of rubbed-up vaccine material *prior* to its admixture with glycerine.

Duration of activity of glycerinated calf lymph.—This varies in all probability with atmospheric conditions, with the fineness of division of the vesicle pulp, and, above all, with the condition of the calf itself. Some calves yield an excellent lymph, others a poor lymph, and the problem is to determine the value of the lymph yielded

FIG. 2.



Photograph of agar plate incubated for seven days subsequently to inoculation with *five loopfuls* of the same material *immediately after* glycerination. The number of colonies on these two plates (Figs. 1 and 2) will be observed to correspond closely.

by any given calf. A lymph which was collected and glycerinated on July 13th, 1897, has since been used at intervals of from 24 weeks to 32 weeks after glycerination for the vaccination of children. During this period 61 children have been vaccinated with this lymph in 5 places each, with a mean insertion success of 98 per cent.[4] Thus by the methods described glycerinated calf lymph can be prepared which becomes freed from extraneous organisms is available for a large number of vaccinations, at least 2000 from an average calf, and retains full activity for ten months and will, under favourable circumstances, continue to do so in all probability for still longer periods if

FIG. 3



Photograph of agar plate incubated for seven days subsequently to inoculation with *five loopfuls* of the stock glycerinated emulsion *one week after* preparation. The number of colonies is somewhat diminished.

necessary. In practice, however, there will, of course, be no reason for keeping lymph for such a period.

From the description which I have given it will, I think, be obvious that the preparation and testing of glycerinated calf lymph, properly so-called, is a matter requiring considerable skill and care. Sir Richard Thorne insists strongly

FIG. 4.



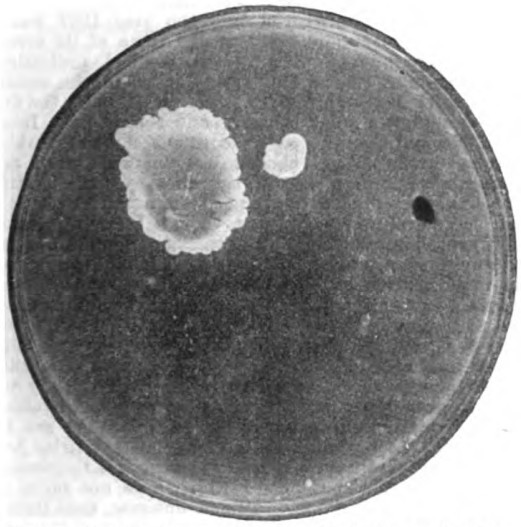
Photograph of similar agar plate inoculated *a fortnight after* glycerination. A further decrease in the number of colonies is now conspicuous.

on this fact in his introduction to our joint report recently presented to Government on the administration of certain of the chief continental vaccine establishments. "In every

[4] This same sample of lymph (now forty-two weeks old) has given in Dr. Cory's hands during the past week an insertion success (based on 50 insertions) of 100 per cent.

instance," he says, "we found that the work of collecting preparing, and storing the glycerinated lymph was carried out with the greatest care; a condition of scientific cleanliness was especially aimed at, and a laboratory, fitted with bacteriological and other scientific apparatus, always formed an essential part of the vaccine institution. The extent to which the desired end of freedom from extraneous impurity was

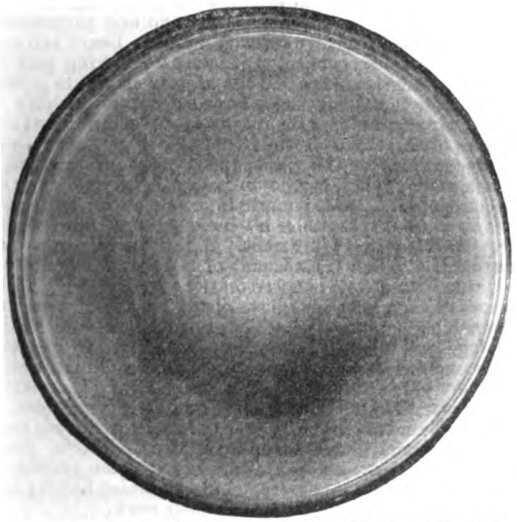
FIG. 5.



Photograph of similar agar plate inoculated *three weeks after* glycerination. The decrease in the number of colonies is still more marked than in the former plates.

attained depended largely on whether a first attempt to adapt an existing calf station or similar establishment to its new purposes had been maintained, or whether it had been abandoned in favour of an institution constructed especially for the purposes of that which is in the main scientific laboratory work. Several of the stations which we visited are already under condemnation because of the difficulty

FIG. 6.



Photograph of similar agar plate inoculated *four weeks after* glycerination. No growth whatever has occurred.

of ensuring that freedom from micro-organisms which should be aimed at during the preparation of the lymph-supply; the Cologne station is one of the newest and may well serve in its main features as a type of that which should be aimed at. The condition of scientific cleanliness to which I have referred extended to such matters as the following: (*a*) the construction and administration of the stabling for the calves; (*b*) the means of washing or bathing calves before their vaccination; (*c*) the construction, cleansing, &c., of the operating rooms; (*d*) the cleansing of the vaccinated surface of the calf with germicidal preparations and sterilised cloths before collection of the lymph; (*e*) the use of clean sterilised outer garments by all officials concerned in the processes carried out; (*f*) the sterilisation of all instruments, &c., employed; and (*g*) the admixture of the lymph material or pulp with glycerine, its preparation and storage under conditions of laboratory freedom from extraneous organisms.

"With a view of meeting all possible criticism as to the chance of conveying tuberculosis together with calf lymph we found that, notwithstanding the well-known rarity of that disease in calves, together with the now recognised germicidal effect on the tubercle bacillus when deliberately added to calf lymph prepared with an aqueous solution of glycerine as described, it was the practice not to issue any lymph until a report had been received from a veterinary surgeon—after slaughter of the animal—of the freedom of the calf in question from tuberculosis or other disease. In brief, the lymph used is that of healthy calves only.

FIG. 7.



Photograph of child (eighth day) vaccinated with glycerinated calf lymph, which, as shown in Fig. 6, had been found, when tested by the method of plate cultivation, to be free from extraneous micro-organisms.

"The information which we obtained in the course of our visits does not profess to be complete. Much remains to be ascertained by careful scientific research in order to learn what are the precise conditions under which glycerinated calf lymph can be prepared and stored, so as to secure, to the utmost, freedom from extraneous and, especially, from pathogenic micro-organisms, whilst at the same time retaining to the utmost the undiminished protective value of the lymph material against small-pox. In every country visited further research is being made in this direction and in Germany a special commission of medical and bacteriological experts has been appointed by the Government in order to study and report upon the subject. But the information which is now available in this country and that which during the course of our visits abroad was placed at our disposal with a readiness and a courtesy which calls for an expression of the fullest acknowledgment suffices to enable me to submit the following conclusions:—

"1. It is desirable that vaccination, both primary and secondary, carried out under the auspices of the Government, should be performed exclusively with vaccine lymph derived from the calf.

"2. There will probably be advantage in retaining, for a time at least, the system of calf-to-arm vaccination at the Board's Animal Vaccine Station for such parents and others as may request it and for the purposes of comparing its results with those following the use of calf lymph preserved in one or another way.

"3. The distribution of calf vaccine from the National Vaccine Establishment should be limited to glycerinated or similar preparations of lymph or pulp material in air-tight tubes or other glass receptacle.

"4. To give effect to the above it will be requisite that the Board's Animal Vaccine Station should be reorganised both as regards construction and administration. Notably will it be requisite that it should include a properly equipped laboratory under the direct supervision of a bacteriological expert."

These recommendations are now in process of adoption by the Government and already suitable laboratories have been secured which are to be placed in the charge of Dr. Blaxall. I trust, therefore, that we shall shortly be in a position to supply bacteriologically pure and fully active calf vaccine lymph in any quantity that may be found desirable.

An Oration

ON

THE MOSCOW CONGRESS—A HOLIDAY; WITH COMMENTS ON SUGGESTED TOPICS.

Delivered before the Medical Society of London on May 16th, 1898,

BY FREDERICK T. ROBERTS, M.D., F.R.C.P. LOND.,

PROFESSOR OF MEDICINE AT UNIVERSITY COLLEGE; PHYSICIAN TO, AND PROFESSOR OF CLINICAL MEDICINE AT, UNIVERSITY COLLEGE HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—You, Sir, with the other members of the Council of the Medical Society of London have again, from purely friendly motives, lured me from the obscurity and retirement for which I instinctively crave and for which nature intended me and have thrust me into a conspicuous and much-coveted position. I should indeed be wanting in appreciation of such kindness, and even in mere courtesy, if I did not express at the outset my feeling of deep gratitude for the honour thus conferred upon me, especially as it is wholly undeserved. I am, however, none the less conscious of my unfitness for the task and of my deficiency in the qualifications necessary to command the attention and interest of such an audience as is gathered together on an occasion like this, most of whom are, I have no doubt, impatient and eager to take part in the more attractive social functions of a conversazione, to enjoy a chat with friends whom probably they seldom meet except at these times, and to indulge in the delights of the "fragrant weed." And yet, Sir, you have now actually designated me an "orator!" Fortunately for my peace of mind this word has nowadays a very wide and indefinite signification and by no means implies the possession of the faculties or powers which were originally associated with the expression and which in ordinary language it is supposed to suggest.

With the view of getting a hint as to a suitable topic for this address I asked our always obliging and courteous registrar—Mr. Hall—whether he could furnish me with a list of the subjects dealt with in previous orations. There was no such record, but he at once took the trouble to prepare one and as the result I have here a list of the orators since 1774 and of the topics on which they discoursed, so far as they are known at present. I have thus at least the satisfaction of being responsible indirectly for calling into existence a record which, while of great interest in itself, will be of much value for future reference. I found, however, that it did not help me materially, except by showing that the subjects presented great variety and that I was at liberty to be guided entirely by my own inclination in selecting one. Of course favourite themes were, in addition to matters relating to the Society itself, the grandeur of our profession as well as its defects, its internal and external relations, how to promote its progress, and the remarkable advances, real or supposed, made from time to time in the various branches of medicine and surgery. These are always tempting and attractive topics, which open up channels for any amount of talk, but for various reasons I personally rather shrink from them, and at any rate they are sufficiently discussed at the present day not to call for any special reference to either of them on this occasion.

I need scarcely remind you that the year 1897 was a memorable one in several respects and some of its events have had important relations to the medical profession. Amongst those of special interest to us were the annual meeting of the British Medical Association, held for the first time in one of our great colonies, and the Twelfth International Medical Congress at Moscow. For reasons which I need not enter upon I chose to attend the latter; and "The Moscow Congress" seemed such an easy way of getting out of any difficulty in deciding upon a subject that I determined to inflict it upon you, though I have no doubt most of you, either from personal experience or from reading the accounts in the medical and lay press, know as much about it as you desire. I must therefore appeal to your kind indulgence on this ground amongst others, that in days to come the mere record in the Transactions of the Medical Society of London of the fact that the International Medical Congress was held in Moscow in 1897 may prove interesting to future generations, and especially that this society was represented as a delegate by its esteemed and distinguished president, Dr. Sansom. I regret to say that I am not the first in the field, for others in this and other countries have given addresses on their Russian experiences and impressions in connexion with the Congress, which does not make my task any the easier or lighter. I hope, however, that there is still something left for me to speak about, and there are aspects of the subject which, so far as I am aware, have not yet been dealt with.

It must seem at first sight highly incongruous and absurd to associate, as I have done, the idea of "a holiday" with the Moscow Congress. To think of going from one large city to another in the height of the hot season, attending crowded meetings as well as fatiguing evening social gatherings and entertainments, most of them continued into the "early hours," and calling such an experience a holiday! Moreover, judging from remarks I have heard, it seems to be a deep-rooted notion amongst the laity, as well as amongst many medical men who do not honour congresses with their presence, that those who do attend such gatherings are consumed with an ardent desire for scientific and professional progress and consequently devote themselves heart and soul to the active work connected therewith, taking part in various discussions, reading and listening to elaborate papers, absorbing and imparting fresh knowledge, and helping to bring into practical utility the results of all sorts of novel and marvellous discoveries. I think, Mr. President, you will agree with me that on the whole this is a delusion, though there are no doubt a few who take things very seriously on these occasions. I may remark in passing that individual notions as to what constitutes a "holiday" and how it may be best spent are very different. A few years ago a very interesting and delightful account of a "Doctor's Holiday" formed the topic of one of these orations by Dr. Ord. There was an air of calm and restfulness about his experiences that made them highly attractive. Others must be always killing something, but in saying this I do not mean to cast any reflection upon members of our profession. Others, again, make a very toilsome business of a holiday, being incessantly "on the move," taking "record" walks or bicycle rides, or climbing some mountain peak, and the more dangerous their exploits the keener the pleasure they derive therefrom. Some stay at home perpetually, being so devoted to the practice of their profession that this is to them a constant holiday and they are miserable when away from their work.

Speaking personally I am glad to say that I can thoroughly enjoy different kinds of holidays, provided I am not expected to put forth too much energy and needlessly risk my life and limbs. From more than one point of view the visit to Moscow might fairly come under the category, for at any rate it afforded a rest and change from the ordinary routine of London life, professional and social; while, altogether apart from the Congress itself, one could not but feel deeply interested in the novel sights and experiences associated with a most remarkable country and city not previously

visited and in observing and gaining some acquaintance with the Russian people, their conditions, habits, and mode of life. But in the title of my address I have coupled the idea of a holiday with the Moscow Congress for a special reason. I wish it to be clearly understood that in relation to this event I held an entirely unofficial, independent, and individual position. I was not even a "delegate" from any society, association, corporate body, or university, but a mere "outsider," an "item," an "unit" in that vast gathering, occupying a very "back seat" and decorated with the simplest badge which the Congress could furnish. Do not imagine for a moment that I am complaining of this. I rejoiced in my liberty and took full advantage of it. I felt that I could spend my time exactly as I liked, so long as I conducted myself in accordance with Russian regulations and ideas, disregard of which might lead to unpleasant consequences. Further, I was calm in the happy consciousness that unless I chose to do so I was not called upon to take any active part in the work of the Congress, nor had I looming before me the prospect of having to give an account of my doings or to prepare any official report. And now, Mr. President and Gentlemen, I am ashamed to confess that I did nothing of which there will be any record in the proceedings of the Moscow Congress. The Transactions of this society will bear testimony to the general fact that I never read papers anywhere if I can possibly avoid doing so, and I must say that I do not regard it as the height of bliss to be obliged to listen to them, especially when they are practically inaudible and delivered in, to me, an unintelligible language. As to taking part in a discussion I shudder at the mere thought. I am fully aware that in these days such conduct is very foolish from several important points of view and I by no means commend it for imitation. On the contrary, I take this opportunity of strongly advising the "rising generations" of the medical profession to bring themselves to the front as much as possible if they wish to succeed, and to assert themselves, not only at home but abroad, and especially when they attend foreign congresses. I cannot answer for members of other professions, for men engaged in commerce, for explorers of new countries and so-called "pioneers of civilisation," for politicians or statesmen; but as regards the members of the medical faculty in this country I have a strong impression that as a class we are not so forward or "pushful" as we might be and in this respect are far behind certain other nations. Consequently their representatives are always to the fore at these gatherings and only too ready and eager to assume prominent positions. At the Moscow Congress a few of our representatives were invited to occupy more or less conspicuous positions, or to read communications on special subjects. We were all particularly pleased to see Sir William Mac Cormac presiding at the last of the general meetings and he conducted the proceedings in his customary dignified and genial manner. Dr. Lauder Brunton upheld the honour and prestige of his country by delivering one of the addresses at the first great meeting. Our distinguished Fellow, Dr. Pavy, read a communication on Diabetes by special invitation. Others were elected vice-presidents or presidents of Sections and occupied the chair at some of these gatherings, amongst them the President of this society. A few of their own free will sacrificed their comfort to their sense of duty by reading papers or joining in discussions. On the whole, however, our countrymen kept very much in the background and the record of actual work done at the Moscow Congress will not contain so many names of our well-known leading men as might be wished. And now, Mr. President and Gentlemen, I have further to confess, as bearing out my idea of a holiday, that I did not even attend the meetings of the Sections as diligently or regularly as I might or ought to have done. In duty bound I entered my name for one of them—namely, that of the "Maladies Internes"—and did spend a little time there at intervals. Moreover, I looked in at other sections in a casual way, more from curiosity than anything else, and was sometimes much entertained, if not edified or instructed.

My remarks up to this point will have prepared you for the announcement that I am not in a position to give such an account of the scientific and practical outcome of the proceedings of the Moscow Congress as you might reasonably expect. For this perhaps you will be grateful, for a disquisition on this line is apt to be very tedious and trying for an audience. But while I did not actively engage in the work of the Congress I desire at once to remove any impression that I looked upon the occasion as a mere pastime or that I intend to deal with my subject in a wholly frivolous and irresponsible fashion. In relation to the gathering itself one could not help feeling a real interest in the proceedings, observing and taking note of events and circumstances connected therewith, reflecting upon the work done and the subjects dealt with, and endeavouring to realise and estimate the present position of our profession, as well as the comprehensive or cosmopolitan tendencies of modern thought and practice in relation to the "science and art of medicine," using the expression in its widest sense. Moreover, a medical congress suggests, either directly or indirectly, many questions of the deepest interest and importance to us as a profession and I regard my independent and unofficial position at Moscow as affording me full liberty to refer to any matters of current interest which fairly come within the range of my theme and to express my personal opinions and feelings in relation thereto.

Before dealing briefly with some of the more prominent events immediately relating to the Moscow Congress I must just allude to a difficulty which pertains more or less to all international congresses, but which in this case assumed unusual proportions, and that is as regards the matter of languages. Personally, I must regretfully admit that I am very deficient in knowledge of foreign tongues and much of my remissness in listening to papers and discussions was, as I have already hinted, due to this cause. I have an impression that not a few of my fellow countrymen were not much better off than myself, though some, on the other hand, excited our envy by being able to discourse fluently in public in French or German. But I was particularly struck, not only with the advantage of a thorough knowledge of these and other of the more familiar modern languages, but also with the importance of cultivating the faculty of acquiring languages. I desire to enforce this point emphatically upon my younger hearers. At the present day you have very great advantages over your predecessors and are expected to have a tolerable acquaintance, at any rate, with French and German, especially if you aim at taking a high position in your profession. This is necessary even for literary purposes, but I would remind you that to carry on a conversation in these languages and to follow with comfort the business of a foreign congress are very different matters from merely knowing just enough to enable you to read books and articles on professional subjects. I met some American friends at Moscow, who, being adepts at learning languages, from prolonged training, and possessing much determination, arrived there with a very fair knowledge of Russian, which served them, and their companions sometimes, myself amongst the number, in excellent stead. One gentleman from the United States actually responded in Russian to a "toast" at the dinner of one of the Sections, and you may imagine with what enthusiasm his speech was received.

It is a common impression, and probably a true one, that foreigners learn English much more frequently and thoroughly than we do their languages, and we are often given to understand that Russians are especially proficient in our tongue. So far as my experience went this is certainly a delusion, for I met with very few Russians who knew anything about English, though a comparatively small number had a smattering which enabled them to be of decided help, for which one felt very grateful. In this connexion I may mention that I have seen it stated in print, though I cannot personally vouch for the fact, that in the Sections "an English paper usually cleared the room, or nearly so, of all but English and Americans." Although it has been affirmed that we as a nation were not in particularly high favour at the Moscow Congress I cannot suppose that such conduct was intentional, but would rather take the more friendly view that it was the natural outcome of linguistic difficulties.

It was a very gracious act on the part of the Government to give members of the Congress "free passes" over their railways, nor would it be right to omit acknowledging the efforts which they made to guide and help benighted travellers on their arrival at the Russian frontier and at the railway stations of the great cities, as well as in their travels from place to place. That they were not always successful was due to circumstances over which they had no control. Russians of all classes are undoubtedly most civil, courteous, and obliging, and personally I was treated with the greatest civility and consideration at the frontier. With a good deal of lifting of hats and bowing the officials declined to examine any of my luggage. Unfortunately, however, this

experience taught me rather an unpleasant lesson, of which I give you the benefit, and that is not to trust too much in people who treat you with excessive politeness and suavity. As a matter of fact, my luggage was not sent on at all, but retained at the frontier owing to some little hitch in the matter of stamping, and I spent the greater part of my time at St. Petersburg, which I first visited on my way to Moscow in endeavouring to gain possession of it—a feat which I believe I never should have accomplished had it not been for the help of some most kind English friends. And here let me express my personal obligations, shared, I am sure, by many of my fellow countrymen, for the kindness and courtesy shown us by British subjects resident in Russia, both in St. Petersburg and Moscow, including his Excellency the British Ambassador, the Consuls and Vice-Consuls, representatives of the press, and private individuals.

On arriving at Moscow it was an immense relief, in the midst of the din and confusion, to be addressed in broken English, but sufficient for the purpose, by a most active, intelligent, and agreeable medical student, in neat uniform, who took charge of our party, speedily relieved us of all trouble and anxiety, and conducted us most comfortably to our destination. Indeed, throughout the Congress we found the students, ladies amongst them, most kind, attentive, and helpful, and I shall ever remember them with pleasure and gratitude.

I think that those who were present at the Moscow Congress are not likely to forget the "Manège" or "Palais d'Exercice," a huge building in which the "central bureau," with its various departments, was located. For those who had arrived fairly early and had got over their troubles without any great difficulty it was decidedly amusing to watch the frantic struggles of the seething crowd of applicants for tickets, badges, programmes, and general information. It so happened that at the time of the Congress a correspondence was going on in one of the London daily papers with regard to "overcrowding in the medical profession" and while there I came across some of the letters on the subject. It struck me, here was an object lesson of the fact with a vengeance! Between 7000 and 8000 members of the craft were gathered together and we were a motley crowd! There appeared to be representatives of almost every known more or less civilised nation or country and of every type of humanity. Need I say that we were also honoured by the presence of a considerable proportion of "lady doctors," who are quite an institution in Russia? If one ever felt dull or tired a visit to the "Manège" was always entertaining and interesting, but the time to see it at its best was during the period of the day allotted to "free lunch and drinks," with which we were most generously regaled for several days.

A striking contrast to the "Manège" was the "Assemblée des Médecins," where the "Comité des Dames" had a special bureau and a most delightful salon. Here everything was refined and restful. The ladies who formed the committee, some of them of the highest rank, were most attentive and hospitable, both collectively and individually, and exerted themselves to the utmost to contribute to the enjoyment of the lady visitors, for whose benefit their efforts were primarily intended, and to enable them to visit comfortably the various places of interest in Moscow and its neighbourhood. But their kindness did not stop here, for they never refused a helping hand to the gentlemen. In addition to a magnificent *soirée* the ladies had a most delightful introductory *réunion* on the evening before the Congress was actually inaugurated. Here might be seen Virchow, under the immediate protection of the Lady President, surrounded by successive relays of ladies, all eager to pet and do homage to the venerable pathologist. He appeared to be thoroughly pleased with himself and to enjoy fully his experiences, as well he might. Altogether, the ladies at Moscow raised a very high standard which it will be difficult to reach at future congresses.

Another scene which will live long in the memory of those who were privileged to witness it is that which was presented at the magnificent Grand Theatre Imperial of Moscow on the occasion of the first general assembly of the Congress and the inaugural ceremony which then took place. It must stand out as the most brilliant and imposing sight which has ever occurred in relation to the medical profession or is likely to occur in the future. I call to mind the opening meeting of the International Medical Congress in London, and it was a very poor show in comparison. I have not the descriptive faculty required to present anything like an adequate picture of the scene, even if time permitted me to launch out in this direction, and it must suffice if I mention some of its more prominent features. The Grand Duke Sergius presided on the occasion and the Grand Duchess with her suite occupied the Royal box. The stage or platform was thronged with the officers of the Congress, State officials, civil authorities, and leading Russian doctors, as well as with representatives of almost every nation. Many were of splendid physique and handsome presence. Magnificent and gorgeous uniforms of various kinds, civil and military, constituted a prominent feature of the scene, which was rendered still more brilliant by the display of medals and decorations on expansive breasts. The whole theatre was crowded with ladies and gentlemen, the former vying with each other in the splendour of their attire and jewels, and many of the latter being also clad in military or court dress. The large majority of us, of course, were not in uniform, but we were all dressed *de rigueur*, and here and there one saw the academic garb indicating a graduate of one of the Universities of Great Britain. It was extremely interesting to see in the flesh men whose names are to us household words and who deservedly hold high positions in our profession in various countries and cities. I will not weary you with any account of the proceedings and will only say that so far as the Grand Duke and the Congress authorities were concerned the speeches were commendably brief. I did, however, particularly note and take an interest in the general behaviour of the audience and their attitude towards the various speakers, to which I must just refer. In the first place I realised what is contrary, I think, to the general impression, that the Russians can applaud in the most vociferous and enthusiastic manner. The nationality of the speakers, undoubtedly influenced the fervency of the cheering; and as regards the speeches themselves, the points which elicited most vigorous applause were brevity, audibility, real oratory, which was exceptional, and the bringing to a close of a prolonged and tedious harangue. But what roused the audience to the highest pitch of enthusiasm was undoubtedly the personality of the speaker. Our old friend Virchow was greeted with a warmth which was both touching and catching. And here I hope it will not be considered out of place, or in the least disparaging to our distinguished representatives, if I give expression to certain feelings that took possession of me on this memorable and exciting occasion. I confess that I felt somewhat envious and jealous for my country and could not help being conscious of a keen sense of regret at the absence of one personality, who, I venture to affirm, had he presented himself on that platform, would have roused the audience to a pitch of enthusiasm which no words could describe or imagination picture. Need I say that I refer to Lord Lister? Among the great events of 1897 which had a special interest for the medical profession in this country will stand out conspicuously the elevation to the peerage of this most distinguished surgeon and teacher in the truest sense of the word. Not only was it the first honour of this kind conferred upon any member of our faculty, but it may be affirmed without fear of contradiction that the choice fell upon one who would have been universally acclaimed as pre-eminently worthy of the position. His brilliant intellect, his true genius, his devoted and untiring scientific and practical work, have achieved such vast and far-reaching results, not only in relation to the medical profession, but for the benefit of humanity at large, that the name of Lister is honoured throughout the length and breadth of this land; while he is revered and beloved for his single-mindedness, his straightforwardness, and his almost too modest demeanour. Not only so, but it is difficult to realise, except by actual observation, how he is positively worshipped by the medical profession in every civilised part of the world and to what extent his teaching and work have influenced and moulded the construction and practice of the modern great hospitals. Am I wrong in affirming that all of us who went to Moscow felt some degree of resentment at our Canadian friends who had enticed Lord Lister across the Atlantic, and that we should have experienced a deep and just pride had he been present to receive the ovation which would have undoubtedly been accorded to him by the united heart and voice of our continental brethren?

The excitement associated with the inaugural ceremony was too much for most of us to enable us to return after the interval to listen to the more formal addresses relating to professional subjects. So I cannot personally tell you anything about them. Nor need I refer to the second and third

general meetings, except to say that they presented a marked contrast to the first, although well attended, and that the proceedings were on the whole somewhat dull and tedious. The final winding up of the business, with its complimentary and farewell speeches and greetings, was decidedly trying to the feelings, especially when the President nearly broke down with emotion, and I have an impression that Sir William Mac Cormac, who, as I have already mentioned, occupied the chair, realised this very keenly.

It is not my intention to inflict upon you more than a brief reference to the sectional meetings and the work for which they were responsible. It must be acknowledged that the accommodation for these meetings was most excellent as regards the rooms in which they were held, these being in some instances quite magnificent, though their acoustic properties were not always everything that could be desired. The section to which I belonged met in the splendid ball-room of the "Assemblée de Noblesses," where in the evening social functions on a grand scale took place. The subjects dealt with in the various Sections appear to have been very much on the old familiar lines and on well-worn themes, and although no doubt the discussions were most interesting and instructive if one could have understood them, I do not suppose that they have brought us any nearer to a final settlement or agreement on any one disputed point. The audiences were as a rule remarkably good and a large number seemed to take a profound interest in the proceedings. On more than one occasion I was attracted by a crowd of eager listeners gathered round a speaker, evidently trying to drink in his every word, and applauding vociferously at the close of his remarks. I naturally concluded that he was imparting some extremely important and original information, but I always found that it was only some old subject that was being dished up, perhaps in a new way. I have no doubt the same venerable themes will be trotted out on similar occasions for many a day to come. Of course, different questions which have been attracting special attention within a recent period were brought into prominence and adequately dealt with, and for the discussion of certain special subjects two or more sections met, so that they might have the benefit of their united wisdom and experience.

It would be a great satisfaction and pleasure to me, if time permitted, to enlarge upon the kindness and hospitality lavished upon the visitors to the Russian Congress, not only by our medical brethren, but by the Czar and Czarina, the Grand Duke and Duchess Sergius, the municipal corporations, the committee of ladies, and others, in the way of banquets, fêtes, and entertainments provided for their delectation and amusement. To these, again, however, I can only make a passing reference and will say nothing as to private receptions or hospitalities. The public gatherings at Moscow were generally on a vast scale and some were truly magnificent, while the kinds of amusements provided were of a promiscuous character to suit different tastes and inclinations, including amongst others various descriptions of music, not always particularly agreeable to the ear, though interesting as illustrating Russian styles, and of course dancing. One of the most striking features of some of the entertainments was the enormous quantity and variety of foods and drinks provided in the way of refreshments. And a still more wonderful sight was the rapidity with which the tables were cleared of their good things and the extraordinary capacity which many individuals exhibited for accommodating any quantity of eatables and drinkables in every conceivable combination. Truly an instructive lesson in "dietetics" from a "medical congress" and by no means the first of a similar kind! I understand that those who went to St. Petersburg from Moscow were there regaled on the same magnificent and lavish scale, but as I was not one of the number I cannot speak from personal experience or observation.

Amongst the entertainments provided for us at Moscow there were two to which I feel bound to particularly refer for a moment. The first was a "religious concert" given by singers of "L'Ecole du Synode." Such a combination of male voices, especially basses, and such superb singing it would be almost impossible to equal, and I think I may say for those who were present that this concert was an immense treat and gave us a very exalted idea as to what Russian music is capable of. The other was the delightful garden party given by the Grand Duke and Duchess Sergius at the Alexandrina Palace on the Friday after the Congress was really over to console those who could not get away owing to a failure of train accommodation and to try to make their enforced stay pleasant and agreeable. Those who were thus circumstanced had no reason to regret it, for a more enjoyable as well as refined function of the kind I never remember. Several bands discoursed splendid music; the refreshments were really beyond description; and the cordial personal welcome with which their Imperial Highnesses received their guests, chatting with them affably and without any restraint or reserve, produced a pleasing and grateful impression which, whatever happens, can never be effaced. This gracious act of hospitality on their part formed a delightful and most soothing conclusion to the Moscow Congress.

In an earlier part of this address I intimated that I might feel myself at liberty to refer to matters not immediately connected with the Congress itself, and now, Mr. President and Gentlemen, I do not offer any apology for troubling you with some remarks about Moscow and may drag in incidentally certain points relating to Russia as a country and the Russian people, as well as to questions with which we are more immediately concerned. To the medical profession the conditions of great cities must always present interesting and attractive features and the comparison of foreign cities with those in this country affords much food for thought and reflection. The problems that constantly face us, and with which it is a main part of our duty to attempt to grapple, are not only extremely important and difficult to deal with, but often exhibit a most appalling and tragic aspect. The ideas entertained by the mass of our people who have never ventured beyond these shores with regard to other nations, are generally as amusing as they are narrow, insular, and erroneous, and they would be very much astonished if they were told that London by no means always compares favourably with many foreign cities, even in countries which are supposed to be mediæval and essentially backward in civilisation. I think those of us who went to Moscow had our eyes very much opened on this matter and many of our preconceived notions and ideas were rudely swept away, while others were greatly modified and corrected. We would be inclined to agree with Sir Wemyss Reid, who in an interesting article in the *Nineteenth Century* entitled "First Impressions," gives an account of a visit last autumn to St. Petersburg and Moscow, amongst other cities, and expresses himself as quite taken aback by what he found in the latter city. He writes: "I had thought of it, as I imagine most of us do, as the decaying capital of that older Russia which is passing into the stage of tradition—a sleepy, old world city where ancient customs and national usages still survived and little beside was to be met with. I found it a huge city numbering nearly 1,000,000 inhabitants, where side by side with the traditional usages of old Russia and, above all, its external devoutness of carriage and demeanour, is to be found the most marvellous development of industrial and commercial enterprise and activity. The streets were as crowded and as full of bustle and life as those of London or Manchester; the groves of tall factory chimneys enveloping the suburbs reminded me of Birmingham. The markets were filled to overflowing both with merchandise and men. The shops were certainly not inferior to those of St. Petersburg and everywhere there was the bustle, the unending activity which bespeaks the existence of a great community engaged in the full work of life. It was only slowly that what I saw enabled me to realise the truth about Moscow—the truth that it is no city of the dead, no relic of mediæval times, but the living capital and centre of a mighty nation, which, though it may wall itself in against western ideas and manners, has an overflowing life of its own and an energy which it is expending freely in a thousand different directions. Those who seek to realise what Russia really is and what enormous potentialities of growth and development she possesses within herself must go to Moscow." Of course, this general aspect of Moscow naturally interested the visitors to the Medical Congress, in common with others, but what could not fail to prove specially attractive to them was to observe the marvellous progress and the immense strides which have been made in scientific and practical medicine, and the remarkable developments in the way of hospitals and institutes for the study and treatment of disease from every conceivable point of view. I think I am expressing the general feeling when I say that not only were we vastly astonished, but some of us were consumed with envy, for we could not conceal from ourselves the fact that in many respects even Moscow, to say nothing of St

Petersburg, is medically and surgically far ahead of this great city of London, with its boasted advanced civilisation. The magnificent and splendidly equipped Clinical Hospital at the Dievitchie Pole, with its separate buildings for every department of medicine and surgery gathered together in one place, on an area of between fifty and sixty acres, and constructed on the most approved and advanced sanitary principles, was a revelation to us all of what Russia is capable of. Here were to be seen every kind of modern appliance for clinical investigation and treatment; while there were special institutes set apart for the study of pathology, bacteriology, pharmacology, and other branches, with every possible modern requirement for scientific investigation and research. What a magnificent field and what an infinite mass of material of every kind for clinical instruction and study, all arranged and classified in the most admirable manner for immediate use. I confess that I could not help contrasting, to our decided disadvantage, this methodical arrangement with our numerous scattered hospitals, where so much valuable material for clinical purposes is absolutely lost, and such excellent teaching is often wasted, or at any rate does not produce its legitimate results, from a want of proper concentration and organisation. With regard to investigations and researches which have for their sole object the advance of medical science and art, need I say that the disabilities which hamper our profession in this country must, while they last, be a continuous check on progress and discovery, and a constant source of resentment and indignation, when we contrast the conditions under which our scientific men work with those which prevail in Russia and other countries, where ignorant, self-seeking, or sentimental faddists are not allowed to have their way, or by their gross and calumnious misrepresentations to mislead the public as to the nature as well as the aims and intentions of the investigations carried on in relation to medicine and surgery by men who have for their paramount aim the well-being of humanity and the relief of suffering. Nor are they at the mercy of a certain class of so-called "statesmen" and "politicians," I care not to what party they belong, who, in order to catch a few votes, will support any outrageous measure which has for its purpose the prevention or stamping out of rational and legitimate scientific research, and who, when it suits them, treat the medical profession with the utmost contempt.

The subject of operative surgery hardly comes within my province as a physician and I should not refer to it at all on the present occasion were it not for a personal experience when at Moscow which I suppose I ought to have looked upon as a special treat. Speaking generally, I think I may say that the operating theatres in the Russian hospitals are equal in every respect to anything that can be found in any part of the world, while the thoroughness and perfection with which antiseptic and aseptic methods are carried out leave nothing to be desired. Nor could one fail to be struck with the vast number, variety, and ingenuity of the instruments and apparatus for operative as well as other purposes which were exhibited for our inspection. There are also private hospitals in Moscow where operations of various kinds are performed and these seem to be equally well provided with every modern requirement. Whether such institutions should be imitated or encouraged may, however, be a matter of opinion. It was at one of them that the experience to which I have referred took place. Purely out of kindness and as an act of hospitality I was invited to a "private view" of an exhibition of "cerebral surgery." Mr. President and Gentlemen, I did not enjoy it, curiously enough, and as soon as possible made my way out of the operating theatre. I was met by what I can only describe as a mob of men and women who nearly crushed me in their struggles to gain an entrance into the theatre, and when it could not contain any more those who were left outside crowded round windows where they might possibly catch a glimpse of the public display of operative surgery which was now about to begin. My hurried flight from the scene prevents me from giving further details. This scene and the loud applause which I heard on another occasion at the close of some brilliant operations at the Clinical Hospital, and which was rather a shock to one's feelings, gave form and expression to two thoughts which have for some time been vaguely floating in my mind, and which I only dare venture to suggest here in the presence of eminent surgeons with the profoundest respect and humility as well as with fear and trembling. In the first place, is it not just possible that with the immense advantages and facilities possessed at the present day for the performance of formidable operations of various kinds, with the aid of anæsthetics, antiseptics, and suitable instruments of every description, and the truly marvellous skill which surgeons have acquired in numerous directions, there might be a tendency to perform such operations on insufficient grounds and more frequently than is actually warranted by circumstances? Then I do not think the fact can be denied or blinked that there exists rather widely a morbid desire or craving to witness what may be fairly termed "sensational operations," or, at any rate, to be present at them, even when it is impossible actually to see any part of the procedure. Such an operation proves so attractive to the modern medical student that it will practically empty the ward or the lecture theatre, and not the most brilliant or popular clinical teacher or lecturer can entice him from the scene or bring him down to the level of the humdrum subjects which he will have to face at examinations or with which he will have to deal in the ordinary practice of his profession. Up to the present I am glad to think that applause after operations, however skilfully and brilliantly performed, would not be tolerated in this country, and I hope it never will be. It would be a mournful day when that consideration and respect for human life and suffering, which have been the glory and boast of the medical profession from time immemorial, should ever be weakened or lost, or when there should arise the least ground for the suspicion that the surgeon's art aimed in any way at rousing the mere admiration of the lookers-on or appealed in the slightest degree to the modern craving for excitement and sensation.

The remarkable institutions which are met with in different places in Russia, but which have reached their highest development in Moscow, known as the *Maisons des Enfants*, or Foundling Hospitals or Homes, present many points of interest to the medical profession and I cannot pass them by altogether without notice. Their history and objects are well known, or at any rate can be gathered from any of the books written as guides to Russia. It was a strange notion of an extraordinary woman—the Empress Catherine II.—to found an asylum or home for illegitimate children, and whatever the motives might have been which prompted the idea it cannot be said that its outcome has tended to promote morality or that the "great care and devotion to infants born to shame and poverty is the highest form of development of rational philanthropy," as Sir Wemyss Reid well puts it. It means the "preservation every year of thousands of lives to swell the great army of want and suffering." The mortality, however, is very high, for which one really cannot help feeling thankful. The number of annual admissions into the Moscow institution now exceeds 17,000 and the history of its progress clearly demonstrates that its establishment has vastly encouraged illegitimate child-bearing. When paying it a visit, although one could not help being deeply impressed with the marvellous extent and character of the work, the excellence of the arrangements, sanitary and other, the general air of well-being and comfort, the kindly and sympathetic behaviour and actions of all the *personnel*, and especially the thoroughly systematic methods adopted under medical supervision to sustain life and to protect against disease, the sight was not a pleasant one, either from the side of the infants or the mothers, who are practically the nurses and who certainly did not give one a very exalted idea of Russian women or girls, for a large proportion of them were quite young. Indeed, I agree with Sir Wemyss Reid that it was a "painful spectacle," though at the same time one full of pathos. A particularly objectionable feature to witness was the number of wretched specimens of recently-born infants which they were endeavouring to "incubate" into life. And the sight reminded me that even in this country "human incubators" are just now assuming a disagreeable prominence. It is a dangerous topic to venture upon as to how we should deal with new-born infants who are obviously destined, if they survive, for a life of disease and probable suffering and in whom the spark of vitality is smouldering to extinction. I yield to no one in my respect for human life and in my tender sympathy and affection for children, but it has sometimes struck me that our efforts to sustain existence under such circumstances as I have just referred to and others are not always in the direction of true kindness towards the poor little souls. At any cost I will go so far as to say that if an infant needs an incubator to launch it upon "life's tempestuous sea" such an apparatus ought never to be

employed without the most conscientious thought and consideration, and its use always demands the utmost rational discretion. To exhibit an incubator in active work upon a human life in places of public entertainment, which is one of the attractions offered nowadays, does not tend to raise one's estimate of modern humanity and is only another example of the morbid craving for some new excitement which prevails so widely at the present time.

I do not intend to speak about the remarkable sights at St. Petersburg and Moscow, with their environs, in the way of palaces, gardens, museums, churches, and monasteries, except to make a brief allusion to the churches generally and the religious aspect of the people. The costly splendour and magnificence of many of the churches are beyond description, but one could not help feeling that much of the wealth thus lavished might have been better employed in other ways. The Kremlin was of course a constant centre of attraction and interest, but some of its churches are more curious than beautiful. The services are highly elaborate, spectacular, and impressive, and the ritual is gorgeous and dramatic. The earnest and devout reverence of the people of all classes, their fervent acts of worship, and their devotion to their religious ceremonies and practices, both within the church and outside, were most remarkable and sometimes bordered on the grotesque. They seemed to have a profound and unwavering faith which to an outsider appeared hardly distinguishable from the most abject and ignorant superstition. There were two features in which the churches presented a marked contrast to those of this country. There was an entire absence of seats and everybody had to stand except when they were engaged in the act of kneeling or prostrating themselves on the floor. Then there was no distinction of persons, but the rich and poor, the well dressed, the working man, and the ragged beggar were all massed together in one common and miscellaneous crowd. I must say that the experience was by no means always pleasant, especially when there was a crush. The odours emitted were certainly not the "odour of sanctity"; and one could not but feel conscious of the special facilities afforded under the circumstances for the conveyance from person to person, not only of infective microbes, but of more easily recognised entomological specimens. A very tragic illustration and object lesson of the possible state of things in a Russian church was afforded by a terrible event which has been reported in the newspapers since the Congress. A consecration service was being held in a crowded village church when a panic was caused by the cries of "fire" and "help" from the outside. Of course the worshippers crushed towards the door, the result being that 74 persons were killed and 160 more or less seriously injured. There was no fire, but as the ventilators had not been opened at first it became necessary to throw open somewhat suddenly both ventilators and windows, whereupon dense clouds of vapour issued forth from the steaming congregation within, which was mistaken by the crowd outside for smoke, especially as at the same time a blaze of light was produced by the lighting up of all the candelabra. To an outsider religious life and practice in Russia certainly do not present an attractive aspect from a medical point of view, and they can hardly be regarded as contributing to the physical or moral well-being of the people. Nevertheless, during the comparatively recent so-called "agreement" between Russia and China it was rather amusing to read in an extract from an article in a St. Petersburg paper that Russia was going into China as "the standard-bearer of Christian culture and civilisation." I wonder how the Chinese will like it!

The problems that present themselves in relation to great cities as regards their material, sanitary, social, and moral conditions and the evils to be contended against are in the main common to all and are but too familiar to us as a profession in this vast London. Taking a comprehensive view of our metropolis and comparing it with foreign cities I can only give vent to my own feelings by saying that it is a most contradictory, inconsistent, aggravating, and tantalising place. No one can deny for a moment that, apart from its unavoidable climatic drawbacks, it has attractions and advantages which can be found nowhere else; and some of these come into conspicuous prominence after a visit to such cities as St. Petersburg, Moscow, and Warsaw. Amongst others one seems to breathe a freer air and to be relieved of an indefinable vague sense of unrest, insecurity, and danger, which amidst all the courtesy and kindness shown to us I think many visitors to the Congress could not help feeling conscious of when in Russia. It may be a question indeed whether freedom in London, in common with every other part of this country, is not carried rather too far and whether sometimes "liberty" is not allowed to degenerate into "license." The fact cannot be ignored that not only in London but in many other cities and towns within this realm rowdyism, ruffianism and acts of robbery with violence in our public streets, even in broad daylight, are greatly on the increase, so much so that one of the metropolitan magistrates spoke strongly not long ago about what he called a "reign of terror" in his district. I really think it is safer to walk in the streets of St. Petersburg or Moscow than in many parts of this city. Moreover, whether we are doing the right thing in permitting indiscriminate alien immigration to the extent which is at present the rule is a matter for serious consideration. Apart from other aspects of the subject I have been recently informed on reliable authority that in certain districts, not in the "east-end" either, they have to be constantly fighting against the most disreputable characters, who pour in chiefly from Russia and Poland, and who manage to get possession of houses of ill-fame as rapidly as they are closed, carrying on the most nefarious practices and being an intolerable nuisance and curse to the neighbourhood. Surely such a state of things ought not to be allowed to continue for one moment, and it is but fair to the inhabitants of London that some discrimination should be exercised as to the kind of people who are welcomed into our midst. And in this connexion I cannot refrain from uttering an energetic protest against a crying evil which constantly stares us in the face in this immediate vicinity as well as in other districts, and which has reached such a pitch that even the clergy are roused to denounce in the daily press what they rightly term "a grave scandal." I allude to the extraordinary laxity shown by the public authorities in permitting the most shameless and repulsive women to parade our principal streets and thoroughfares in open day, especially at the time when they are most frequented, to flaunt their calling in the most ostentatious manner and to molest passers-by with their solicitations. Most of these creatures are also obviously of foreign importation and what they must think of a great city which actually seems to invite them to a line of conduct which would not be tolerated for one instant in any other civilised city in the world I really cannot imagine. Efforts are being now made in many quarters to promote purity, and not only have we the most cordial sympathy with such efforts, but we must not mince matters, and it is time for us to speak out plainly and boldly. Let us be consistent, however, and practise a little common sense by doing our utmost in the first instance to put down temptation in every form. We shall have no difficulty in emphatically endorsing a resolution passed at a recent influential meeting held at the Guildhall in connexion with a "special crusade" against gambling, intemperance, and impurity calling for immediate action on the part of all good citizens and of the Legislature with a view to effecting, amongst other reforms, the "promotion of energetic action on the part of the police authorities for the suppression of street solicitation." In one of the letters emanating from the clergymen already referred to they say: "We are more than ever persuaded that the time has arrived when the properly constituted authorities should take the needful steps to remove an evil which is a decided blot upon the social system of a great Christian city." This seems to me to be an exceedingly mild way of putting the matter. They are more practical when they write: "May we not also reasonably expect that the evils to which we directed attention (in a previous letter) may induce some action on the part of the public authority to protect passengers of both sexes from interference whilst they are making lawful and proper use of the public thoroughfare." The Bishop of London, speaking on the "Promotion of Purity" at a conference held not long ago, remarked that it was always possible to get a high-minded and God-fearing physician who was ready and willing to speak to men—and, above all, to young men—about the temptations to which they would be exposed, and whenever this had been done in his experience it had always been productive of the best results. This, no doubt, is true, but I fancy there are few of us who possess the qualifications necessary for carrying out such a work successfully and efficiently. We can all, however, unite in expressing our utter condemnation of the existing state of things in the capital of this great country, and I have thought it my duty, as fairly coming within the scope of my subject, to give vent to what I venture to believe must be the unanimous feeling and sentiment of this

Society and of the medical profession at large with regard to a grave and pressing evil, and to join others in strenuously urging upon our public authorities, whoever it may concern, the imperative necessity for immediate and radical reform, in order to sweep away a scandal which is not merely a "blot upon the social system of a great Christian city," but which must sap the very foundations of decency, morality, and order in any civilised community.

The question of intemperance is a very pressing one in Russia and it was interesting to meet in Moscow a few who, like many temperance reformers in this country, strive to influence those with whom they come into contact by their personal example, being strict total abstainers. I have recently seen an announcement that the enormous increase of intemperance has led the Russian Government to take the question into its own hands and as a first step the sale of spirits in the country is gradually being turned into a Government monopoly. The Government is also directing its attention to counter attractions to the public-house and has appointed a "temperance curatorium" in St. Petersburg, one of whose duties is to provide these. Here is a useful hint to our legislators and to the authorities who have to contend with the same evil in this country. It seems to be a general belief that drunkenness is far more prevalent in Russia than amongst our people, but from what I have seen and heard I am not at all sure that there is any real foundation for such a notion. At any rate, we cannot boast that the inhabitants of any part of the United Kingdon are models of temperance and we are not in a position to throw stones at any other nation. The sights that constantly obtrude themselves upon us in London, even in the "West-end," are disgusting and appalling, and I confess that they often produce in me a feeling of profound humiliation as well as of utter impotence, hopelessness, and despair. And yet how can we wonder at the state of things when we observe the temptations and attractions presented on every hand, as contrasted with the so-called "homes" of the people, in the shape of luxurious public-houses, which almost vie with the Russian churches in their gorgeousness and magnificence. It may be interesting to note that the Russian working-classes appear to be much more methodical in their drinking habits than our people, with whom, by the way, they compare by no means unfavourably in appearance and manners, so that the effects of excessive indulgence may not interfere immediately with their regular employment, and I fancy that the Government has something to say in this matter also. Judging by current events it does not look as if the drink traffic in this country is likely to be controlled or checked in any way for many a day to come. This is easily explained, not only by the inherent sentiment planted in the breast of every "true Briton," that he will never, if he can help it, permit what he calls his "liberty" to be interfered with, but also by the powerful individuals and combinations of persons who are directly or indirectly interested in this traffic, by the enormous fortunes and large dividends which it yields, and by the too tempting contribution which it makes to the revenue. It must be acknowledged that this state of affairs does not strike one as being altogether satisfactory or gratifying. I certainly am no advocate for entering upon the impossible task of trying to make people sober "by Act of Parliament" or any other compulsory method, except in the case of habitual inebriates, nor should I like to see any meddling interference with fair dealing in alcoholic drinks, but as medical men we cannot shut our eyes to the practically unlimited facilities and encouragement given for the abuse of alcohol and the establishment and continuance of intemperate habits, not only in this city, but in the country at large, and of the terrible consequences resulting therefrom. Here, again, surely "liberty" has been allowed to degenerate into "license" and it is our duty so far as lies in our power to support every rational measure which has for its object the promotion of sobriety, coupled with a due recognition of the established and legitimate rights of those who deal in articles of commerce which, when used intelligently and in moderation, are, in my opinion, not only harmless but capable of contributing in no small degree to the comfort and well-being of the human race.

I have thus far been dealing with the more glaring evils in this city and country which a comparison with Russia brought prominently before my mind, but I must still note some minor points in relation to London in which we are lamentably deficient and where we might learn many a valuable lesson from other capitals. The causes of these defects are many and various, but they are obvious enough, though at the same time by no means easy to overcome. Amongst them may be mentioned the obstructive influences associated with long-established "rights and privileges," vested interests, monopolies, and corporations; conflicting opinions and interests of official bodies; a complete want of any comprehensive or controlling organisation; feeble and often ignorant though thoroughly self-satisfied vestries; general apathy and an indisposition to make any effort against existing abuses, but to let things slide—a failing to which we are all very prone; individual self-seeking and absolute selfishness, without a spark of consideration for others; and, I have a strong impression, no small amount of "jobbery," as well as "bribery and corruption," in many directions. There can be no doubt that the laws and regulations intended to benefit the community at large are often tacitly ignored or even treated with open contempt and defiance; and it has struck me that a short experience of autocratic government might do us no harm and help to put matters right. Comparing London with Moscow I have been told on good authority that the latter is about the most insanitary city in the world and I can quite believe it. Certainly one could not help noting a general objection to fresh air and ventilation and as a rule an absolute neglect and disregard of all sanitary conditions, precautions, or regulations. In these respects no doubt we are on the whole far in advance, not only of Moscow, but of many other cities, though there is still much to be desired. Indeed, have we not frequent revelations showing that not only in London but in many other cities and towns, as well as in rural districts which nature has made lovely and beautiful, the most elementary sanitary laws and conditions are absolutely ignored, and if the descriptions given are true we have quite recently had brought prominently under our notice in the press a state of things in one of the neighbouring counties which can only be fitly characterised in the words of the *Times* as "grave scandals" and a "disgrace to civilisation and humanity." Taking a superficial view of things Moscow appeared to be decidedly cleaner than London and as for the lighting of the streets we are not in it. Indeed, I am afraid that our metropolis has an unenviable reputation for being dirty and badly lit, and our friend and would-be reformer *Punch*, in his last Christmas number, includes among what he calls "Some Christmas Waits"—"A system of illumination and purification of the London streets which shall be at least equal to that of the second-class European capitals." Those of us who reside in this locality are thoroughly familiar with these two defects, but we must not altogether hide our light under a bushel, for there is one example of strenuous if misdirected energy which really deserves publicity, though I must say I have witnessed the same performance in Moscow and other places. We must not, however, withhold the honour specially due to London and to the Marylebone Vestry and sanitary authorities in particular. Given a series of wet, filthy, muddy days, the streets are left absolutely untouched and even the professional crossing-sweepers are then generally conspicuous by their absence. To cross Portland-place or Harley-street, for example, under such circumstances is an experience neither good for the "outward man or woman" nor for the temper. But let there come an absolutely dry day, with a high wind and heaps of dust, mixed with an abundance of desiccated excrement and expectoration, and then you will find some ten or a dozen lusty men vigorously sweeping these and other thoroughfares and choking the passers-by with the volumes of a choice and miscellaneous assortment of microbic and other abominations which they raise by their efforts. The *rationale* for this performance is not evident at first sight, but it has occurred to me that it might possibly be intended to promote the interests of the medical profession in this neighbourhood by exciting disease and spreading infection, as a slight return for our help in so greatly enhancing the value of property and our large contributions to the Imperial taxes and the local rates!

There are other aspects from which London might be fairly criticised even as compared with Moscow and other cities supposed to be far behind in civilisation, but time warns me to forbear. I will only mention the matter of overcrowding, which is further so often associated with obvious and sometimes the most revolting insanitary conditions, which ought not to be permitted for one instant. All this, of course, is perfectly well known in a general way, but the disclosures made from time to time in the newspapers, especially in connexion with inquests, are truly shocking and appalling. In

the course of a discussion a short time ago my friends Dr. Corfield and Dr. Poore both agreed in letters to the *Times* that the huge infant mortality in London is mainly due to overcrowding. Surely this state of things might easily, and ought to, be kept somewhat in check at any rate, and Dr. Poore well writes: "Is it not time to do something to try to arrest the overcrowding in London instead of regarding it with complacency because there happen to be more unhealthy cities elsewhere?" Whether the solution of the difficulty advanced by this eminent authority in sanitary matters is correct or not I do not feel competent to judge, but my impression is that the millennium is not yet in sight and will not come in our day.

I hope, Mr. President and Gentlemen, that I may not be regarded as having gone beyond my province in the preceding discussion of some of the aspects of London with which we as a profession are immediately concerned and in which we have a direct interest. I hold it to be our duty on every possible occasion to bring prominently before the public any glaring scandal or abuse as well as minor imperfection in our social system which tend seriously to impair the health or to interfere with the well-being of the community at large, without regard to class or station in life. Personally I felt that this was a legitimate opportunity of which I might justly take advantage. Not that I flatter myself that my remarks will have the slightest practical outcome or effect. Things will go on just as before and we must merely await as patiently as we can the results of enlightened progress. I know not whether we are to be governed in the future by the "county council" or by separate "municipalities," nor do I feel competent to express any definite opinion as to which is the better method. We can only trust in Providence and hope that, to whatever body or bodies may be entrusted the control and guidance of our affairs, they will bring to their great and noble task intelligent thought and consideration, founded on due knowledge and experience, honesty of purpose, and an earnest desire for the welfare of their fellow citizens.

Mr. President and Gentlemen, this is the age, amongst other characteristics, of vast association meetings and congresses of all kinds—national and international—and the questions have been raised whether these gatherings are of any practical value whatever or serve any really useful purpose and whether they should be maintained? I have read some particularly disparaging comments with regard to their social developments and they have even been compared to "huge picnics." So far as International Medical Congresses are concerned, although for obvious reasons there is no actual necessity for them at the present day, yet it would be a pity to abolish them altogether. If they do nothing more, they may possibly form a link to bind nations and peoples together in unity and concord and to promote peace, it may be, when "relations are strained." But, further, my own opinion is that while they certainly are capable of working infinite mischief, on the whole they do a tolerable amount of good in the way of guiding the profession generally into right channels—sometimes at critical epochs; of promoting and developing that which is worthy of encouragement and support; of bringing into prominence novel discoveries relating to the science or art of medicine and surgery which are of real merit; and, on the other hand, of keeping in check, or entirely suppressing if need be, any tendencies which are detrimental to the true dignity and advancement of our profession or to the practical interests of those with whom we have to deal as patients. As regards the Moscow Congress, from what I have previously stated, it may be gathered that its outcome has not led immediately to anything very remarkable or striking. It was not, so far as I know, signalised by any unusually brilliant or sensational incident from a medical or surgical point of view or by the announcement of any startling discovery. For this I feel personally profoundly thankful, for my firm impression is that the medical profession has at the present time quite enough material for investigation and study to engage the attention and best efforts of its most able and energetic members for many a day to come. Nor, I am glad to say, did this gathering afford any undue encouragement to certain modern ideas and tendencies which cannot fail to give occasion for anxious thought, not unmixed with foreboding, to those who have the true interests of our vocation at heart.

After some hesitation I have come to the conclusion that my text fully entitles me to call attention to some of the more pronounced of these tendencies and to offer a few comments upon them, which, of course, only express my own personal views. In the first place there is the now somewhat stale question of "specialism," which is always with us, but the process of "splitting up" is still going on, and where it will end it is impossible to say. I will merely remark that it has already reached a pitch which can only be described as ridiculous and absurd, and that the incalculable mischief which it is working must be obvious to any rational and disinterested observer. Then there is the tendency which undoubtedly exists to run certain branches of medicine almost entirely on so-called "scientific" lines with little if any regard to their practical relationships or bearings. This is all very well for gentlemen who spend their days in the calm retirement of some quiet laboratory, enjoying the satisfaction and delight which scientific research, with its marvellous results and achievements, must always afford. But it is a very different matter for the active practitioner or physician who has to study and combat disease in its manifold manifestations and combinations in actual living patients, with all their personal idiosyncrasies and individualisms. The tendency is also evident in the education and training of medical students at the present day, for whom the more scientific branches of study naturally possess decided attractions. It will be an evil day, however, for the medical profession should this tendency be unduly encouraged or developed, or should those who are preparing for its active duties be taught to ignore or make light of its more practical problems and aspects.

No one who has watched the progress of events can fail to be struck with the advances and remarkable discoveries which have been made during recent years in the science and art of therapeutics. This very fact, however, has led to certain developments, for which we as a profession are more or less responsible and which are even now doing much harm, while they give occasion for serious anxiety as to the future. In the first place there are the extraordinary ideas now so widely prevalent with regard to supposed "cures!" I have even met with medical men who have rather wild notions on this point, but I hardly imagine that any rational and honourable member of our body would go quite the length which a very large proportion of the laity have reached. Their views are that a patient invariably suffers from some disease as a distinct entity, that every such complaint must have its cure, and that it is our business to find it out and practise it. Hence they are ever on the look-out for some sensational discovery or some novel line of treatment which shall serve the desired end in relation to this or that complaint. If one is not "up-to-date" with regard to the newest and most recently advanced "cure" for the more familiar diseases—for example, typhoid fever, influenza, or phthisis—and unless one is acquainted with every "advertised remedy," generally recommended by some individual of no scientific or professional standing or, it may be, utterly unknown to fame, he is looked upon as being "behind the times" and only fit to be shelved. I can affirm from personal knowledge that not a few have a fixed idea that when we go to a Medical Congress our object is to bring away with us, actually or potentially, definite "cures" for various complaints, the outcome of the collective wisdom of those who take part in its discussions, and they cannot understand otherwise what business we have there at all. As intimately associated with this idea comes the bewildering succession of new therapeutic agents with which the drug-market is being constantly inundated and with every one of which we are expected to be familiar. No doubt many of them are useful for particular purposes, but very few become permanently established as really valuable remedies. Another most mischievous practice to which we cannot shut our eyes in these days is the tendency to run some special line of treatment which happens to be "the fashion" at the time for every case belonging to a certain class of diseases, without judgment or discretion or any rational consideration as to its appropriateness in individual instances. I have found by bitter experience that unless you are prepared to fall in with the prevalent views and to advise or practise such treatment under all circumstances, even against your better judgment, conviction, and conscience, the public will have none of you, and again you are delegated to a "back seat." To sum up the whole matter, patients and their friends have been taught to believe that no matter what the conditions may be with which the medical practitioner has to contend, modern science and skill ought to be able to cure them straight off, or at any rate to relieve their

sufferings under every possible combination of circumstances, and they as a rule expect that these results can be achieved by a mere "prescription" or a "bottle of medicine."

There is still another tendency to which I must refer and which, if persisted in, is likely to lead to more and more trouble as time goes on, and that is the temptation to give expression and utterance to prophetic assertions, predictions, and promises with regard to prolongation of life, eradication of disease, marvellous improvement in the health of individuals and communities, and so on. For the world at large the outlook is truly rosy, but for the medical profession it is black indeed, seeing that its members will "have no work to do" and in process of time it must inevitably become extinct. It goes without saying that every one of the infectious complaints will be completely routed and annihilated even within a short period, and in the meantime every human being shall be so inoculated as to be rendered immune against the whole lot. Gone will be the days of "stirring epidemics of influenza to blow big dividends" to a certain company! I have seen a statement in print that two of the most eminent authorities in our profession, gentlemen for whom I have personally the highest esteem and respect although compelled to differ from them, have expressed their firm conviction that pulmonary phthisis will be eradicated—one says within 200, the other within 50 years. I have often been amused as well as amazed with the glowing prophecies made in irresponsible lay newspapers and periodicals or journals and with their almost hysterical outbursts about the "advances of science," the "marvellous achievements of medical skill," and similar "tall talk." That does not signify, however, very much and we cannot prevent such effusions. But when the influential medical press indulges in the same theme beyond what is strictly in accordance with facts, or when some well-known and prominent scientist or physician paints a radiant picture of what is going to happen even in the near future, it is a very different matter. The laity naturally believe them and pin their faith on their statements. Then follows disappointment, not unmingled with resentment, that the predictions do not come true and that the millennium does not arrive. And yet, Sir, it does not. The contagious affections are still amongst us and in full force, and we are from time to time startled by the breaking out of a virulent epidemic of some grave disease of this nature which we had flattered ourselves had been practically exterminated and which we find it almost impossible to check or to cope with successfully. And this does not result from any want of knowledge as to how to deal with these complaints and how to prevent them, or of devoted skill in treatment, but from the mere force of circumstances which are obvious enough. The fact seems to be that those who make what I must term rash predictions do so from an entirely theoretical, scientific, or "laboratory" standpoint. They appear to forget altogether the inevitable conditions of existence and social life, among civilised perhaps even more than uncivilised communities, and they also ignore entirely such factors as human weakness, appetites, lusts, passions, and selfishness. Do not let us be led away with exaggerated ideas and expectations and imagine, for example, that because the tubercle bacillus has been discovered such a disease as pulmonary phthisis will soon be a thing of the past. We may strive as a profession, as we do, to our honour be it said, to promote the adoption of every preventive measure at our command, we may go so far as even to try to stop people from kissing, as well as expectorating just when and where they please, but I venture to predict (and at any rate I am safe in doing so, seeing that no one now present will have the chance of contradicting me when the time comes) that so long as the world lasts consumption will still be one of the chief scourges and dreads of its inhabitants.

In the preceding remarks it has not been my intention to say one word against rational progress in relation to the subjects which I have discussed, or the adoption of any method or measure which can be of real service for purposes of clinical investigation and diagnosis, or for the prevention and active treatment of disease. By all means let us do all in our power to promote sound health and the general well-being of humanity and to encourage them to take a hopeful and optimistic view of the future, so far as is consistent with common sense and actual hard facts. But let us never forget that we have to protect our patients and fellow-creatures against themselves, if I may so speak, as well as against numerous dangers from without. A moment's consideration will show that the tendencies against which I have been uttering my feeble protest afford direct encouragement to, and open up unlimited opportunities for, charlatans and quacks of every kind. We must charitably assume that there are none actually within the ranks of our profession who come under this category, and yet it now and then happens that the General Medical Council find it necessary to remove from the Register one of its members for downright and unconcealed quackery. Not that in the scandalous and at the same time humorous state of our laws with regard to practitioners of medicine—as contrasted with the legal profession, who take very good care of themselves—it makes the slightest difference to the individual so expelled, unless it be in his favour, for he can go on just as before, or even with additional *kudos*, posing as the victim of professional injustice and jealousy. And then comes the matter of advertisements. Really, Sir, what is the use or advantage of any Congress or even of this venerable Medical or kindred Societies, with their regular meetings, reading of papers, and learned discussions, when in almost any lay, not to mention pharmaceutical or medical, paper you will find not one but any number of "cures" and "remedies" recommended for every possible disease or symptom, now frequently with the additional attraction of the photographs of grateful patients before and after treatment? Even such a journal as the *Times* sometimes inserts advertisements of which I hardly think those who are responsible realise the significance. Not long ago I cut this advertisement out of the most prominent column on the front page of this leading newspaper: "Dr. [a foreign name, but not Koch] has discovered the Bacillus of Tuberculosis and is able to heal this malady." Then we are informed that "the Court Physicians" prescribe a certain preparation for our "Royal Family" which of course has the power of curing every "ill that flesh is heir to"! But of all the advertisements, usually supplemented by the most flagrant and grotesque "puffs," which are a scandal to this country and to the present "enlightened" age, none approach within measurable distance in barefaced impudence and downright misrepresentation those found in much of the so-called "religious" or "Christian" press! These papers wholly belie in this respect the titles they have appropriated and make one feel almost ashamed of words with which we are accustomed to associate all that is true and great and noble. They are more especially the means of propping up and foisting upon the public that particularly offensive species of the genus "quack" who under the guise of religion and religious motives is allowed by our laws to prey unchecked upon ignorant and confiding simpletons by pretending to have discovered a "specific" for some grave and widely-distributed malady which he will dare to hold out as a "certain cure" even at the last extremity, when death is at the very door! I affirm that which I have actually seen. No wonder such creatures amass large fortunes. These advertisements and puffs are then passed on to some of the so-called "Society" papers, and so the game goes on! It behoves us as a profession to give thoughtful consideration to the question how far we are responsible for these and kindred evils and to be particularly careful at the present time not to encourage them in the least degree by any mistakes on our part.

There is another aspect from which we need to be specially cautious and circumspect just now as to what we say and do, at any rate in this country. It is but too evident that our profession is being watched with suspicious and unfriendly eyes from more than one quarter, that our words and actions are being subjected to severe and hostile criticism, and that some of our most cherished and deeply-rooted doctrines and practices are being vigorously attacked by powerful individual and combined forces. Certain people seem to think it their duty and calling in life to take every opportunity to oppose whatever we try to do for the good of humanity and for the real advancement of medical science and art, and they are ever on the look-out for some malignant plot of medical Jesuitry. The fact must not be ignored that even within our own ranks there are men of ability and of high scientific and practical attainments who honestly and conscientiously differ from the vast majority of their brethren on important questions and whose actions are governed accordingly. We can only regret that such should be the case, but at the same time must treat them with consideration and respect. But what we have chiefly to contend against are the numerous and weighty outside influences

which combine together so far as lies in their power to bar all progress, to crush scientific investigation and research, and to wreck every measure which the medical profession as a body, with but few exceptions, demand as essential for the prevention and extermination of some of the most grave and terrible diseases which afflict the human race. Many of our most bitter opponents occupy high social positions and they may be, so far as I know, in their own spheres well-informed and clever people. They may even have acquired a smattering of physiology, or dabbled in medical works, and the vague and superficial knowledge they have thus obtained makes them conceited enough to imagine that they are thoroughly qualified to give a dogmatic opinion upon every conceivable subject relating to health and disease, as they are indeed quite prepared to take charge of the affairs of the world in general. But the great mass of opposition which we have to face consists in a combination, in various forms and degrees, of unreasoning prejudice, personal interests which brook no interference, sheer faddism or fanaticism, misguided sentiment, downright ignorance, and consummate impudence and conceit. When any of these obstructive forces are associated with power for active mischief, be it but that of a chairman of a board of guardians, the results are very likely to be most injurious or even disastrous to the cause of humanity. I repeat, therefore, that in face of these embarrassments we must be ever wary and careful as to our sayings and doings, avoiding everything that can rouse needless opposition or excessive friction, and giving no occasion for those whom we are compelled by their conduct to regard as our enemies to gain any advantage over us or to cast ridicule upon our claims.

In bringing this address to a close may I be permitted to refer briefly and comprehensively to what I conceive to be the real objects which such an authoritative and august gathering as an International Medical Congress should have in view and what practical purposes it is intended to serve? Surely it must never be regarded as a mere passing event which leaves behind no permanent impression or result. In general terms a congress of this nature may be described as intended to promote those aims which we as a profession individually and collectively always keep steadily before us, notwithstanding our differences of method and in spite of all opposition and difficulties, and by mutual instruction, help, and encouragement to render each one of us better fitted to carry out efficiently and intelligently the high functions and noble duties of our calling. And what are they? First and foremost comes the formidable task of diminishing mortality, of preserving and saving life, and prolonging its duration, so far as this purpose is consistent with the fitness of things. As a matter of fact, we instinctively do our utmost under every possible circumstance to avert death, and there is no more sad or trying ordeal for the practitioner of medicine to pass through than to see a young and promising life, or one in the full prime and vigour of manhood, engaged not uncommonly in active and useful work, and, alas, but too often the family "bread-winner," cut off by some dire disease which defies his best skill and most devoted efforts. Our surgical colleagues have a great advantage over us poor physicians in this matter and I frequently envy them when I think of the thrill of satisfaction and pleasure which the skilful operator must feel, especially at the present day, when he calls to mind the lives he has personally saved. But the mere addition of two or three years to the average duration of existence, or the prolongation of the life of one bowed down by the ravages of time or with constant pain and suffering, does not appeal to me as the supreme duty of the medical profession and I have no sympathy with some of the ideas now in vogue with regard to the attainment of longevity. I hold in my hand a summary of instructions as to how to live to be a hundred! I wonder who wants to spend a hundred years in this weary world, unless it be that conscience makes him afraid of venturing on the next! Other prominent objects which as a profession we are always striving to fulfil are the cure of particular diseases; their prevention, both among individuals and communities; and their extermination so far as this is practicable. Then I need but mention the wide field that is open before us and the constant call that is made upon our knowledge and skill in our attempts to relieve pain and suffering of every kind. But I venture to think that perhaps the most difficult problem with which we have to cope at the close of this nineteenth century, and one worthy of our supremest efforts, is how to deal with the mass of "morbidity" and "invalidism," the countless "ailments," real or imaginary, call them by what name you like, which crowd upon us on all hands and in every station of life, which render thousands upon thousands unequal to the ordinary avocations and duties of modern existence, which wreck the comfort and happiness of many a home, and which often become the starting point of pernicious habits that are sapping the very foundations of society in many directions, and if not checked must inevitably lead to widespread disaster.

What will be the ultimate practical outcome of the occasion which I have utilised as a text for my address cannot as yet be determined. We may reasonably hope that it has had some influence in creating a kindly and mutually considerate international feeling at a period in the world's history which is fraught with grave issues. Surely, moreover, it cannot fail to leave its mark upon the history of the progress of medicine and surgery and to promote in no small measure the all-important objects to which I have just referred. At the present moment we cannot shut our eyes to the disquieting fact that the relations between Russia and Great Britain are such as to cause serious anxiety with regard to the course of events even in the immediate future. We must all earnestly hope, however, that diplomatic statesmanship, aided by mutual consideration and a conciliatory spirit, may be able to guide us safely and successfully through all dangers and difficulties, so that "peace with honour" may continue between these two great empires. Their power for good upon vast masses of people, when acting in concert, it is impossible to over-estimate; while the beneficial results which may be anticipated from their combined efforts in the cause of civilisation and human progress are incalculable. On the other hand, the bare suggestion of war calls up scenes of horror, devastation, and desolation, with inevitable disastrous consequences to both nations, from which even the most hardened and thoughtless must instinctively shrink. Whatever may be the immediate and final results, international and professional, of this memorable cosmopolitan gathering, and whatever may happen in the future, I believe I am expressing the feelings and sentiments of my fellow-countrymen who were present and took part in its proceedings when I affirm that while time will dim more and more any passing impression of experiences not altogether agreeable which may have occurred to us as individuals until they are absolutely forgotten, there will always remain a vivid mental picture of novel, attractive, and interesting scenes, as well as of manifestations of kindly feeling and generous hospitality, and we shall one and all ever entertain a grateful and pleasant reminiscence of the Moscow Congress.

THE VIRUS OF VACCINIA AND ITS CULTIVATION.

BY A. F. STANLEY KENT, M.A. OXON.

THE identification and culture of the virus of vaccinia has for many years proved a problem of such difficulty as to baffle the endeavours of some of the most brilliant workers in bacteriology. Perhaps this is in some measure owing to the fact that the methods of bacteriology have been employed almost to the exclusion of histology, the idea that histological methods could afford any assistance having occurred apparently to very few. Nevertheless, that all experiments having for their starting point the collection of lymph from the vaccine vesicle would have to contend with the presence of multitudes of extraneous organisms will be evident to anyone who is conversant with the flora of the skin. It is indeed a matter of common knowledge that micrococci of various species—especially the staphylococcus pyogenes albus and staphylococcus pyogenes aureus—besides being present in large numbers on the surface and in the dead superficial cells of the stratum corneum, swarm in the openings of the hair follicles and even penetrate in them to a considerable depth.

It is for this reason that there arises so extreme a difficulty in sterilising the skin of patients about to undergo surgical operations, and when the object is to obtain lymph from vesicles in the skin itself and to obtain it free from extraneous organisms it is apparent that the task is one

calling for the exercise of the utmost care. All attempts to identify the virus by ordinary bacteriological means having failed I proposed to investigate the problem by somewhat different methods. It seemed probable that whatever organisms there might be in the vaccine lymph, at all events in the tissues around the vesicle, one might reasonably hope to find the specific virus in a state of comparative purity. Accordingly I undertook the preparation and examination of a large number of sections of the vaccine vesicle and its surrounding tissues. The preparations were made by vaccinating a susceptible animal in a suitable manner, excising the resulting vesicles at stages of their growth varying from a few hours after inoculation to their latest development, fixing and hardening these specimens by the best methods known to me, and, finally, after sectioning them, subjecting them to several different methods of staining. At the same time lymph was collected of different ages and examined bacteriologically. Some short account of the results obtained was communicated to the meeting of the British Medical Association at Bristol in 1894.

Of the extraneous organisms found it is necessary to say very little. Of course, upon the free surface of the sections, and especially in the openings of the hair follicles, there appeared crowds of micrococci. They were very obvious, occurred in clumps and masses of all sizes, and were as easily stained as is usually the case. They occupied not only the surface of the skin but extended also a considerable distance into the hair follicles, occurring as clumps of varying size and in the deeper parts as groups of two, three, or more. In the tissues immediately bordering on the breach of continuity in the skin small numbers of these organisms may sometimes be seen. In the deeper tissues, however—i.e., a short distance from the actual breach in the surface—they are conspicuous by their absence.

Whilst asserting the absence of the extraneous organisms I am far from denying the presence of other organisms in the tissues surrounding the vaccine vesicle—indeed, the exact contrary is the case—and I attach much importance to the fact, which I first pointed out in 1894, that there do exist organisms both in the vesicle and also in the surrounding tissues for a considerable distance from the site of the original lesion—organisms which in their morphological characters, their distribution in the tissues, their relation to cells, and their staining reactions are separated sharply off from the other organisms ordinarily associated with the processes of vaccinia. Morphologically they may be described as small—indeed, exceedingly minute—bacilli, about 1 micron in length and rather less than a half of this in thickness, with rounded ends, and usually occurring in pairs forming diplo-bacilli or dumb-bells. Photographs of these organisms were shown at the Bristol meeting of the British Medical Association in 1894. Morphologically, then, they appear to resemble the minute bacilli described by Klein, and independently by Copeman and myself, as occurring in early vaccine lymph, and I take it that the occurrence of these organisms also in the tissues under circumstances immediately to be described lends some probability to the view that they are fundamentally concerned in the causation of the disease. The distribution of these organisms in the tissues is a point of great importance. Unlike the extraneous organisms, they are not present in countless multitudes at the surface of the skin and in the hair follicles Indeed, as has been shown previously, they are absent from, or present in small numbers only in, lymph taken from vesicles after the fourth or fifth day from inoculation, whilst the extraneous organisms seem actually to increase in number as time goes on.

On the other hand, the bacillus, which for convenience it may be well to call simply "diplo-bacillus vaccinise," is present in the tissues surrounding the vaccine vesicle, not only soon after inoculation, but even up to the twelfth or fourteenth day and probably even later. It is of interest to note that it does not occur in the tissues as colonies or irregular masses, but is for the most part contained in cells. These cells appear often to be wandering cells; some, however, are of the nature of fixed corpuscles. As stated above the presence of these organisms in the tissues surrounding the vaccine vesicle may be recognised in specimens taken at all stages of the disease up to about the fourteenth day and the number does not seem to be materially lessened in preparations made at the later dates. Their presence is the more significant when it is remembered that they are present in what is practically a pure culture, for the extraneous organisms, though numerous on the surface, are absent from the deeper tissues affected by the diplo-bacillus vaccinise. The staining reactions of this bacillus are also of interest inasmuch as they afford some explanation of the extreme difficulty encountered in demonstrating its presence. For to stain the bacillus at all was found difficult and this difficulty has undoubtedly stood in the way of its earlier recognition. Most of the ordinary aniline dyes are unsatisfactory for the purpose and it was only by following out a somewhat complicated modification of Gram's method that I was able to stain it with certainty in the tissues. However, that the method is satisfactory is, I think, proved by the photographs which were shown at Bristol in 1894 and by preparations that were there exhibited.

I consider, then, that the morphological characters, the distribution in the tissues, the relation to cells and the staining reactions, together with the fact that cultures containing this organism produce in the calf and in children typical vaccine vesicles—vesicles which in their turn contain the same virus—sharply separate this diplo-bacillus off from the other so-called extraneous organisms and give support to the view that here at last we have before us the true germ of vaccinia. There are additional considerations which lead to the same conclusion. As will be remembered, a statement has been made that the peculiar minute bacilli described as occurring in early lymph are absent or nearly absent from lymph taken at a later date. In connexion with this it is significant that both Klein and I[1] have described in these organisms bodies which have the appearance of spores and have noticed the possible explanation by this circumstance of the permanence of vaccine lymph when preserved dry upon points. It is further to be noted that although the bacilli appear to be absent, or nearly absent, from mature lymph this is by no means the case with the tissues, the bacilli being recognisable in these until quite a late stage of the disease.

It is of course quite possible that the different conditions obtaining in the two situations are sufficient to determine on the one hand the formation of spores with subsequent or simultaneous breaking up of the bacilli and on the other a persistence of the ordinary form. Nevertheless, it appeared to me to be probable that in the case of lymph stored in contact with glycerine some development of the spores, supposing such to exist, might reasonably be looked for and this appeared the more probable from the fact, observed by many, of the great extent to which it is possible to dilute lymph with glycerine without injuring its power, and still more from the statement that lymph when so diluted and stored actually increases in virulence. I have accordingly examined a number of samples of glycerinated calf vaccine lymph and by the special methods of staining above alluded to I have been able to satisfy myself that whatever may be the case with late and mature lymph, in glycerinated lymph which has been kept for a few weeks the diplo-bacillus vaccinise is undoubtedly present. One explanation may, of course, be that in addition to the lymph itself a certain quantity of vesicle pulp would be used in the preparation of the glycerinated lymph and the bacilli may have come from this, but in most of the samples examined the solid material taken was reduced to a minimum and therefore this source of error was much lessened.

Another thing which tends to strengthen belief in the specific nature of the diplo-bacillus is the fact that, as briefly noted in a joint communication by Dr. Copeman and myself to the Bristol meeting of the British Medical Association in 1894 and more fully described by Dr. Copeman in the following year in London, a method was devised whereby it was found possible to cultivate an organism morphologically identical with the above and to produce by the inoculation of such cultures upon calves vesicles which very closely resembled those of ordinary vaccinia. And, further, I have shown that in vesicles produced by inoculation of cultures the same organism exists and has the same relative distribution as regards cells and extraneous organisms as I have described as characteristic of the diplo-bacillus vaccinise.

It was, however, very desirable that in addition to the cultures made in eggs other media of a more convenient character and capable of being solidified should be devised. I had already made very numerous experiments with all the ordinary culture media and with modifications of these without attaining any satisfactory result. Early in 1895, however, I was more fortunate and at the meeting of the British Medical Association held in London in that year I was able to report that some measure of success had been obtained.

[1] Brit. Med. Jour., Sept. 22nd, 1894.

My experiments were conducted upon the supposition that it should be possible to prepare some special mixture of albumen and glycerine so proportioned that whilst the former would afford nourishment and encourage the growth of the vaccine virus the latter would prevent the growth of extraneous organisms and so do away with the necessity of sterilisation by heat.

The following is a typical experiment copied from my notebook: "April 18th, 1895: Lymph was collected from the calf at the National Vaccine Establishment in Lamb's Conduit-street. It was inoculated upon a culture medium consisting of egg albumen with the addition of 10 per cent. of pure glycerine and incubated at 37° C." Five days after inoculation I have a note to the effect that there are many white colonies floating in the fluid, together with a growth which I compared with cotton wool. This cotton-wool-like growth I believe, for reasons which I shall presently set forth, to be the vegetative form of the diplo-bacillus vaccinise. At the same time that the above cultures were made I also inoculated with vaccine lymph tubes of the same culture medium which had been solidified by heat. The note here is that colonies, orange and yellow, are present. There was also upon the surface of the culture medium a thin film-like growth which I took to be the expression on the solid medium of the formation of the cotton-wool-like growth in the liquid. The coloured colonies consisted of staphylococci. Experiments were also carried out with media containing 15 per cent of glycerine, and in these the liquid tubes showed fewer of the white colonies but more luxuriant cotton-wool-like growth, and on the solid form the orange colonies were usually absent whilst the filmy growth was more pronounced. Finally, when the medium was made up with 20 per cent. or more of glycerine, the liquid tubes showed no colonies whilst the cotton-wool-like growth was well marked. These results were briefly alluded to at the meeting of the British Medical Association held in London in 1895.

On first observing the above-described cotton-wool-like appearance in the culture tubes I was of opinion that it represented a slow and incomplete coagulation or precipitation of a portion of the albumen contained in the medium, such precipitation being due probably partly to the action of the glycerine and partly to the dilution combined with the incubation at 37° C. As is well known, egg albumen is a complex mixture and contains several proteids which coagulate at different temperatures; moreover, the exact temperature at which coagulation takes place is determined by the concentration of the solution and the quantity of salts present. The coagulation temperature is generally given as from 70° to 73° C., but Gautier states[2] that coagula may also be obtained at 54° and 63°, whilst according to Corin and Berard,[3] by applying the method of fractional heat coagulation to filtered white of egg, coagula may be obtained at 57·5°, 67°, 72°, 76°, and 82°, the first two being due to globulins, the others to albumins. It seemed probable, then, that by mixing egg albumen with glycerine and subjecting it to incubation some amount of precipitation of proteid might be produced and this was rendered more likely by the experiments of W. Ramsden, who showed that by a prolonged action of heat a precipitation of albuminous fluids might be brought about at a temperature considerably below that generally assigned as specific for the body under consideration.

Accordingly I made numerous control experiments by mixing with egg albumen varying quantities of glycerine and submitting the resulting mixtures to similar conditions of incubation as obtained in the case of the culture tubes. Treated in this way it was found that in the case of tubes containing an addition of 33 per cent. of glycerine after a short time a certain amount of a woolly material appeared as clumps and cloudy patches in the fluid. It appeared, however, to consist of a definite solid substance suspended in a bright and transparent liquid and no general opalescence or cloudiness of the fluid was produced. In the case of cultures, on the other hand, the solid portion was much more finely divided and produced a definite opalescence in the liquid. Larger flakes of a peculiar semi-transparent character were also present, and at the upper edge of the fluid there was often observed a film-like portion of growth. In tubes containing a less proportionate amount of glycerine—viz., about 16 per cent.—and in which the albumen was about 33 per cent., a greater degree of opalescence was produced, but no increase in the cloudiness was observed to occur after the first few days, whilst in the case of similar tubes inoculated with vaccinia the opalescence was much greater, continued to increase and was accompanied by the formation of a flaky semi-transparent material, especially at the upper part of the tube where the fluid was in contact with air. In solid media it is of course less easy to make out the exact characters of the growth, in consequence of the physical condition of the nutrient material. It is, however, possible to ascertain that in its general characters the growth corresponds to the film-like material seen at the upper part of tubes containing liquid culture material.

Having thus succeeded in obtaining a growth in special culture media inoculated with vaccine lymph I next experimented with similar media inoculated with lymph which by admixture with glycerine and subsequent storage had been freed from extraneous organisms. These experiments gave results indistinguishable from those above described, with the exception that in no case did coloured colonies appear. Moreover, when cover glass preparations had been made and appropriately stained microscopical examination revealed in every case the presence of groups of organisms morphologically indistinguishable from that above described as diplo-bacillus vaccinise. Further, in the majority of the experiments they were the only organisms present, but in a few cases they were accompanied by extraneous germs. These cultures have been used for the inoculation of calves and have given results which tend to support the view of the specific nature of the bacillus.

It may perhaps be suggested that the finding of the organisms in the cultures is no proof of their multiplication in the artificial medium, since the individuals observed microscopically may have been some of those present in the original lymph used for establishing the culture. In answer to this objection I need only say that the cultures have been carried on from tube to tube and also the quantity of lymph used in the first inoculation was only $\frac{1}{100,000}$th of the quantity of fluid with which it was mixed. So that although in the tubes of the first generation cover-glass preparations might conceivably reveal the presence of an occasional bacillus, the occurrence of numerous groups would be most unlikely and would approach impossibility in the case of subsequent tube-generations had no multiplication taken place meanwhile. As mentioned previously, in a communication to the British Medical Association in 1894 it was stated that cultures of an organism morphologically indistinguishable from the above, but obtained from variolous crusts, when inoculated upon calves produced phenomena which up to the fourth day were similar to those produced by normal lymph, whilst in 1895 Dr. Copeman communicated to the association the further fact that by passing such cultures through two successive calves a lymph was obtained which produced typical vaccinia in a child. The cultures with which these results were obtained were fully described by Dr. Copeman in 1895. The medium used was the hen's egg, the yelk and white being well mixed together and subsequently inoculated with variolous material. Certain disadvantages were found to result from the use of such nutrient material. Transparency was lacking, subcultures failed, and isolation of special organisms by plate cultivations was not practicable. It was whilst endeavouring to improve upon these early attempts that I hit upon the plan of using the egg-white apart from the yelk and mixed with sufficient glycerine to inhibit the growth of extraneous organisms.

The result has been so far successful that I am now able to place the diplo-bacillus vaccinise under circumstances such that its multiplication is apparently possible, and to prepare cultures containing it in a pure state.

James-street, Hyde Park, W.

[2] Chimie appliquée à la Physiologie, &c., Tome i. (1874), p. 242.
[3] Travaux du Laboratoire de Léon Frédéricq, Liége, Tome ii. (1888), p. 170.

CROWNHILL (DEVONSHIRE) CONVALESCENT HOME.—The annual meeting of this institution was held on April 30th. The report showed that 265 patients had been admitted during 1897. The financial statement exhibited a balance in hand of £28 The report mentioned that the home, which is beautifully situated on the border of Dartmoor, is capable of accommodating 500 patients during the year, but the subscription list is not large enough to permit of this number being received.

NOTE ON THE SERUM REACTION OF MEDITERRANEAN FEVER AND ITS TREATMENT BY ANTITOXIC PLASMA.

BY A. R. ALDRIDGE, M.B., C M. EDIN., D.P.H.,
SURGEON-CAPTAIN, ARMY MEDICAL STAFF.

THE cases were all examined by the microscopic method. Some of them were also tested in the sedimentation tubes recommended by Professor Wright, but the larger quantity of blood and longer time required for this method seemed to make the former preferable. The blood was collected in capillary tubes, which were sealed and allowed to stand for 24 hours. The tube was then broken, the clot drawn out, and the serum transferred to a slide. In this way the serum obtained was not entirely free from blood corpuscles, but these did not appear to interfere in any way with the reaction. This serum was diluted with "loopfuls" of normal saline solution to the required amount, and a small quantity of a cultivation of the micrococcus Melitensis of Bruce mixed with it by means of a platinum loop. In all about 30 cases were examined, but, unfortunately, as the samples of blood were sent from various parts of the island of Malta, detailed notes were not kept of all.

TABLE I.—*Cases of Fever which showed the Reaction.*

No.	Day of disease.	Dilution of serum.	Reaction.	Remarks.
1	35th day.	1–10	Immediate; no reaction with Eberth's bacillus.	Died; ulceration of large intestine.
2	26th day.	1–10 1–25	Immediate.	Lasted 9 weeks; antitoxin.
3	3rd day. 8th day.	1–10 1–10	None. Immediate.	Antitoxin on 9th day; lasted 11 days.
4	4th day. 9th day.	1–10 1–10	None. In half an hour.	Antitoxin on 4th and 14th days; lasted 24 days.
	6th week.	1–10 1–100	Immediate. In half an hour.	Very severe constitutional symptoms; lasted over 3 months; antitoxin.
6	16th day.	1–10	Immediate.	Severe; with lung complications; lasted over 4 months; antitoxin.
7	10th week.	1–10	Immediate.	Prolonged; uncomplicated except with "rheumatic" pains.
8	3rd week.	1–10	Immediate; no reaction with Eberth's bacillus.	Resembled enteric fever at first.
9	5th week.	1–10	Immediate.	—
10	5th week.	1–10	Immediate.	—
11	9th day.	1–10	Immediate; no reaction with Eberth's bacillus.	Resembled enteric fever at first.
12	15th day.	1–10	—	—
13	12th week.	1–10 1–100	Almost immediate. None.	—
14	5th day.	1–10 1–100 1–500	Immediate. In half hour. None.	—

TABLE II.—*Cases of Slight Fever which did not show the Reaction.*

No.	Day of disease.	Dilution.	Reaction.	Remarks.
1	4th 13th	1—10 1—10	None. None.	Fever lasted 9 days; no relapse.
2	4th	1—10	None.	Fever lasted 6 days; no relapse.
3	8th	1—10	None.	Fever lasted 9 days; no relapse.
4	5th 7th	1—10 1—10	None. None.	Fever lasted 7 days; no relapse.

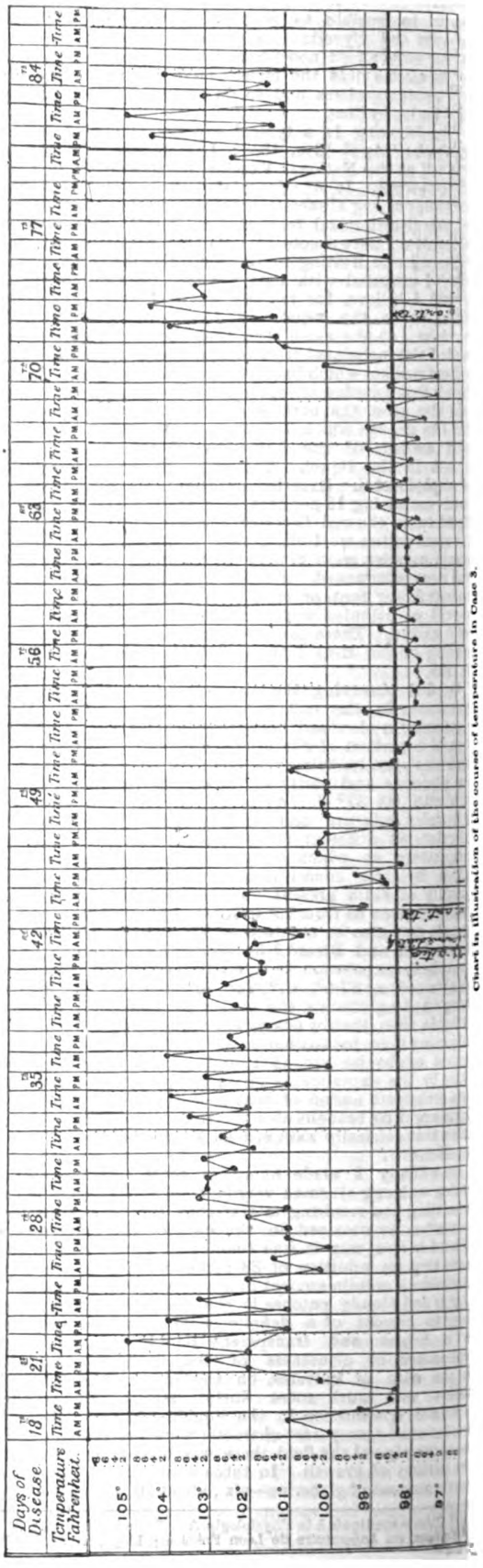


FIG. 1.

Chart in illustration of the course of temperature in Case 3.

In every case which could be considered clinically typical of Mediterranean fever a reaction was obtained. There remained a certain number of cases of uncomplicated fever lasting from six to ten days, not at all uncommon in Malta, which did not give the reaction at any time during their course or after the fever had subsided. Four cases of enteric fever were also tested with negative results, but gave a reaction with the bacillus typhosus. The course of the disease confirmed these results and in two of them post-mortem appearances also. Three cases during part of their course closely resembled enteric fever. Two of these were, in fact, so diagnosed at first, but no clumping was obtained with the bacillus typhosus, whereas the reaction with the micrococcus Melitensis was immediate, and in each case the after history left no doubt as to its nature; in two the usual relapses and "rheumatic" pains recurred for several weeks, and in the third a necropsy confirmed the diagnosis.

As regards the date at which the reaction first appears the number of cases examined during the first week has been very few. The fifth day was the earliest on which it was obtained and in no case which ultimately showed the reaction was it found absent after this. The cases were at first all tested with a dilution of 1–10 and the reaction in almost every case occurred immediately—that is, the micrococci were found clumped when the slide was put under the microscope, though a few could often be seen free; in from a quarter to half an hour these, too, were clumped. The reaction was also well marked in greater dilutions up to 1–100, though with such a rather longer time was generally required up to half an hour. If a considerable quantity of the micrococci be added in putting up the specimen the clumping can be recognised with the naked eye.

Five cases were treated with the antitoxic plasma prepared by Professor Wright of Netley. Of these 2 cases which were in their sixth and ninth week of disease did not appear to be affected in any way by the injection. The third case was a very severe one with great prostration, in which the fever had lasted seven weeks with only one partial remission; 30 c.c. of the antitoxin were injected and a marked improvement commenced from the following day. The tongue, which had been dry and brown, and the breath, which had been very fœtid, improved very markedly; the collapse became less, and the temperature came down and remained normal from the eighth day after the injection (see Fig. 1). Another relapse occurred after three weeks and the temperature again decreased three days after another injection of 15 c.c. of the antitoxin, but this improvement was not maintained and no more of the antitoxin was available.

The two other cases were recent ones and uncomplicated. In Case 4 30 c.c. of antitoxin were injected on the fifth day. The temperature, which had reached 106°, gradually fell till it ranged between normal and 101°; but on the fourteenth day, as it showed a tendency to rise again, another similar dose was given and was followed again by a fall of temperature,

FIG. 2.

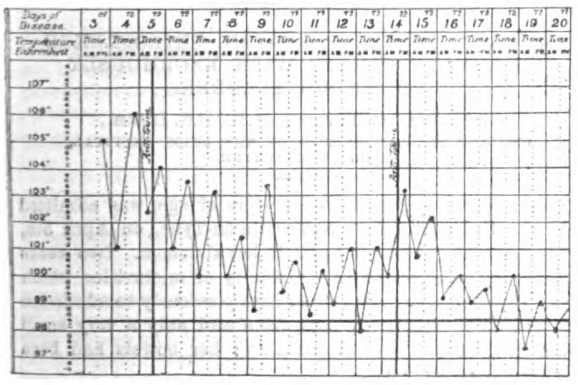


Chart in illustration of the course of temperature in Case 4. After the twentieth day the temperature remained practically normal.

which did not rise above 100° from the third day afterwards (see Fig. 2). This case did not show the serum reaction on the fourth day, but did so on the ninth, which, however, was after the first injection of antitoxin.

In Case 5 no serum reaction showed on the fourth day, but it did so on the eighth day. On the ninth day 30 c.c. of antitoxin were injected and the temperature, which had already shown a tendency to come down but continued between 100° and 102°, reached and remained normal from the third day after the injection.

The recorded temperatures in Case 5 were as follows, two observations being taken each day, the first in the morning and the second in the evening:—Third day of the disease, 105·0° F. and 101·0°; fourth, 103·0° and 103·0°; fifth, 102·4° and 103·0°; sixth, 101·4° and 102·4°; seventh, 100·4° and 102·2°; eighth, 100·2° and 102·0°; ninth, 100·0° and 102·6° (antitoxin was injected); tenth, 100·0° and 101·2°; eleventh, 100·4° and 99·4°; twelfth, 98·4° and 99·0°; thirteenth, 98·2° and 99·0°; fourteenth, 98·0° and 97·6°; fifteenth, 97·8° and 98·4; and sixteenth, 97·6° and 98·4°.

In coming to any conclusion as to the benefit resulting from the antitoxic serum a great difficulty lies in the fact that whereas from analogy with the use of similar serums in diphtheria and tetanus and also experimental inoculations the best results are to be expected in recent cases, yet diagnosis during the first week is very difficult, for besides enteric and other causes of fever there is a form of slight fever, already referred to, common in Malta. This lasts from about six to ten days and is apparently different from Mediterranean fever but only distinguishable from it by its short duration and by the serum test. Now this test does not seem to occur until the end of the first week and is itself of no value after the injection of antitoxin, which presumably will produce the reaction in the blood.

The cultivations used in these experiments were from Dr. T. Zammit's laboratory, with whose assistance much of the work was carried out.

Malta.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF DEPRESSED FRACTURE OF THE SKULL.

BY CLAYTON A. LANE, M.D. LOND.,
SURGEON-LIEUTENANT, INDIAN MEDICAL SERVICE.

ABOUT noon on Aug. 17th, 1897, while the 18th Bengal Lancers were encamped at Kushalgarh on their way to Kohat, a sowar was kicked on the head by his horse and was brought to the hospital tent. He was insensible, answering no questions. His pulse was irregular and very easily compressible; his pupils were neither contracted nor dilated and were equal. Crossing the centre of the left eyebrow and running upwards and inwards for an inch was a wound leading down to the periosteum. Above and inside the upper end of this wound a depression could be seen and felt through the skin and on putting a finger into the wound a fracture was felt starting near the middle of the upper edge of the orbit and curving upwards and finally outwards across the temporal ridge, where it was lost. The curve had a radius of about an inch and the portion of bone in its concavity was depressed, the greatest depression being along the line of fracture, where it amounted to ¼ in. The man's condition seemed to me to be so critical as not to justify my waiting to operate till water could be boiled and cooled, though the water I should have to use came from a dirty tank near the camp. Accordingly I began the operation at once, using carbolised water (1 in 40) for lotion and using the instruments provided in the field surgical pannier. On starting to enlarge the wound upwards the patient began to struggle, so the hospital assistant gave him chloroform. After trephining and inserting the elevator the depressed bone sprang at once into position and remained there. The bleeding vessels were twisted, not tied, and the skin was sewn up with silver wire without any drain. During the operation he stopped breathing, the pulse being still felt at the wrist, but after artificial respiration had been continued for some minutes he began to breathe again. With the thermometer at over 100° F. in the shade the cessation of artificial respiration was an even greater pleasure than usual. 20 minims of spirit of ether were injected after

the operation and he shortly revived. In the evening his temperature was normal and his pulse was 100. The patient was sensible and had no pain.

The question of after-treatment was a most anxious one as the regiment was to march next day, but after grave consideration I determined to have the patient carried with us on the two marches to Kohat, 30 miles in all, for at that time the chances of his obtaining efficient medical aid at Kushalgarh were more than remote. He was carried in a doolie by Kahars, starting at 4.30 A.M. each day and getting into camp before the heat from the sun was great. On the evening of Aug. 18th his temperature was 100° F. but the wound looked perfectly healthy. On the 19th his temperature was normal and he was quite free from any pain. I left him at Kohat and subsequently heard from Surgeon-Captain Bamfield that he never had a bad symptom. He rejoined the regiment about six weeks later. In February last, six months after the operation, the patient told me that he had been quite well since he rejoined the regiment and had had no headache. He had been doing his duty satisfactorily and had not been ailing in any way. There was a slight scar 1½ in. in length above his left eyebrow and on the site of the fracture was a prominence giving the impression that the previously depressed bone had been too much elevated. Where the bit of bone had been removed there was a slight depression and its area, too, was small.

The fact that the wound remained aseptic was probably due to the following reasons, at least in part. So far as the water went either the carbolic acid was effectual in sterilising it sufficiently to enable the leucocytes to do their work easily or the micro-organisms it must have contained were not pathogenic, or if they were so they were not educated to virulence. The silk supplied in the field equipment is not kept in an antiseptic solution and cannot be kept surgically clean, and I do not believe that silk can be sterilised by a few minutes' soaking in carbolic solution. I accordingly avoided it, twisting all vessels. Before using the silver wire for suturing I rubbed it thoroughly with a clean cloth, hoping that in this way I might be able to get it almost surgically clean, just as one can clean the outside of a catheter. The measures used to cleanse it were probably effectual for no stitch-abscess resulted.

The case seems to show with particular force the well-known fact that when in the field and away from a contaminated hospital building (as all hospital buildings tend to become) operations can be successfully performed without all the precautions necessary in a fixed hospital; and though that, of course, is no cause for not taking every precaution which can be taken, still it shows that under these circumstances the risk of septic infection is less than it appears to be, and that it is justifiable, if not an actual duty, to make an attempt to save life even though the surroundings may appear far from favourable.

. Jullunder.

RUPTURE OF GALL-BLADDER; LAPAROTOMY TWENTY-FOUR DAYS AFTER INJURY; RECOVERY.

BY J. M. H. MARTIN, M.D. VICT., F.R.C.S. ENG.,
SENIOR HONORARY SURGEON TO THE BLACKBURN AND EAST LANCASHIRE INFIRMARY.

IN THE LANCET of March 12th, 1898, Mr. Whipple records a case of cyst in connexion with the liver apparently due to the rupture of a hepatic duct. In the following case the bile escaped into the peritoneal cavity from a ruptured gall-bladder. Such an injury is generally considered fatal, but, as this case shows, not necessarily so.

A boy, aged nine years, was admitted to the Blackburn and East Lancashire Infirmary on Nov. 26th, 1897. Four days before admission his abdomen had been run over by a cart weighing 15 cwt. After the injury he was carried, or rather dragged, a quarter of a mile to his home. The medical man who then saw him reported that "he was suffering from shock and pain in the right side of the belly not specially confined to the liver." Next day his symptoms were distinct abdominal swelling, slight discolouration over the region of the gall-bladder, and a temperature of 101° F.; there was no vomiting. On the 24th there was retention of urine and his "bowels were moved, the motion giving marked evidence of blood." On admission to the infirmary the boy looked very ill and complained of pain in the abdomen, which was slightly distended but not very tender to the touch. Nothing else was made out by physical examination of the abdomen. His pulse was 100 and his temperature was 98°. His tongue was furred; there was no sickness. Nothing in the way of local treatment seemed indicated and milk with lime-water was the only food given. At 10 P.M. the temperature rose to 101·8°. Once during the afternoon there was vomiting of curdled milk. Next morning the abdominal tenderness had almost disappeared and the boy looked much better. He complained of being hungry. From this time till Dec. 2nd (six days), when he was sent home, improvement was very rapid; in fact, two days before discharge he was found running about the ward during the nurse's absence for a short time. He was discharged as being "well" and was taken home to Accrington by an uncle who carried him most of the way. The uncle states that in the train the boy complained of feeling ill and when he was seen the same evening by his former medical attendant he was "complaining of pain in the abdomen and vomiting bilious fluid." The abdomen had become distended again. He remained at home for twenty-one days and during this time the stools were clay-coloured. He was sick occasionally during this time and the abdomen remained swollen. On admission to the infirmary for the second time a great change was evident in the boy. He had lost a great deal of flesh; the abdomen was full of fluid of some kind but was not tender. The temperature was 98° and the pulse was 110. The tongue was furred; there was no jaundice, neither was bile present in the urine; the stools were clay-coloured. The temperature remained normal during the second twenty-four hours after admission. On the third day the abdomen was opened in the middle line above the umbilicus by an incision 2 in. long. Nearly five pints of fluid escaped. This fluid, which was deeply bile-stained, was in the general peritoneal cavity and not in any way limited by adhesions. The coils of intestine in the neighbourhood of the liver were matted together with lymph. The gall-bladder was empty and was thought on digital exploration to be adherent to the parietal peritoneum. A drainage-tube was left in the wound and a bulky dressing was applied. The boy bore the operation well and there was no rise of temperature afterwards. The dressing was removed on the second day and found to be soaked with bile-stained fluid. The boy's general condition had improved, his tongue being moist and his pulse better. The after-history is only remarkable for the rapidity of recovery. The temperature never reached 100°, the discharge became less each day, and the tube was discontinued on the seventh day. The total quantity of fluid absorbed by the dressing would almost equal the first amount removed. Bile was noticed for the first time in the fæces on the third day after the operation. The urine was examined each day for bile but it was never detected. The daily average quantity of urine was only 20 oz. The patient was discharged on Jan. 1st, 1898, and when seen on March 21st was quite well.

Blackburn.

A CASE OF INCARCERATED RETROFLEXED PREGNANT UTERUS WITH ENORMOUSLY DISTENDED BLADDER.

BY WILLIAM SIMPSON, M.B., B.S. DURH.,
RESIDENT MEDICAL OFFICER OF THE UNION HOSPITAL, NEWCASTLE-ON-TYNE.

A SINGLE woman, thirty-two years of age, was admitted into the Union Hospital, Newcastle-on-Tyne, on April 5th, 1898, complaining of great pain in her abdomen. Two weeks previously she began to have difficulty of micturition which gradually increased. For three days previously to admission she had been unable to pass urine and only a very small quantity had escaped involuntarily; her bowels had been confined since April 1st.

On examination the abdomen was very much distended and tense and a swelling, which was dull on percussion and on first consideration appeared like a large ovarian cyst, extended from the pubes to 2 in. above the umbilicus. Both legs and the vulva were œdematous. On vaginal examination the fundus of the uterus was felt to be enlarged; it occupied Douglas's pouch and the cervix was felt to be

directed forwards above the pubes. The patient said that she had not menstruated for the last three months. A soft rubber catheter was passed into the bladder and 196 oz. of foul-smelling, high-coloured urine were drawn off, the last few ounces of which were loaded with pus. In addition fully 4 oz. escaped during examination. No effort was made to replace the uterus that day on account of the collapsed state of the patient. On April 6th she passed 43 oz. of urine naturally, 77 oz. were drawn off by the catheter, and on vaginal examination the uterus was found to have righted itself. On the 7th 72 oz. of urine were passed naturally and 14 oz. by the catheter, after which she was able to empty her bladder voluntarily and the quantities passed on the three succeeding days were 70 oz., 80 oz., and 60 oz. respectively. She was discharged on April 20th in good health, the fundus of the uterus extending to 2 in. below the umbilicus. The œdema of the legs and vulva had completely disappeared.

The quantities of urine above stated are strictly accurate, they having been measured under my personal supervision. I should like to know what has been the largest quantity of urine known to have been drawn off from the female bladder.

I am indebted to Mr. Dodd, visiting surgeon to the hospital, for permission to publish this case.

Newcastle-on-Tyne.

NOTE OF A CASE OF LIPOMA OF THE HAND.

BY ARCHIBALD CUFF, B.A., B.C. CANTAB., F.R.C.S. ENG.

THE presence of a fatty tumour in the palm of the hand, though more frequently met with there than in the sole of the foot, is of uncommon occurrence. The following case was recently under my care in the Sheffield Royal Infirmary.

The patient, a woman, aged forty-four years, had had the tumour, which had slowly increased in size, for eight years. The inconveniences caused by its position and size rather than any feeling of discomfort were her reasons for having it removed. The tumour occupied the position of the thenar eminence, reaching above to the level of the base of the first metacarpal and below projecting between the thumb and index finger. From the dorsum of the hand it was seen to project between the heads of the thumb and index metacarpal bones, pushing them apart. Irregular and lobulated in outline, the mass gave an indefinite sense of fluctuation on palpation. Its position not lying in the direct course of the tendon sheath, the way in which it was inserting itself between the metacarpal bones, and, lastly, the negative result on pushing an exploring needle into the mass, distinguished it from a cyst in connexion with the tendons, with which these tumours are most likely to be confounded. It was removed by an incision made over its long axis through which it shelled out easily. It then appeared to be of greater size than was suspected before operation, several lobules being situated beneath the palmar fascia extending to about the mid line. Very little bleeding was met with and it was noticeable after removal of the tumour that there was no fatty connective tissue to be seen in the wound. I am indebted to Mr. Shaw, surgeon to this institution, for permission to treat and record this case.

Sheffield.

THE ROYAL INSTITUTION.—On Friday evening, May 13th, Professor Tilden delivered an address the title of which was "Recent Experiments on Certain of the Chemical Elements in Relation to Heat." After a brief sketch of the investigations of specific heat made by the earlier observers—such as Dulong, Petit, Regnault, and others—he said that the discrepancies in the results obtained were probably due to the metals examined not being in a state of purity, and that Dulong and Petit's law, according to which the product of the atomic weight and specific heat of an element is a constant number, is only approximately true. Experiments were shown with fusible metal, fusing and welding of platinum foil, galvanically deposited antimony, soluble and insoluble chromium chloride, &c., and also with Professor Joly's differential steam calorimeter. In the library Mr. Goold of Nottingham showed the production of rapid circular motion of tassels and paper discs by means of vibrating steel bars.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

A CASE OF PARTIAL RETROFLEXION OF THE GRAVID UTERUS PERSISTING TILL THE END OF THE EIGHTH MONTH; SPONTANEOUS DELIVERY.

(Under the care of Dr. G. E. HERMAN.)

THE rarity of the condition present in the following case is very great and the value of the record is enhanced by Dr. Herman's remarks. For the notes of the case we are indebted to Dr. H. M. Rigby, resident accoucheur, and Mr. J. F. Walker, clinical clerk.

A woman, aged twenty-seven years, was on Feb. 28th, 1898, admitted into the London Hospital under the care of Dr. Herman. The patient had had no previous illness. She had menstruated regularly and without pain from the age of fourteen years until the last week in June, 1897. She was married in March, 1897. She saw nothing after the last week in June, 1897. In the second week of November she found that she could not pass urine. She sent for a medical man, who relieved her with a catheter. A week later she was again unable to empty the bladder and it was emptied with a catheter. In the following week she again had retention of urine. The medical man passed a catheter as before, but on no occasion did he make any further examination than what was necessary for the passage of the catheter. From this time until Feb. 22nd, 1898, she had no further trouble, but then she began to have pains which she took to be those of labour. She sent for Dr. H. Richardson, who found the condition which will be described. She was removed to the London Hospital in order that her condition might be more thoroughly investigated.

On admission to the hospital the abdomen was found to contain a swelling, mainly to the right of the middle line, which reached to the lower ribs. The fœtal heart was heard over it, most loudly at about the level of the umbilicus. The girth at the umbilicus was 35 in.; midway between the umbilicus and the pubes it was also 35 in. The distance from the umbilicus to the right anterior superior iliac spine was 8 in., to the left anterior superior iliac spine 7½ in., to the pubes 7 in., and to the ensiform cartilage 6½ in. The measurement between the internal borders of the anterior superior iliac spines was 9¾ in., between the iliac crests it was 11¾ in., and the external conjugate diameter was 7½ in. By the vagina there was felt a firm, rounded swelling which filled the hollow of the sacrum and which was covered in front by the posterior vaginal wall. There was room enough to allow the finger to pass between this swelling and the pubes. The vagina ran directly upwards behind the symphysis, but the finger could not reach the top of it. No os uteri could be felt.

After admission the patient was anæsthetised and examined. It was made certain that the os uteri was not within reach of the finger. The whole hand was then inserted into the vagina; and when this had been done the os was felt to the right and so high up that it could not be reached without the introduction of the whole hand. The os uteri was large enough to admit a finger, but not larger. After the examination under anæsthesia the patient had no labour pains and no trouble with micturition until the evening of March 3rd. She then began to have slight pains in the lower abdomen and back, and amniotic fluid commenced to run away. On the 7th a digital vaginal examination was made and the condition was found to be the same as it was before. The os uteri was quite out of reach of the finger. The pains continued. On the 9th a digital vaginal examination was again made. The state of things was the same, the os uteri being

still out of reach. Some meconium came away. During the night and the following morning the pains increased in severity and frequency, and at 3.15 P.M., during the absence of the resident accoucheur, the breech of the child was expelled without resistance. The legs were extended. There was delay in the delivery of the head, which had to be manually extracted. The child was born dead. The mother recovered without any unfavourable symptom.

Remarks by Dr. HERMAN.—The above case is published because such cases are rare and those showing that the delivery may safely be left to nature are still rarer. G. Veit[1] collected 11 such cases and Depaul[2] has recorded two others. These are all that I have found. The majority of the patients, as in the above instance, were primiparæ and, also as in the above case, most of the labours came on prematurely. In most of them some interference was thought to be necessary; either the body of the uterus was pushed up or the cervix was pulled down, as in Oldham's case. These manœuvres were probably harmless but unnecessary. Michaelis manually dilated the cervix, and Depaul in one of his cases incised the os uteri so that he might manually deliver. In his other case Depaul incised the uterus through the posterior vaginal wall, with the result that the patient died. The only cases which have been left to nature have been under the care of English physicians—viz., those of Merriman,[3] Ramsbotham,[4] and the one above reported. In each of them delivery took place, the displacement of the uterus having no more serious effect upon the labour than to somewhat prolong it.

The most difficult clinical question in these cases is the diagnosis between pregnancy in a uterus misshapen in this unusual way and (1) extra-uterine pregnancy under the peritoneum behind the uterus, a condition which is probably more common than the former. It was to decide this question that the patient was admitted into the hospital. The diagnosis is made by finding or not finding the uterine body in front of, and distinct from, the fœtus-containing cavity. In this case the difficulty was to find the os uteri; when this was done it was found that the os led into the cavity which contained the fœtus and there was no uterine body distinct from the main swelling. 2. Very similar physical signs to those in this case may be given by a fibroid in the posterior wall of the uterus occupying the hollow of the sacrum, with pregnancy in the uterine cavity above the fibroid. I have published such a case in which I performed Cæsarean section.[5] The complication of pregnancy with a fibroid in the true pelvis of about the same size as the head or breech of a fœtus is very unlikely to happen. The only criterion I can point out is the great elevation of the os uteri in persistent retroflexion of the uterus. Were a pregnant uterus so pushed up by a fibroid that its os came to lie as high as in the case now reported, the difference in hardness between the fibroid and the cavity containing the liquor amnii would be easily appreciable by abdominal examination, for such a fibroid would reach high above the true pelvis. 3. An ovarian tumour in the true pelvis ought not to cause much difficulty in diagnosis, for in this case a sulcus between the tumour and the pregnant uterus would be palpable.

[1] Volkmann's Sammlung, No. 170.
[2] Archives de Tocologie, 1876.
[3] Synopsis of Cases of Difficult Parturition, 1820, p. 232.
[4] Medical Times and Gazette, 1852.
[5] New York Journal of Gynæcology and Obstetrics, June, 1893.

BEDFORD GENERAL INFIRMARY.

A CASE OF FRACTURE OF THE BASE OF THE SKULL; NECROPSY.

(Under the care of Mr. COLBY SHARPIN.)

FRACTURES of the skull are always of interest and many problems connected with them are still unsolved. The mechanism of the production of many forms of these fractures is by no means clear. A valuable paper by Chipault and Braquehave was contributed to the *Archives Générales de Médecine* of Paris in September, 1895; it deals with the question of the mechanism by which fractures of the skull are produced.

The patient in this case was a man, aged eighty-one years, who, while he was crossing a road in Bedford, was knocked down by a cart which was going at the rate of seven or eight miles per hour. He was brought into the infirmary at 8.30 P.M. on April 9th. On admission he was comatose. Upon examining him a scalp wound 2 in. in length was discovered over the left of the occipital bone. There was also a linear fracture in the occipital bone, but no displacement had occurred. Over the left side of the frontal bone there was a small incised wound ¼ in. in length which was superficial. There was profuse hæmorrhage from the left auditory meatus which lasted for several hours. Dr. Ross diagnosed a fracture of the middle fossa of the base of the skull. The patient remained comatose until the time of his death, which took place at 7.30 A.M. the following day.

Necropsy.—At the post-mortem examination, which was made on April 11th, all the internal organs were found to be healthy except that there were pleuritic adhesions on the right side of the chest. The heart was full of blood, especially the right auricle and ventricle. Upon opening the skull the frontal lobes of the brain were seen to be encased in blood-clot. The base of the brain was also covered with blood-clot. There was no laceration of the cerebral substance. When the brain was removed the base of the skull was found to be covered with blood-clot, fluid blood, and serum; after clearing this away Dr. Ross discovered a fracture which extended from the linear occipital fracture before mentioned to ¼ in. beyond the petrous portion of the temporal bone. The tearing through of the superior and inferior petrosal sinuses and the left occipital and the left lateral sinuses explained the profuse hæmorrhage which occurred.

Remarks by Dr. ROSS.—With regard to the different ways in which this lesion may be caused I have seen the following various types: (1) a man falling 20 ft. from a scaffolding and alighting upon his feet fractured the middle fossa of the base of his skull; (2) a "coupler" caught by a buffer on the left side of his forehead fell backwards upon the "sleepers" fracturing the anterior fossa of the base of the skull; (3) a youth, aged sixteen years, when diving into a swimming bath struck the top of his head, sustaining a fracture of the middle fossa of the base of the skull; and (4) in the case under consideration the patient's left occipital bone was caught by the right shoulder of the pony and he being precipitated forward upon his forehead the posterior and middle fossæ of his skull were fractured. If a linear fracture be found at the point of impact and there be signs of one or other of the fossæ of the base of the skull being injured it is tolerably certain that post-mortem examination will show the vertical and basal line of fracture to be continuous.

BRADFORD ROYAL INFIRMARY.

A CASE OF ATRESIA ANI VAGINALIS.

(Under the care of Mr. W. HORROCKS.)

THE following very interesting example of a by no means common condition demonstrates forcibly the great value of Rizzoli's operation of transplantation of the anus. The name of "anus vulvovaginalis" has been applied to this variety of irregularity in development and up to the present, according to Freeman, more than sixty cases have been recorded.[1] It is rarely seen in the adult, but Dwight[2] met with an instance of it in a woman aged thirty-two years.

An infant, aged six months, was admitted into the Bradford Royal Infirmary on Jan. 26th, 1895. The patient, who was the ninth child of healthy parents, suffered from malformation of the anus. All the other children were well formed and no similar deformity was known to exist on either the father's or the mother's side. The mother was in good health while carrying the child, who was born at full term after an ordinary labour. Shortly after birth there was some difficulty in relieving the bowels and this increased as the child grew older. On admission the child was found to be well nourished and except for the malformation of the anus well developed. In the ordinary position of the anus there was no depression, but there was an elevated and discoloured tag of skin, from which a raised blue raphé reached forwards to the vaginal orifice. At the posterior commissure of the vagina was the termination of the bowel which looked directly forwards. The external genitals were otherwise well formed. On passing a probe into the rectum it travelled backwards for about half an inch and then

[1] Philadelphia Medical News, Sept. 21st, 1895.
[2] American Journal of the Medical Sciences, April, 1895.

passed in an upward direction. The probe could be easily felt through the skin when it was lying in the rectum. On Jan. 28th, the child having been anæsthetised, an incision was made encircling the anus and this incision was prolonged backwards to the tip of the coccyx. The bowel was thus freed from the surrounding tissues. It was closely adherent to the skin behind the orifice and in separating it the gut was opened, but the orifice was closed by a catgut suture. The bowel was now freed in front, care being taken to spare as far as was possible the tissues around the anal orifice. The anus was now brought backwards and fixed about an inch in front of the coccyx by deep and superficial catgut sutures. The perineum was formed in front of the anus and the aperture in the vagina was closed with catgut sutures. There was no difficulty in bringing together the two sides to form a firm perineum. The child was somewhat collapsed after the operation. The wound healed well at the back part, but there was some suppuration about the perineum which ultimately healed by granulation. The child was discharged from the infirmary a fortnight after the operation and has since done well, there being no incontinence of fæces and no obstruction at the orifice.

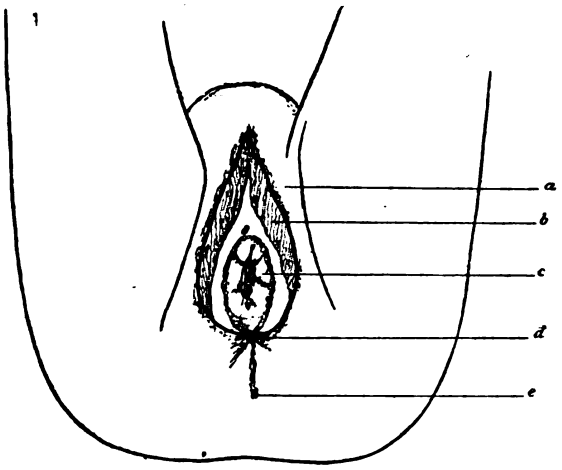


Diagram showing position of anus. *a*, Fold of labium majus separated to expose parts. *b*, Labium minus. *c*, Hymen, showing opening of vagina. *d*, Anus placed at posterior commissure of vagina. *e*, Fold of skin showing position of normal anus.

Remarks by Mr. HORROCKS.—The above case is interesting as being an example of a somewhat rare malformation of the anus. The termination of the gut opened into the cloaca, the recto-vaginal septum being imperfectly developed. The forward bend of the rectum before its final twist backwards is an indication of this condition in a normal state. The close proximity of the bowel to the skin and the tight adhesions between them may account for the rectum not being drawn upwards during development and the non-formation of the recto-vaginal septum. The elevated raphé with the rudimentary tag at the natural position of the anus shows the imperfect closure of the two halves. In a similar case which was treated some years ago a bent director was passed into the rectum and an opening was made in front of the coccyx. The margins of the communication with the vagina were then freshened and brought together with stitches. The new opening was kept open with a piece of catheter. In this case the anus was constantly contracting and frequently required dilatation, and the infant died about six months after the operation from whooping-cough. Shortly before treating the present case a description of Rizzoli's operation was seen in Ball's "Diseases of the Rectum" and the operation seemed to be suitable for the case. There was some doubt as to whether the dissection of the sphincter ani would destroy its nerve-supply and to avoid this the tissues around the anus were spared as much as was possible. The greatest difficulty of the operation was the separation of the skin from the rectum behind the anus, the parts being firmly adherent. The formation of a solid perineum seems the great advantage of Rizzoli's operation. The present case is most interesting from the fact that the sphincter is now efficient and obstruction of the bowels, which was a prominent symptom before the operation, no longer troubles the child.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Intestinal Obstruction from Thickening of the Great Omentum.—Sarcoma of the Kidney.—Presence of Fat in the Glanders Bacillus.—Intra-spinal Tumour.—Thickening of Subcutaneous Veins.—Exhibition of Specimens.

A MEETING of this society was held on May 17th, the President, Dr. J. F. PAYNE, being in the chair.

Dr. T. A. BOWES and Mr. CHARLES POWELL WHITE showed a specimen of Intestinal Obstruction due to Induration of the Great Omentum. The patient was a man, aged sixty-six years, who was treated in the Herne Bay Infirmar for tertiary syphilis and developed signs of increasing intestinal obstruction, from which he died. The great omentum was found to be much indurated and contracted, so that the lumen of the colon for a length of six inches was reduced to the size of a penholder. There was no sign of malignant disease and the condition was regarded as syphilitic.

Mr. CHARLES POWELL WHITE showed a specimen of Sarcoma of the Pelvis of the Kidney. The patient was a girl, aged six years. She had suffered from ascites for six months but had never had any renal symptoms. The kidney was not enlarged. There was a diffuse growth situated between the mucous membrane of the pelvis and the pyramids, red in colour and firm in texture. It extended beyond the hilum to the retro-peritoneal tissues about the ureter. There were secondary deposits along the whole length of the intestines and in the pancreas. Microscopically the growth consisted of round cells with well-marked nuclei in a delicate network of interlacing fibrils, in which were some branched cells.

Mr. S. G. SHATTOCK read a paper on the Presence of Fat in the Glanders Bacillus. He had been led to inquire whether the bacillus contained fat from the luminosity of the flame having often struck him whilst sterilising the loop in carrying on cultures. The method adopted was to transfer superficial portions of potato cultures to cover glasses, mix them with distilled water, and expose the material in dark chambers to the prolonged action of osmic acid vapour; examinations of the material (still moist) were made by means of the hanging drop. Careful microscopic study revealed the presence of minute points of fat, coloured deep black, in the longer forms of the bacilli. Such points were limited to the longer forms which occurred especially in potato cultures; they did not correspond either in size or number with the clear, oval, or spherical unstained areas seen in preparations dyed with carbol fuchsin; these Mr. Shattock regarded as vacuoles similar to those in the cholera spirillum. Such spherical vacuoles had, again, to be distinguished from the segmentation of the protoplasm often presented by this bacillus. The presence of fat in yeast had been long known. Brieger's analysis of Friedländer's pneumococcus had shown the presence of fat moreover in this, whilst Koch had demonstrated the same class of substance in the tubercle and Unna in the lepra bacillus. A fatty acid was elaborated again by the diphtheria bacillus. The fat, however, lay in some of these cases without or around the bacterial cells. Whether the presence of fat in the glanders bacillus was physiological or a mark of degeneration was disputable. Mr. Shattock exhibited also a series of White Mice infected with pure cultures of the glanders bacillus by subcutaneous injection. Death occurred in from two to three weeks. The chief organ affected was the spleen, which was greatly enlarged and studded with glanderous nodules in which microscopic examination showed the bacilli in an unmixed condition; the testicles were uninvolved. It was invariably stated in textbooks that white mice were immune from glanders. The disease ran a somewhat chronic course, for in the field mouse death took place in from two to eight days. The insusceptibility, in short, was relative, not absolute, in this case.

Dr. MORLEY FLETCHER exhibited a specimen of an Intra-spinal Tumour from a man, aged fifty-five years, who was under the care of Dr. Gee at St. Bartholomew's Hospital. The total duration of symptoms was sixteen months. The chief symptoms were loss of power and pains in both legs. There were no pains in the back and a striking feature in the clinical history was the very sudden termination of the case with symptoms of collapse. The growth was an oval

tumour in the lumbar enlargement arising within the posterior part of the cord near the central canal. It was a glio-sarcoma. It was pointed out that intraspinal malignant tumours were extremely rare, especially sarcomata, and that few cases have been recorded either in this country or abroad.

Dr. F. PARKES WEBER showed Microscopical Specimens illustrating an Apparent Thickening of Subcutaneous Veins. Dr. Weber said that if the superficial veins in a series of rather thin cachectic men, especially those slightly under the middle age, were felt, it would be found that in some of them the veins apparently had thickened walls, and indeed occasionally they can be rolled about like cords under the finger. As far as Dr. Weber had been able to obtain microscopical examinations he concluded that what clinically appeared to be "phlebosclerosis" was in these cases due to great development of the longitudinal unstriped muscle fibres in the most internal portion of the tunica media, and possibly also a state of contraction of the circular muscle fibres. To decide how far this condition is abnormal required further careful investigation. The condition was more noticeable in the internal saphenous veins than in the veins of the upper extremities. In the case of a man who had had syphilis two and a half years before his death (from ulcerative endocarditis) Dr. Weber found this condition to be associated in one of the internal saphenous veins with a certain amount of endophlebitis proliferans. During life the internal saphenous veins in the thighs felt like hard cords. When the veins in this case were cut open longitudinal folds were noticed similar to those described by Cornil in commencing varicose veins.—Dr. LAZARUS-BARLOW thought that caution should be observed in accepting these changes as actually due to morbid change during life. In some recent work on the lungs he had been struck with the ease in which, owing to particular methods of preparation, appearances exactly like endarteritis and endophlebitis could be produced.—The PRESIDENT also thought that it would be worth Dr. Weber's while to make preparations from normal veins. It had struck him that possibly if the veins were kept slightly distended during hardening, to the same extent as during life, that many of these appearances would not exist.

The following card specimens were shown:—

Mr. T. D. LISTER: Acute Œsophagitis in Infants.

Dr. COLCOTT FOX: Molluscum Contagiosum on the Legs of a Chicken.

Mr. H. J. CURTIS: Lipoma in the Perineum.

Mr. SHATTOCK: Guinea pigs Inoculated with (*a*) Streptococcus Pyogenes. (*b*) Coli Bacillus, (*c*) Tubercle Bacillus, and (*d*) Plague Bacillus.

Mr. C. P. WHITE: Ununited Fracture of the Scapula.

Dr. F. P. WEBER: Papillomatous Adenoma of the Kidney.

The annual general meeting was held subsequently when votes of thanks were passed to the retiring officers and members of council. The following gentlemen were elected for the ensuing year: President: Dr. Joseph Frank Payne. Vice-Presidents: Dr. Radcliffe Crocker, Dr. Frederick Taylor, Dr. F. Charlewood Turner, Dr. German Sims Woodhead, Mr. Anthony A. Bowlby, Mr. Stanley Boyd, Mr. Alfred Pearce Gould, and Mr. Robert William Parker. Treasurer: Dr. Sidney Coupland. Honorary secretaries: Mr. D'Arcy Power and Dr. Humphry D. Rolleston. Council: Dr. John Abercrombie, Dr. J. Rose Bradford, Dr. Julius Dreschfeld, Dr. Archibald E. Garrod, Dr. Herbert P. Hawkins, Dr. R. G. Hebb, Dr. William Hunter, Dr. H. A. Lediard, Dr. Hubert Montague Murray, Dr. G. Newton Pitt, Dr. J. W. Washbourn, Mr. William H. Battle, Mr. Cecil F. Beadles, Mr. Raymond Johnson, Mr. John R. Lunn, Mr. H. Betham Robinson, Mr. W. G. Spencer, Mr. J. H. Targett, Mr. Frederick C. Wallis, and Mr. Edgar W. Willett.

CLINICAL SOCIETY OF LONDON.

Cases of Intussusception.—Perforation of the Vermiform Appendix in Ambulatory Typhoid Fever.

A MEETING of this society was held on May 13th, the President, Mr. LANGTON, being in the chair.

Dr. DAVID B. LEES and Mr. A. QUARRY SILCOCK related a case of Ileo-cæcal Intussusception in which excision of involved intestine was performed with a successful result. A boy, aged four and a half years, was admitted to St. Mary's Hospital in December, 1896, on account of intussusception. Under an anæsthetic 28 oz. of water were injected into the rectum and reduction was apparently effected. He was discharged from the hospital two days later (on Dec. 30th). On Jan. 1st, 1897, he was readmitted, the symptoms having recurred with reappearance of the tumour. Reduction was again effected by injections of water. Again and again the tumour reappeared with symptoms as before, which subsided more or less completely under treatment. In the latter part of February and in March the abdominal pain became more constant; castor oil and rectal injections were frequently used to combat the constipation. At the end of March the condition of the boy became very serious. The tumour was now never wholly reducible and operation was determined upon. It was found that the parts concerned in the intussusception were the lower end of the ileum and the cæcum. The intussusception was irreducible and these were therefore excised, the ileum being divided 2 in. or 3 in. above the ileo-cæcal valve, the colon some inches below the cæcum. The cut ends of the intestines were approximated and united by Lembert and quilt sutures. The patient made an uninterrupted recovery and at the present time (May, 1898) is quite well. Examination of the specimen showed that the posterior wall of the cæcum carrying with it the appendix had been invaginated into the ascending colon; the ileo-cæcal valve had been dragged upon, carrying with it about 1 in. of the ileum. Dr. Lees and Mr. Silcock were unable to explain the mechanism by which the intussusception was brought about. The form of the intussusception seemed to belong to the same category of cases as those in which an inversion of the appendix into the cavity of the cæcum has obtained. In this case the wall of the cæcum carrying with it the appendix seems to have been the starting point of the mischief. It was clear from an inspection of the specimen that the complete reduction of the intussusception by the injection of air or water was an impossibility.

Dr. W. S. COLMAN and Mr. T. H. KELLOCK related a case of Chronic Intussusception of the Cæcum with Extreme Latency of Symptoms. The patient was a boy, aged eight years, who was admitted to the Hospital for Sick Children, Great Ormond-street, on Aug. 17th, 1897, on account of periodical abdominal pain and wasting. The paroxysms of pain had been noticed for fifteen weeks and were usually attended with vomiting. His bowels had been opened once or twice daily, the motions being solid. On admission he was thin, but his abdomen was full and somewhat resistant. There was a moveable swelling in the left flank between the iliac crest and the costal margin. It appeared to vary in size during the examination. An hour later during an attack of pain the mass became larger and harder and almost reached the middle line. In the attacks which frequently recurred the boy always placed himself on his hands and knees. It was thought at first that the case might be one of axial rotation of a wandering spleen, but later the splenic dulness could be mapped out as distinct from that of the tumour. The severe attacks of pain returned almost daily, but there was no change in the character of the motions and nothing could be felt *per rectum*. The boy was getting up and except for the attacks of pain appeared to be perfectly well until three weeks after admission and eighteen weeks after the onset of symptoms, when the vomiting and pain became severe and his general condition became serious. The character of the tumour was more definitely sausage-shaped and one end of it could be felt to be very hard. It was therefore decided to open the abdomen and this was done by Mr. Kellock on Sept. 13th. There was no free fluid in the peritoneum and no peritonitis. A large intussusception in the transverse colon and splenic flexure was found in the left hypochondrium. This was easily reduced at first, but owing to œdema and induration of the last two inches there was much more difficulty. A perforating ulcer with discoloured edges was found close to the root of the vermiform appendix. The ulcer was excised, the edges being brought together by Lembert's sutures. The cæcum was then returned to the abdomen. Two days afterwards, as there was pyrexia and tenderness over the cæcum, the wound was reopened at the lower end and some pus was liberated, but the child died. Leave for a post-mortem examination was refused. Attention was drawn to the latency of the symptoms, the bowels acting naturally throughout, and to the great variations in the size and position of the tumour. In any similar case it was suggested that if an ulcer had to be excised a fresh opening should be

made in the right iliac fossa and the cæcum stitched in position there.

Dr. LEES described a case of Intussusception of six weeks' standing successfully treated by Irrigation and the Local Application of an Icebag. A boy, aged three years, had suffered for six weeks from abdominal pain severe enough to make him scream. There had been no blood in the motions and vomiting had occurred only during the last of the six weeks. His appetite was very bad and he was wasting. A transverse swelling was detected in the position of the transverse colon which, while handled, became distinctly harder and firmer, afterwards softer again, obviously from peristaltic action. Under chloroform the tumour was felt more easily and the peristaltic hardening was still more evident. 25 oz. of water were passed into the rectum under low pressure and soon the tumour became shifted towards the right. The irrigation was repeated but apparently without further effect. A good deal of mucus came away but no blood. A few hours later the swelling occupied a vertical position in the line of the ascending colon; evidently the reduction was incomplete. Remembering that in fatal cases of intussusception most difficulty is experienced in reducing the last half-inch which is swollen through congestion, Dr. Lees applied an icebag over the cæcal region, taking care to keep the child's feet and legs warm with hot-water bottles. The icebag was kept in place for eight days; it was well borne, but hot fomentations were occasionally applied over the bladder to assist micturition. After the ice had been applied for four days the tumour was found to be less distinct. Three days later only a small rather hard lump, somewhat resembling a gland, could be detected. The appetite had greatly improved and during the week the child gained 2 lb. in weight. After eight days the ice was removed and another large enema was administered; this produced a copious motion. The small lump could now no longer be felt. Recovery was complete, and five months later it was found that the boy was still quite well and nothing abnormal could be detected in his abdomen. In this case, though the symptoms were subacute, the history of severe abdominal pain for six weeks, the characteristic position and shape of the tumour, the peristaltic hardening, and the effect produced by irrigation left no doubt as to its nature. It is well worthy of note that the intussuscepted intestine, even after six weeks, had not become fixed by adhesions and that it was still possible to obtain a very definite amount of reduction by irrigation. Yet it would probably have been necessary at last to open the abdomen if it had not been for the assistance rendered by the icebag, which apparently reduced the congestion of the wall of the intestine and allowed a final enema to complete the reduction. Dr. Lees admitted that there was a difficulty in the adoption of this method of treatment in an acute case of intussusception because of the marked tendency to collapse, but he considered the plan worthy of further trial in subacute cases.—Mr. BARKER congratulated Mr. Silcock on his success in saving by resection a case of intussusception which was in so severe a condition. Such a result was very rare. The most important question raised by this interesting series of cases was that of the desirability of resorting to injection or of proceeding at once to laparotomy. It was true that some cases got well with injection alone, but there were many in which from the outset such a procedure was hopeless. In a series of cases of intussusception brought before that society early in the session he had shown that out of 15 consecutive cases in which he had performed laparotomy for this condition no less than 3 were cases of enteric or ileo-colic intussusception which could not possibly have been reduced by injection. Five of his cases died, three of them being gangrenous at the time of operation. The results he had obtained encouraged him to earlier and freer operation in the future. He considered injection inadvisable as it not only involved delay but was not without risk, and he was convinced that immediate operation was the best mode of treatment in the average hospital case. In one of his cases there had been a thickening of the cæcum similar to that described by Dr. Colman and Mr. Kellock in their case. It was only by squeezing and a sort of massage that he was able to reduce the tough wall and keep it reduced. He did not think that there was much risk of recurrence after reduction. He thought that many of the apparent exceptions to this rule were cases in which reduction had been incomplete. He had, however, seen one case in which recurrence took place some months after operation. He mentioned one case in which on opening the abdomen he found a mass in the transverse colon which was at first thought to be the intussusception, but which proved to be a tuberculous mass, the real intussusception being found in the right iliac region. Although the intussusception in this case was an enteric one there was no vomiting.—The PRESIDENT thought that most surgeons would agree that in acute cases injection only gave rise to delay and often to a false sense of security when the intussusception had not been completely reduced. Even in chronic cases rupture might be caused by irrigation at low pressure. The operation in itself was not so dangerous as the delay and the nature of the disease. When injection was employed, too, it was impossible to feel whether the all-important last portion of the intussusception had been completely reduced.—Dr. LEONARD GUTHRIE said that diagnosis came before treatment and was often a matter of great difficulty. Some years ago he had had a boy, four years of age, under his care for some weeks suffering from paroxysmal abdominal pain. He had repeatedly examined the patient but could find no tumour either during the paroxysm or in the intervals. He never passed blood or mucus, but one day he was brought to the hospital with the ileo-cæcal valve protruding from the anus. He thought that a condition of "incipient intussusception" had been present all along and that from time to time spontaneous reduction had taken place and that strangulation and severe symptoms had occurred acutely. He agreed that in acute cases irrigation was unwise seeing that one was in the dark as to the condition of the bowel.—Dr. F. J. POYNTON said that it was often impossible to make a correct diagnosis unless the patient was seen at very frequent intervals. In the absence of blood and mucus in the stools the diagnosis would rest on the presence of a tumour of variable resistance, shape, and position which disappeared from time to time, reappearing with a fresh attack of abdominal pain.—Mr. SILCOCK, in reply, said that injection had been employed in the first instance in his case because at that time the tumour was of very recent formation and was freely moveable.—Mr. KELLOCK, in reply, said that he did not think that so little risk was involved in opening the abdomen in a child as had been suggested. The experience at Great Ormond-street was that in young infants laparotomy was an extremely dangerous operation no matter for what purpose it was performed. The risk might be minimised by making the smallest possible incision and introducing one, or at most two, fingers as Mr. Barker had suggested. Since this paper was written he had operated on another case of intussusception of the cæcum into itself. In this case also the child assumed the unusual genupectoral position. The intussusception was reduced and the child made a good recovery.—Dr. LEES, in reply, concurred in the view that peritoneal operations on young children were attended by great risk. He had not seen such favourable results after operation as Mr. Barker had obtained, but, on the other hand, he had seen many cases in which recovery had taken place in acute cases after injection alone. In many, surgical operation, performed immediately after injection had failed, had been equally unsuccessful.

Dr. ROLLESTON recorded a case of Perforation of the Vermiform Appendix during the course of Enteric Fever. The patient was a man, aged twenty-one years. Twelve hours after admission to St. George's Hospital with enteric fever abdominal pain and signs of collapse came on. After palliative treatment by morphia it was decided that perforation had probably occurred; the liver dulness remained, and it was thought that the perforation had been small and not allowed of the entry of gas into the peritoneum. Mr. T. Pickering Pick performed laparotomy and found fibrinous peritonitis due to perforation of the appendix close to the cæcum. The appendix was removed, the stump being invaginated into the cæcum, the peritoneum was washed out and a tube left in for drainage. On the next day the Widal reaction was found by Dr. C. Slater to be strongly marked. The patient rallied temporarily after the operation, but died on the second day, this fatal result being probably due to grave constitutional symptoms and to the fact that he had been at work to within five days of his death. At the necropsy ulceration of the intestine of a typhoid character was found. The points of interest in the case were (*a*) the frequency of appendicular lesions in enteric fever and (*b*) the question of operative interference during the height of the fever. In 14 out of 60 fatal cases of enteric fever examined in St. George's Hospital the appendix was found to be altered, being

swollen in 5, ulcerated in 7, and perforated in 2. In those 60 cases perforation (including the appendix cases) occurred in 18, so that the appendix was perforated in 11 per cent. of cases of entire perforation. This was the percentage arrived at by Nacke; Osler found it even higher (4 in 16), while Finney placed it at 5 per cent. and Fitz at 3 per cent. The statistics of operative interference in perforation during enteric fever were referred to and 2 recent cases reported by Deaven in which a perforated appendix was successfully removed during enteric fever were mentioned.—Dr. E. W. GOODALL was surprised to hear that the complication was so frequent. Although he had a somewhat extended experience of enteric fever at the fever hospitals he had not yet come across a single case. He had seen one case of operation for perforation in enteric fever. The patient was a girl, eight years of age, who was suffering from a recrudescence of enteric fever. She was exceedingly ill and the operation was somewhat prolonged owing to difficulty in finding the site of the perforation. It was also noticeable that there was little sign of the other typhoid ulcers from the outside of the gut, although they were shown after death to have been numerous. The aperture was closed by sutures. The patient lived four days. It was found that not the slightest attempt at repair had taken place and another perforation had been caused by one of the sutures having been passed through an adjoining ulcer. He agreed with Mr. Bland Sutton that it would be better in such a case to bring the perforation up to the abdominal incision and fix the gut there. Dr. Goodall mentioned that Mr. Parkin of Hull had operated successfully in one case of perforation and there were two more successful cases in the recent reports of the Belvidere Hospital, Glasgow.—Mr. BARKER took exception to the wording of a statement that "the mortality after surgical treatment was appalling." The cases without operation might be considered as uniformly fatal, while after operation 23 per cent. had recovered, which was encouraging.—Dr. ROLLESTON, in reply, said that he had also been surprised to find that the condition occurred in so large a percentage of cases. Most of them were derived from American literature.

SOUTH-WEST LONDON MEDICAL SOCIETY.

The Proposed Midwives Bill.

A MEETING of this society was held at Wandsworth Town-hall on May 4th, under the presidency of Mr. T. A. I. HOWELL, to discuss the questions raised by the proposed Midwives Bill.

The PRESIDENT argued that among the reasons for the Bill were the facts that in a large proportion of the women attended by unskilled persons the mortality both among mothers and children was increased and that those cases also were responsible for much of the ophthalmia neonatorum which later drifts towards the hospital. For these and other reasons it is agreed on all hands that something ought to be done. In a general criticism of the Bill he pointed out the necessity for limiting the responsibility to the person who actually had the conduct of the case and called attention to the omission from the Bill of all reference to stillbirths and the absence of any clause making it necessary on the part of the proposed midwife to provide a certificate of character. He pointed out the necessity, in his opinion, of protecting the practice as well as the title of the medical man and of restricting the practice of the midwife solely to the functions which she was intended by the Bill to fulfil. He showed that by-laws cannot be made contrary to the spirit of the Act, which seems to be the case in the Bill under consideration. As regards local funds they ought not to be available for expenses incurred in carrying out the provisions of the Act, and he especially objected to Clause 9, which virtually appoints medical detectives. Public opinion, he was sure, was generally adverse to the passing of such a measure.

Mr. ROWLAND HUMPHREYS said that the proposed Bill was only there in outline and that the details were left to be filled in by the board. He assured the meeting that deputations representing 20,000 persons in favour of the Bill had been received and that petitions to the same effect were constantly being sent in. Legislation had been hampered to a great extent by the views taken of the matter by various women's societies. He thought that a certificate of character would be of no use and that it would be a very difficult thing to provide against the risk of the midwife practising for gain.

Dr. EDEN said that since the Bill had been condemned by the General Medical Council it ought not to be allowed to pass into law. The Bill should have been promoted by the profession at large and not by any particular body, no matter how good their intentions. At present there were no means of dealing with midwives who were deserving of censure; they were practically under no control. This was very different from the regulations on the Continent—in Italy, for example, where every midwife must give full particulars of each case which she has attended to the local authority. There, also, midwives are trained gratuitously, but in this country the probabilities are that the certified midwife will not reach the class for which she is intended—viz., the very poor.

Dr. MCCOOK WEIR said that if this Bill passed the midwives would ultimately treat all diseases of women and children. He stated that the signatures in favour of the Bill were obtained by canvassing, that in his opinion the constitution of the Midwives' Board was bad, and that the General Medical Council had been overridden by the Privy Council and by other influences. He gave an outline of a Bill prepared by himself which he would call the Obstetric Nurses Bill and was strongly of opinion that a certificate of character was a most essential qualification.

Dr. BARKWELL spoke against the Bill.

ÆSCULAPIAN SOCIETY OF LONDON.

The Management of Labour in Contracted Pelves.—Sacral Spina Bifida with absence of Skin Covering and with Skull Bones imperfect.—Spontaneous Complete Disappearance of Large Rheumatic Fibromata.

A MEETING of this society was held on May 13th, the President, Dr. B. G. MORISON, being in the chair.

Dr. THOMAS G. STEVENS read a paper on the Management of Labour in Contracted Pelves in which he related particulars of the following cases:—

Full-Time Children.

—	Primipara or Multipara.	Age.	Diagonal conjugate in inches.	Operation.	Weight of child.	State of child at birth.
1.	P.	22	3¼	Craniotomy. Prolapsed funis.	—	Stillborn.
2.	P.	32	3¼	Symphysiotomy and forceps.	—	Stillborn
3.	P.	22	3⅛	Craniotomy.	7 lb. 11 oz.	Stillborn.
4.	M. (7th)	30	3½	Version.	7 lb. 4 oz.	Alive.
5.	P.	31	3¼	Version and craniotomy.	9 lb.	Stillborn.
6.	P.	26	3⅜	Forceps.	7 lb. 5 lb.	Dead. Alive.
7.	P.	?	3½	Replaced funis.	4 lb. 8 oz.	Alive.
8.	P.	25	3	Version.	6 lb. 12 oz.	Stillborn; white asphyxia.
				Induction Cases.		
9.	P.	25	2½	6th month.	—	Stillborn.
10.	M. (2nd)	34	3⅜	8th month. Forceps.	—	Alive.
11.	M. (5th)	38	3	8th month. Version.	—	Stillborn.
12.	P.	—	—	5th month. Kyphotic pelvis.	—	Stillborn.
				Premature Labour not Induced.		
13.	M. (2nd)	25	3½	Version.	—	Alive.

All mothers recovered. 5 children were born alive and 9 were stillborn.

He emphasised the great inadvisability of hurry in these cases, pointing out that a maternal pulse of 110 per minute is safe unless the well-known signs of exhaustion in the parturient are present. For the child forceps delivery was better than version.

Mr. W. CAMPBELL M'DONNELL showed a drawing of Sacral Spina Bifida with absence of Skin Covering and the Specimen of the Defective Sacrum. The skull was also very imperfect, the frontal bones being separate 7·5 cm. On the fifteenth day the child had three epileptic fits and then died. Delivery had been quite normal.

Mr. M'DONNELL also read notes of the Complete and Spontaneous Disappearance of Fibromata, 2·5 cm. in diameter, of rheumatic origin, from a man, aged thirty-one years, the subject of previous acute rheumatism without cardiac lesion.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Risks to the Ureters when Performing Hysterectomy.

A MEETING of this society was held on May 12th, the President, Dr. MACNAUGHTON-JONES, being in the chair.

The following specimens were exhibited:—

Mr. J. FURNEAUX JORDAN: Myoma of the Uterus removed by Hysterectomy.

Dr. GRANVILLE BANTOCK: Uterine Fibroid removed by Hysterectomy.

Mr. CHARLES RYALL: Large Uterine Fibro-myoma removed by Abdominal Hysterectomy.

Mr. F. BOWREMAN JESSETT: Uterine Fibroid Complicating Pregnancy.

In the discussion on these four specimens the following gentlemen took part: Dr. HEYWOOD SMITH, Dr. PURCELL, Dr. NEIL MACPHATTER (Denver, Colorado), Dr. ARTHUR GILES, and the PRESIDENT.

The following card specimens were exhibited:—

Mr. W. D. SPANTON (Hanley): Biliary Calculus.

Dr. T. DOLAN (Halifax): Intra-uterine Myoma.

Dr. F. A. PURCELL read a paper on the Risks to the Ureters when Performing Hysterectomy, illustrated by a case in which both ureters were occluded and freed fifty-eight hours after. He dealt with the risks to the ureters when performing abdominal hysterectomy in which the combined method is employed—in other words, pan-hysterectomy—illustrating his remarks by quoting a case and showing the specimen of a large adeno-carcinoma of the uterus with a diseased os and a much enlarged and widely distended neck. During the operation both ureters became compressed and no urine was voided from the bladder. Fifty-eight hours after the first operation the patient was anæsthetised and the abdomen was again opened, the laced peritoneum across the floor of the pelvis, which was intact and free from inflammation, was ripped asunder and the ureters were examined. Both were found to be ballooned. The silk ligatures on the uterine arteries were cut through and removed; by this means the patency of the ureters was restored and urine flowed into the bladder, the toilet was again performed and eventually the patient made an uninterrupted recovery. Dr. Purcell then reviewed the relations of the uterine arteries and the ureters and stated that one, if not the greatest, risk that presented itself in performing pan-hysterectomy was the endangering of the ureters. He regarded the uterine artery as being the most important vessel surgically, running its course downward and inward between the folds of the broad ligament until it arrives at a point below the level of the os internum just above the lateral fornix, where it makes a sharp turn across the ureter to the neck.—Mr. BOWREMAN JESSETT said that Dr. Purcell's case was interesting from many points of view and, among others, from that of diagnosis. The question lay between malignant disease and a sloughing fibroid; and the conclusion, which was borne out by the operation, was that it was a sloughing fibroid which was becoming malignant. One lesson from the case was that it might have been better to divide the arteries and tie them after the removal of the tumour. The ureters were not included in the ligatures, but were kinked by the puckering up of adjacent tissues.—Dr. GEORGE KEITH related a case which he had seen in Edinburgh some fifteen years previously, in which a small piece of tube was found on an ovarian tumour after its removal. It was sent to a pathologist to be examined and he reported that it was not ureter. However, the necropsy showed that a piece of ureter had really been removed.—Dr. NEIL MACPHATTER had had trouble with a ureter in his first hysterectomy. The tumour was very large, weighing 46 lb. after removal, and was operated upon under the impression that it was ovarian. While separating adhesions a uniform band was noticed and he was about to divide it when his assistant suggested that it might be ureter. This timely suggestion saved the patient. The ureter had become so much elongated by the tumour that after it was freed it lay in a little coil.—The PRESIDENT observed that in these cases the normal relations were so disturbed that exact anatomical knowledge might be of little avail and injury was generally due to displacement or congenital anomaly of the ureter. In Doyen's method of pan-hysterectomy the risks to the ureters were minimised, especially because he adopted the plan of drawing the uterine and ovarian arteries out of the surrounding tissues, securing the vessel alone. He had written to several eminent operators asking their experience with the ureter. Howard Kelly had promised to send statistics, and Martin of Berlin, Doyen of Paris, and Kufferath of Brussels had written giving their experience. These letters the President read. To Howard Kelly, whom they had had the pleasure that evening of proposing as a Fellow of the society, they were indebted for some of the most important advances in the protective and reparative surgery of the ureters. To him was due the method of ureterostomy and through his work on the Catheterisation of the Ureters they were able to determine which kidney was affected in cases where nephrectomy was required, thus obviating the necessity of a preliminary abdominal section. He congratulated Dr. Purcell on his boldness and success under very trying circumstances. — Dr. C. H. F. ROUTH suggested that when uræmic symptoms threatened and there was reason to fear injury to the ureters it might be advisable as a preliminary step to open the kidney from behind. By this means present danger could be averted and a secondary operation could be performed later if necessary.—Dr. PURCELL, in reply, thought that when the injury to the ureter was discovered at the time of operation Dr. Routh's suggestion might be adopted with advantage. But if it were not found out till later it would be necessary to first determine which side was affected. As a rule, if one side only were injured the remaining kidney would go on excreting and there would then be no danger of uræmia.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Combined Pleural and Pericardial Adhesion.

A SPECIAL meeting of this society was held on April 27th, Dr. CATTLE, President, being in the chair.

Dr. FREDERICK TAYLOR read a paper on Combined Pleural and Pericardial Adhesion. Dr. Taylor described the case of a woman, aged forty-two years, who was admitted to hospital for dyspnœa, cough, and pain in the chest. Five months previously she had noticed that her abdomen was getting larger. A month previously she had chills, shivering, dyspnœa, pain between the shoulders, and cough. Œdema of the legs followed and the physical signs of fluid at the right base. This was explored without result. On admission the physical signs of right pleural effusion persisted and the left base presented the same in less degree. The heart's impulse was felt in the normal position. The dulness was normal in extent. The pulse was regular, but feeble and rather rapid. There was no murmur. The urine a few days later contained some albumin. The patient never improved. The general condition and physical signs remained much the same, but the dyspnœa increased as well as the anasarca. She died about six months after admission. The post-mortem examination revealed universally adherent pleura and adherent pericardium. The lungs were compressed and airless except at the apices. Some bronchial tubes were dilated. The vessels and other structures in the mediastinum were matted together by inflammatory tissue (mediastinitis). The peritoneum was universally thick and opaque and presented some recent lymph as well. The right auricle was dilated, the right ventricle was dilated and hypertrophied, and the left ventricle was very small. Dr. Taylor pointed out that the mere

co-existence of pericardial and pleural adhesions was common as found post mortem, but a very small proportion of them seem to present the features seen in this case—great prominence of the physical signs on the side of the pleura and absence of local evidence on the side of the heart. The etiology of this case was obscure. There was no history of rheumatism or acute pneumonia, and other causes of multiple serous inflammations were not present with the exception of scarlet fever. The consideration of the relation of the different serous inflammations to one another and to the symptoms showed that the pulmonary lesion seemed unequal to the production of the symptoms except through the failure of the right heart and no doubt the dilatation of the right cavities as a result of adherent pericardium was the chief cause of the dropsy. Dr. Taylor referred to an interesting paper by Heidemain, who showed that ascites was likely to occur as an early symptom in adherent pericardium, probably because there had been with the pericarditis simultaneous peritonitis. This had a possible bearing upon the present case. The subject of mediastinitis was then discussed and its probable influence on the symptoms in this case was shown to be small. In the diagnosis Dr. Taylor suggested that the co existence of lesions in two or more serous membranes as the result of former inflammations rather increased than lessened the difficulties in diagnosis, especially in consideration of the interaction of the heart and lungs one upon the other. The chief guide is probably the recognition of adherent pericardium acting upon the right heart as a possible cause of failing circulation. When the local evidence of heart disease is not forthcoming the suspicion of adherent pericardium may be strengthened by evidence that the pleura is, or has been, inflamed. Dr. Taylor referred in conclusion to another case in which a similar diagnosis seemed allowable.

The PRESIDENT thanked Dr. Taylor for his interesting address and Dr. HANDFORD proposed and Mr. CHICKEN seconded a vote of thanks to Dr. Taylor which was carried unanimously.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Exhibition of Cases and Specimens.—Empyema of Fronto-ethmoidal and Sphenoidal Cavities.

A MEETING of this society was held on May 11th, Mr. C. E. RICHMOND, President, being in the chair.

The PRESIDENT showed and described a case of Fibro-adenoma in a Breast the seat of chronic mastitis.

Dr. REYNOLDS and Dr. MOORE showed specimens from a case of Acute Hæmorrhagic Pancreatitis met with in a male subject, aged twenty-nine years. During life the patient had suffered from several pseudo-angina-like attacks. The fatal termination was very sudden, being ushered in by somewhat anomalous mental symptoms. The pancreas, examined nine hours after death, was enlarged, weighed 146 grammes, was firm, and of a bright red colour mottled with dark grey and yellowish patches. The duct was patent and normal in size. Microscopically the peri-glandular fat showed areas of necrosis and masses of decolourised and more recent blood-clot; the gland parenchyma in many parts appeared but little altered, the individual acini being more widely separated than normal; in other parts it was in a condition of coagulation necrosis or had disappeared entirely, its place being occupied by a necrotic débris. The interstitial tissue was the seat of considerable exudation, having decided hæmorrhagic characters and here and there small foci of suppuration. In the necrotic areas the bacillus coli communis was found both by cultivation and histologically, but no other organism. The first part or the duodenum was the seat of an acute necrotic inflammation, the mucous membrane being necrosed and in great part absent, the submucous and muscular coats being markedly infiltrated and congested.

Mr. E. STANMORE BISHOP showed several Microscopic Sections of a Non-gravid Tube from a case of Ectopic Pregnancy in order to illustrate the changes described by Webster of Montreal. For purposes of comparison sections of ordinary decidual membrane of a normal and of an inflamed Fallopian tube were also shown, these having been kindly lent by Dr. Fothergill. Other sections were shown from the gravid tubes of both cases showing chorionic villi and one mucous fringe with well-marked decidual change. Mr. Bishop detailed the changes found in these tubes, the differences between such changes and those found in ordinary salpingitis, and emphasised the fact that if these observations were confirmed a clear idea would be obtained as to the causation of such cases and a scientific reason for the commonly accepted belief that all ectopic pregnancies are primarily tubal.

Dr. KELYNACK showed a specimen of Dissecting Aneurysm of the Thoracic and Abdominal Aorta which developed in a female, aged fifty years. There was a history of strain from which the cardiac symptoms dated. Death was due to progressive cardiac failure. The aneurysm originated by a slit-like aperture in the descending thoracic aorta and reached to the common iliac arteries. There were several communications between the sac and the aorta.

The following card specimens were exhibited:—

Mr. STANMORE BISHOP: (1) Ureteral and Vesical Calculi; and (2) Pyosalpinx.

Dr. FOX EDWARDS: Flattened Bullet removed from the Nasal Bone.

Dr. HARRIS: Aortic Aneurysm compressing the Trachea from a Female Subject.

Dr. HIGGINSON: Supernumerary Digit.

Dr KELYNACK: Aortic Malignant Endocarditis from a Medico-legal Case.

Mr. RICHMOND: Cerebellar Abscess following Mastoid Disease.

Dr. STEELL: Melanotic Sarcoma of the Liver and Kidney.

Mr. WESTMACOTT: (1) Localised Tubercle of the Vocal Cords; (2) Carcinoma of Sinus Pyriformis; and (3) Trauma of the Larynx in a Sword-swallower.

Mr. WOLSTENHOLME: Epithelioma of the Glans Penis in a Horse.

Mr. WESTMACOTT read a paper on the Pathological Anatomy of Empyema of Fronto-ethmoidal and Sphenoidal Cavities. After demonstrating the anatomical limits of the cavities met with in different skulls, both in the recent state and macerated condition, the appearances of the part when filled with pus were described as seen through the nasal speculum and with the rhinoscopic mirror. Finally, a few points of interest in differential diagnosis and operative treatment were detailed. A number of prepared specimens and photographs were shown.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Rupture of the Vagina during Labour.

AN ordinary meeting of this society was held at Owens College, Manchester, on April 22nd, Dr. J. W. MARTIN, the President, being in the chair.

Mr. RUMBOLL (Leeds) showed a large Fibroid Tumour of the Uterus removed by Abdominal Hysterectomy. Treatment by electrolysis had failed to have any effect on the growth. In removal the "serre-nœud" was used and the stump was brought to the incision.

Dr. DONALD (Manchester) showed the Uterus and Appendages which he had removed from a patient, about thirty years of age, who had been suffering for eight months from Acute Pelvic Inflammation. On the left side the ovary was represented by a thick-walled abscess of about the size of an orange; the tube was thickened and its abdominal end was blocked and adherent to the abscess. On the right side the tube was elongated and much thickened and the abdominal end was closed and studded with small caseous patches; the right ovary was small and was embedded in adhesions. The uterus was enlarged and globular and the walls were much increased in thickness. The patient was unfit for work, was almost entirely confined to bed, and had suffered from hæmorrhage constantly for four months. After palliative treatment in the hospital for four weeks without any change in her condition operation was decided upon and the vaginal route was chosen. Both tubes were useless from purulent inflammation, and the mischief having evidently commenced in the endometrium extirpation of the uterus was thought best. Dr. Donald remarked that the radical vaginal operation for bilateral tubal and ovarian suppuration had not so far met with much support in this country, although for some years it had been recognised on the Continent as the best means of dealing with cases which did not improve under rest and palliative treatment. The removal of the uterus added nothing to the danger of removing the appendages. After removal of the appendages the uterus was a useless organ and the objections to its removal were

mainly sentimental. When the uterus was healthy and the appendages were not septic there was no need to remove it.

Dr. DONALD then read notes of a case of Rupture of the Vagina during Labour. The case was that of a woman, about forty years of age, who had in her ninth confinement been attended by a midwife. When the patient was admitted to the hospital a very distended and congested loop of large intestine 2 ft. in length was hanging from the vagina; the funis was prolapsed, cold, and pulseless. There was a large rent in the posterior vaginal wall; the cervix was about two-thirds dilated, the vertex presenting in the right occipito-anterior position. Craniotomy was performed and after the extraction of the fœtus and the expulsion of the placenta it was found that the tear in the posterior vaginal wall began at a point 1 in. from the posterior commissure of the vulva, ran transversely for about 2 in., and then almost vertically and a little to the left of the middle line up to the highest point of the posterior vaginal fornix. The uterus was loosely packed with iodoform gauze and the hole in the vaginal vault was plugged with several thick strips of iodoform gauze which were removed from the uterus fifty-six hours after delivery, but not from the abdominal cavity until the seventh day. The patient made an uninterrupted recovery.

Dr. W. K. WALLS (Manchester) described a case similar to Dr. Donald's but less severe. It was that of a patient in her eighth confinement with conjugata vera of 3¾ in. and with a history of having borne large children and of having had forceps labours. The breech was impacted, chloroform was administered, and a leg was brought down; the arms were delivered with difficulty, the head extraction being comparatively easy. A laceration was discovered in the neighbourhood of the right sacro-iliac synchondrosis external to the cervix; the laceration admitted two fingers which passed into the tissue of the broad ligament and then into the peritoneal cavity. The tear was plugged with iodoform gauze, the cervix uteri was plugged separately, and the vagina was tightly packed with iodoform gauze beneath all. A good recovery was recorded.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Discussion on Obstetric Report of Rotunda Hospital.—Exhibition of Specimens.

A MEETING of this section was held on April 27th, the President, Dr. F. W. KIDD, being in the chair.

Dr. R. D. PUREFOY having read the Clinical Report of the Rotunda Lying-in Hospital for 1896–97,

Dr. MACAN said that as an old master he would like to offer his congratulations to Dr. Purefoy upon the success of his first year. He did not agree with Dr. Purefoy in his four hours' teaching of putting on forceps in the second stage. He thought that every student should be given absolute indications for putting on forceps. As regards morbidity, the limit of normal during his mastership was 100·4, instead of 100·8 as at present. He was tolerably content with the treatment of eclampsia by chloroform and chloral hydrate in large doses. There was no objection against morphia as well.

Dr. A. SMITH said that if the mother's temperature was raised and her pulse was quick, or if the child showed pressure effects, such as quickening or slowing of the heart, and meconium was passing away, with vertex presenting, the forceps should be used.

Dr. SMYLY was struck with the steady increase in the deliveries in the Rotunda Hospital. There was also a decrease in the mortality, mainly due to antisepsis and asepsis, but also due to the discipline in the hospital. Results in private practice were not at all commensurate with those in hospital practice, chiefly, he thought, due to the rules being carried out in a perfunctory manner. Regarding mortality, in contrast to the results of late years, he read the following from an old Rotunda Hospital report:—

In 1869	there were	1159	deliveries with	25 deaths.
,, 1870	,,	1087	,,	27 ,,
,, 1871	,,	1161	,,	33 ,,
,, 1872	,,	1193	,,	20 ,,
,, 1873	,,	1191	,,	32 ,,
,, 1874	,,	1236	,,	15 ,,

The PRESIDENT said that formerly the fact of a man being master of a lying-in hospital was against his private practice on account of his being daily in touch with septic cases. Now, however, as shown by statistics, a lying-in hospital was the safest place for a woman to be delivered in. He thought there was some serious mismanagement in connexion with private cases, probably because the nurse did not carry out the rules as she would under a matron in hospital. Regarding the removal of retained membranes not accompanied by hæmorrhage he thought it better not to introduce the hand to remove such.

The following specimens were shown:—

Dr. W. J. SMYLY and Dr. R. D. PUREFOY: Myomatous Uteri.

Mr. E. H. TWEEDY: Ovarian Cyst removed by Cœliotomy.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Adjourned Discussion on Plague Experiences at Hubli.

A MEETING of this society was held in the University Hall on March 25th, Surgeon-Lieutenant-Colonel J. W. CLARKSON being in the chair.

The adjourned discussion on Surgeon-Captain C. H. L. Meyer's paper on Plague Experiences at Hubli, of which an abstract appeared in THE LANCET of April 2nd, p. 936, was resumed.

Surgeon-Captain J. B. SMITH, acting civil surgeon, Poonah, sent some remarks, read by the Secretary, in which a comparison was drawn between Hubli and the village of Karad in the Satara district. The circumstances of the two places were very different. In Hubli there were 35 cases all told; in Karad the week before Surgeon-Captain Smith went to it there were over 35 cases a day. In Hubli the people affected were railway employés and were under considerable control; the people at Karad were subject to a punitive police post owing to a threatened attack on the assistant collector. In Hubli dry weather accommodation had only to be found for 1200 people, close to a line of railway; in Karad, four miles from the railway, with an unbridged river in flood between, monsoon—i.e., rainy season—accommodation would have had to be provided for at least 6000 people. Evacuation of the houses seems to be the only real remedy for plague in the villages but it is practically impossible during the rains.

Staff Surgeon BASSETT SMITH said that on two occasions a single case among the natives was attacked in the *Tenasserim*, one in each epidemic. They were quickly removed to hospital and the part of the ship was well scrubbed with disinfectants. On neither occasion was there any spread of the disease.

Dr. N. N. KATRAK, a sanitary member of the Bombay Municipal Corporation, said that measures of detention, quarantine, and segregation were always difficult of application, even in the beginning and in small places, but were almost impossible in such a large city as Bombay, especially when plague was extensively prevalent. He considered that rats were the chief if not the sole propagators of plague.

Dr. PEARSE said that the records show that not more than 5 per cent., and probably very much less, of those exposed to the contagion of a case of plague contract the disease, which seems to indicate that measures must be adopted to destroy the contagion from other sources than that from one individual to another.

Dr. ISMAIL JAN MAHOMED said he had noticed the recrudescence of plague in houses which were thoroughly disinfected and he thought this was due to the incoming tenants bringing with them dirty linen which infects the rats and then the rats spread the disease.

Surgeon-Major H. P. DIMMOCK, who spoke at considerable length, said that (1) the people should be removed from insanitary and unhealthy quarters; (2) the sick should be treated in hospitals; (3) those who had been in contact with the sick should be placed in segregation quarters for a certain time; (4) the clothes and belongings of the sick should be disinfected; and (5) the infected houses must be disinfected and allowed to stand empty for a considerable time. In a city it is difficult to carry out such measures even if the citizens honestly coöperate, and in Bombay, where they are largely hostile, the difficulties are enormous. He did not think that the epidemic was spread by rats so much as was imagined.

The further discussion was postponed till the next meeting.

Reviews and Notices of Books.

The Medical Examination for Life Assurance. By F. DE HAVILLAND HALL, M.D, F.R C P. Lond. Bristol: John Wright and Co. 1898. Price 2*s.* 6*d.* net.

THIS volume contains much that is sensible and practical in the way of advice as to the formation of a correct judgment upon the prospects of life of individuals presenting themselves for insurance. The medical examiner has often a difficult task to perform in estimating aright the importance of factors in the family history, in the previous health-condition of the applicant, his state at the time of application and his manner of life and occupation. It is not humanly possible to forecast with accuracy the vitality of any individual, but there are considerations under each of these heads which are clearly expounded by the author that should lead to the rejection or the "loading" of the application. Dr. de Havilland Hall exercises a wise caution in his recommendations, especially in regard to the subject of family tendencies, which certainly go for a great deal in estimating the chances of life. Speaking of "albuminuria," he considers that at present too little is known of the after-history of cases of "functional albuminuria" to render it safe for the examiner "to recommend for assurance any applicant whose urine contains albumin." However, a few lines further he somewhat modifies this view, for he says that if the subject is otherwise normal and free from a family history of Bright's disease and the urine is still found to be albuminous after a postponement of from three to six months, then "a further period of probation might be suggested or the applicant might be granted an endowment policy payable at fifty or fifty-five, an addition of about ten years being made." There are some judicious remarks upon the selection of an office, particularly addressed to medical men, whose profession renders it especially incumbent on them to take the opportunity of assuring themselves on embarking on their career in life.

Diseases of Women: A Clinical Guide to their Diagnosis and Treatment. By GEORGE ERNEST HERMAN, M.B., F.R.C.P. Lond., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital, &c. London: Cassell and Co., Limited. 1898. Price 25*s.*

THIS work is dedicated to the memory of Matthews Duncan and the equally remarkable man, Henry Gawen Sutton who was lecturer on pathology at the London Hospital and whose teachings must have greatly assisted in moulding the views of the writer of this volume who was a student at that school. A similar scientific spirit pervades the pages of his book to that manifested in Duncan's and Sutton's works—the same attempt to base practice on knowledge and scientific certainty and not on pure empiricism which unfortunately even at the present day is common in the treatment of the diseases of women and which has too long dominated this department. Dr. Herman's book is unique in this field, being neither a systematic textbook nor a volume of clinical lectures, but a "clinical guide" to the diagnosis and right treatment of the diseases of women. The sixty-three chapters of which the work consists are grouped into eleven parts not with any definite attempt at systematic arrangement, but rather in accordance with his clinical experience. He broadly divides the diseases peculiar to women into major and minor gynæcology. In the treatment of the former group surgical knowledge is especially necessary, whereas in the minor class the difficulties are medical and include "the treatment of slight ailments which interfere with the patient's comfort, but if she has fortitude to disregard this, neither impair health nor endanger life." Not being hampered by a too methodical arrangement of the work the author in the first seven chapters deals with subjects many of which are of general interest to the profession. Thus, in reference to the necessary training for the proper performance of surgical gynæcology he says: "The system at many of our hospitals by which the operations are in the hands of the seniors, and the juniors during the years most precious for the acquisition of manual dexterity are kept to seeing out-patients, is a bad one. It would be better for the seniors to see the out-patients and the juniors to do the operations." Would Dr. Herman support such a radical change in hospital organisation? The chapters on Neurasthenia, Hysteria, and Headaches may be studied with advantage by all practitioners, the discussion of the various forms of headache being worthy of one devoting himself particularly to the study of the nervous system and containing some caustic criticisms; thus in speaking of the supposed reflex effects of uterine diseases Dr. Herman says: "There have been publications—I trust now out of date—in which uterine paralysis, uterine cough, ovarian dyspnœa, &c., have been written about. The uterus and ovaries have been maltreated to cure these maladies. Such things cannot now be seriously discussed. They only mean that a patient with some organic disease has had the misfortune to meet with an incompetent doctor." The enumeration of the signs and symptoms and the differential diagnosis of uterine and ovarian tumours is clear and very methodical, and the directions for the performance of major operations are precise and may be safely followed. Dr. Herman's surgical principles are quite up to date, but fortunately he does not support those who advocate the removal of all fibroid tumours as soon as discovered. The volume contains 252 illustrations, most of them being derived from the usual sources. A few are far from satisfactory, as one on page 481 "of a patient of the author's," in which the anatomy of the external genitals has been quite disregarded by the draughtsman. This work is no mean addition to our English medical library and is sure to prove helpful, not only to advanced students who have already acquired a knowledge of the elements of gynæcology, but to general practitioners and as a book of reference to those who devote themselves to this branch of practice.

Pathological Technique. By Dr. FRANK BURR MALLORY, Assistant Professor of Pathology, Harvard University Medical School; and Dr. JAMES H. WRIGHT, Director of the Laboratory of the Massachusetts General Hospital. London: The Rebman Publishing Company, Limited. 1898. Pp. 397. Price 14*s.*

THIS work is intended to be a practical manual for the Pathological Laboratory. Most books of the kind in addition to a description of the various methods employed in such a laboratory contain the clinical or pathological deductions which may be made from the examinations. Such a plan has its advantages and disadvantages. In the work now under consideration a sort of compromise is made.

Part I. contains good and detailed instructions as to the making of post-mortem examinations. Some of the processes described are rather old-fashioned, but as a whole the student will derive many useful hints from a perusal of the first seventy pages of the book.

Part II. deals with Bacteriological Examinations. Not only are the methods for making culture media and the methods of studying bacteria fully explained, but excellent descriptions are given of the various forms of micro-organisms and numerous illustrations are distributed throughout the text. The great majority of these are borrowed from other authors, but are none the less valuable on that account.

Histological Methods are fully detailed in Part III. The

processes are clearly described and there should be no difficulty in following out the instructions given.

We can cordially recommend the work as a useful handbook for the laboratory, but nothing more. In order to learn the results which may be obtained from clinical and pathological observations we must search elsewhere.

Respiratory Exercises in the Treatment of Disease. By HARRY CAMPBELL, M.D., F.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1898. Pp. 200. Demy 8vo. Price 7*s.* 6*d.*

THIS, like the author's other works, is characterised by independence of thought and opinion based on sound physiological principles to which reference is often made in the course of the argument. The present volume is, so to speak, a forerunner of a larger and more special one on the mechanical treatment of heart disease, a subject which has long engaged the author's attention; in fact, we gather from the preface that this form of treatment has occupied his thoughts since the commencement of his medical career and that he has found himself somewhat forestalled by the Nauheim school. The present volume is therefore somewhat of a preliminary contribution and is concerned rather with general considerations. In the first place it clears the ground by dealing at length with the physiological problems of respiration, then describes the various kinds of breathing exercises, and in conclusion treats more briefly of their practical application in various diseases.

The more interesting parts are those describing the breathing exercises and their therapeutic uses. Under the heading of preliminary exercises the patient is directed to learn to dissociate costal and abdominal breathing, since each produces its own peculiar effects. Active breathing exercises are described and directions for combining them with active exercises for the arms are given. By developing the lungs and chest respiratory exercises may prevent the onset of pulmonary disease or exert a beneficial influence on its course. With regard to the treatment of heart disease by respiratory exercises the author is rather brief, as he proposes to deal with it at length in a separate work which the reader of the present volume will await with interest.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at 20, Hanover-square on April 27th, Dr. W. V. Snow being in the chair.—Dr. William Bain read a paper entitled "The Action of Certain Drugs and Mineral Waters on the Secretion and Composition of Human Bile: an Experimental Investigation," after which Dr. A. P. Luff, Dr. Solly, and Dr. Hobhouse made some remarks and Dr. Bain briefly replied.—Dr. Edmund Hobhouse then read a paper on Gout and Rheumatism in Relation to the Seashore and Salt-water Baths, in which he said that it seemed doubtful whether sea air in itself had any direct effect apart from the question of soil and general meteorological conditions. Season also is an important subject, for the seaside is drier and more free from fogs than the country during the autumn and winter, but more windy in the spring. Statistics seem to show that the sea has little influence on acute and subacute rheumatism, but generally speaking marine climates are not indicated in rheumatic affections, although patients weak and anæmic after acute attacks may be greatly benefited. Gouty patients with any active symptoms are better away from the sea. Salt-water baths are unquestionably of great value, especially in subacute rheumatism, but the question is whether their value is due to the heat or the salt—probably chiefly to the latter.—Dr. Archibald Garrod, Dr. Luff, Mr. Hamilton Cumming, Dr. Street, Dr. Hyde, Dr. Tyson, Dr. Solly, Dr. Ward-Humphreys, Mr. Bowen Davies, and Dr. Symes Thompson took part in the subsequent discussion.

Analytical Records
FROM
THE LANCET LABORATORY.

BYNO-PHOSPHATES.

(ALLEN AND HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

THE improvement in this preparation is evident. It consists simply of the replacement of the sugar in the ordinary preparations of chemical food by an active fluid malt. Whilst the phosphates of iron, lime, potash, and soda are preserved unimpaired the menstruum is not only itself nutritious but an aid to digestion. Preparations loaded with sugar are frequently inadmissible.

HYDROXYL-FREE COD-LIVER OIL.

(PETER MÖLLER, 43, SNOW-HILL, E.C.)

We have already shown how the elimination of hydroxyl by Mr. Möller's process of preparation renders cod-liver oil free from the decided drawback of "repeating" or giving rise to eructation. We have recently tested both chemically and practically a sample of the new season's oil (1898) with satisfactory results. The oil is remarkably bright and clear and practically tasteless and free from unpleasant effect after ingestion.

(1) EXTRACT OF BEEF; AND (2) FLUID BEEF.

(LIPTON'S, LTD., CITY-ROAD, E.C.)

The difference in composition between these two excellent preparations will be seen from the following results of analysis: extract of beef: moisture, 18·64 per cent.; organic matters, 61·38 per cent.; and salts, 19·98 per cent. The organic matters presented the following composition: peptone, &c., 30·27 per cent.; albumins, 1·00 per cent.; and extractives, 30·11 per cent. The preparation is obviously highly concentrated and is according to these results a powerful nutrient as well as stimulant. The nourishing constituents occur in practically the same proportion as the stimulating beef extractives. The flavour is pleasantly beefy but somewhat excessively spicy. It is evidently concentrated with care, for there was no indication of burnt flavour. The fluid beef gave the following results: moisture, 42·91 per cent.; organic matter, 40·83 per cent.; and salts, 16·26 per cent. The organic matter contained albumin and fibrin, 6·87 per cent.; peptones, &c., 15·26 per cent.; and beef extractives, 18·70 per cent. The preparation affords a pleasant and satisfactory beef-tea including the albumin and tissue of muscle. According to analysis it contains all that is necessary to sustain the vital processes. Both preparations were found to be free from objectionable preservatives.

TOILET, ANTISEPTIC, AND MEDICATED SOAPS.

(EDWARD COOK AND CO., SOAP WORKS, BOW.)

Soap is itself mildly antiseptic, but its value in this direction by the addition of well-known antiseptic agents is decidedly increased so long as they are compatible. This at any rate is the case with the following soaps which we have examined from the above makers: "camphor, rosemary and borax," "compressed coal tar," and "Cambath." The latter is very agreeable to use. Sulphur and glycerine soap is a very useful combination for the skin. Amongst the specimens also was one called "violet savon de luxe," which is a very excellent toilet soap of well-balanced composition and free from alkali, irritants, and resins. Lastly, we have examined a specimen of hygienic tooth soap which appears to be well adapted as a dentifrice. It is cleansing and neutral and contains a mild antiseptic which we had no difficulty in recognising.

INVALID FRUMENTINE.

(WILLIAM HAY, LIMITED, GROSVENOR-STREET FLOUR MILLS, HULL.)

The microscopic examination of this food indicates that a wise selection has been made of the most nourishing portions of cereals in its preparation. It contains an excellent proportion respectively of nitrogenous, carbonaceous, and mineral matters. Moreover, its flavour is particularly satisfactory, being of a rich, nutty, and malty character. It contains a notable proportion of the germ of wheat. An additional advantage from the dietetic point of view consists in the fact that the nutritive constituents occur abundantly in a soluble condition. The preparation is a decided advance on many farinaceous compounds which at their best consist merely of highly-baked flour.

MEAT AND MALT WINE.

(JOHN RILEY, PENDLETON, MANCHESTER.)

The examination of this wine gave the following results: total solid matters, 11·72 per cent.; mineral matter (containing phosphates), 0 53 per cent.; alcohol, by weight 16 46 per cent., by volume 20 24, equal to proof spirit 35·47 per cent. The amount of nitrogen proved to be 0 167 per cent., which is equal to 8 9 per cent. of albuminoids in the extract. The wine is thus obviously a genuine meat and malt wine, but as we have pointed out before wines of this class possess very little direct nutritive value since the nutrient constituents of beef are not soluble in wine of moderately high alcoholic strength. The wine employed in the present instance is a port of satisfactory character judging from the good flavour of the preparation.

EXTRAIT CANNABIS.

(E. EISSENHARDT, 47, CAMPDEN HOUSE, PEEL-STREET, KENSINGTON, W.)

This preparation of hemp-seed extract would appear to deserve some attention since abroad it is said to have given encouraging results as a nutritive in wasting diseases. It has, in particular, been tried in pulmonary diseases with the result, it is stated, of an increase in the weight of the patient. We have confirmed the analysis published by Dr. Spiegel of the University of Berlin. It consists approximately of one-half starch and one-third albumin, the remainder being made of 8 per cent. of fat, 1 per cent. of mineral matter, and 10 per cent. of moisture. It is prepared for administration by adding a tablespoonful to a pint of fresh milk, which is then boiled until the extract is quite pulpy.

"HIGHLY NOURISHING" STOUT.

(C. VAUX AND SONS, CASTLE-STREET, SUNDERLAND.)

In the brewing of this stout it is said that by paying greater attention to the operation of mashing an increased proportion of nutritive substances appears in the wort and hence in the stout. The results of our examination confirmed this statement. At the same time the stout is free from acidity and is yet of a ripe character. The extract amounted to 8·02 per cent. and the mineral matter to 0·33 per cent. On distillation the stout proved to contain 5 25 per cent. by weight of alcohol or 6·55 per cent. by volume, equal to 11·49 per cent. of proof spirit. As is well known, stout appears to be easier of digestion than beer, and doubtless in the present case this is particularly so, since the digestive action of malt has been pushed in the process of production to a maximum degree.

HYDROBROMATE CACHETS.

FLETCHER, FLETCHER, AND CO., HOLLOWAY, N.)

The value of the hydrobromate combinations of quinine and iron is now well recognised. Recently they have been prepared in a new form for administration which offers decided advantages. This new form is the cachet, which contains a greenish powder soluble in water, forming a pale green solution. On examination this solution is found to contain the iron in the unoxidised condition—that is, as ferrous bromide. Each cachet contains two grains of hydrobromate of iron and one grain of hydrobromate of quinine. We have examined also a cachet containing in addition $\frac{1}{64}$ gr. strychnine. The cachets obviate the drawbacks to the administration of hydrobromates in liquid form, while quinine and iron thus combined do not give rise to cinchonism or gastric disturbance as with ordinary preparations of iron and quinine.

"RISO" SELF-RAISING FLOUR.

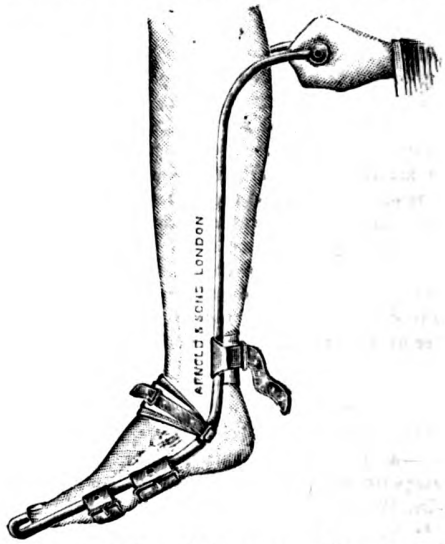
(HENRY ROBERTS AND SON, ALUN FLOUR MILLS, MOLD.)

We have examined this flour analytically and practically. It is a flour of excellent quality which yields a small quantity of gas on moistening and heating. It is free from alum. In practice its raising power is not so brisk as it might be, the bread produced being somewhat heavy and yellowish in colour. It is decidedly better for making cakes.

New Inventions

APPARATUS FOR THE TREATMENT OF TALIPES.

NEGLECTED cases of talipes may in course of time undergo so much consolidation and fixation as to be hardly capable of replacement in the natural position by means of the ordinary forms of orthopædic apparatus, and I have found the wrench which is shown in the accompanying illustration to be of



considerable service in suitable cases. The wrench is made in two forms; the principle is the same in both, the essential difference being that modifications are introduced to adapt the one for the treatment of obstinate talipes equinus, while the other is similarly applicable to talipes varus. Messrs. Arnold and Sons, Smithfield, E C., are the makers.

Mandeville-place, Manchester-square, W. HENRY F. BAKER.

A NEW GLASS TANK FOR SURGICAL DRESSINGS.

THESE tanks, a specimen of which is shown in the accompanying illustration, are made of glass and have a tightly fitting metal lid. They are of the same diameter at the mouth as at the base, and being transparent it is possible at a glance to see if stock is getting low. They are made in different sizes, a most useful one being 8 in. by 6 in. by 4 in. which is sold for half-a-crown. The manufacturers are Messrs. Reynolds and Branson of Leeds.



THE LANCET.

LONDON: SATURDAY, MAY 21, 1898.

THE unexpectedly early conclusion of the second reading stage of the Vaccination Bill and its reference to the Grand Committee on Law bring it to the crucial part of its passage through Parliament. If it is to be seriously added to or amended the work must be done by this committee, as the report stage is not likely to see the introduction of any important changes, the power of the Government both in the House of Commons and the House of Lords being practically supreme. If Mr. CHAPLIN has been taking note of the views of the medical profession on the Bill he cannot but have been struck by the fact that divergence of opinion has been comparatively trifling and has referred mainly to less important points, while as to essential principles there has been a very near approach to unanimity. On one question there is, we venture to say, such a consensus of view as is rarely to be found in a profession numbering thirty thousand members proverbially alleged to be apt to differ. That question is the inclusion in the Bill of a provision for revaccination. The Epidemiological Society, the British Medical Association, and the Jenner Society have alike given prominence to this requirement. Even more notable perhaps is the action of the medical officers of health. In face of the continually repeated asseverations by anti-vaccinationists that sanitation without vaccination is capable of preventing small-pox it is a significant fact that the body of men whose special work it is to develop sanitation and whose interests are bound up in the public recognition of the value of sanitation have publicly confessed that the only effective means of preventing and controlling small-pox consists not in sanitation, but in vaccination and revaccination systematically performed. This declaration was signed by some 1100 or more medical officers of health before any Bill was brought forward, and now in presence of the Bill the council of the Incorporated Society of Medical Officers of Health has memorialised the Government regarding these and other points and has offered to send a deputation to Mr. CHAPLIN to support their views.

It seems to us that Mr. CHAPLIN and the Government will be incurring a very serious responsibility if they give no heed to this great body of skilled opinion on the subject of their present legislation. The conclusions at which the medical profession have arrived are based not on *a priori* considerations but on abundant and world-wide experience. The great national experiment which has been carried on in Germany for nearly a quarter of a century has demonstrated the fact that a State can control small-pox by means of vaccination and revaccination even if it be surrounded by other States which are more or less neglectful of the Jennerian prophylaxis and as a result are continually introducing the variolous infection within the German boundaries. In our own country, on a much smaller scale, similar experiments are being constantly made with a similar result. In the postal and constabulary services whenever a local epidemic of small-pox takes place evidence is furnished that these bodies of men specially exposed to infection are yet specially protected from infection and the only adequate explanation of their differentiation from the rest of the population is to be found in their systematic revaccination. In large workshops, with many employés, revaccination at once shows its power in stopping an outbreak, as it did in the Bewsey Ironworks at Warrington.[1] In the Army and Navy, in spite of the comparatively low standard of operative success attained there, an enormous diminution in small-pox prevalence has followed the general use of revaccination, and in our small-pox hospitals the revaccinated nurses dwell and work unharmed in the midst of a living fire of variolous infection.

While we refer to the example of Germany it is to be clearly understood that we do so with a difference. In Germany there is systematic vaccination and revaccination and there is also strong compulsion with regard to vaccination and revaccination. As a profession it is our duty to tell the State how it may prevent and control small-pox; but assuming that the State accepts our teaching as to the value of the preventive means it is then primarily the duty of the State itself to decide how the prophylaxis which we advocate and which the State adopts shall be applied. The Legislature must look not merely to the value of vaccination but to the condition of public feeling on the subject and to the principles which guide the making of laws in a democratic country. Every individual in the realm ought to be vaccinated and revaccinated and the State should provide the means and should use all reasonable legislative pressure and influence towards this being done, but how far it should resort to actual compulsion or physical force is a question in which medical men are interested rather as units in the body politic than as a profession. Our position, therefore, is this, and we hold it to be unassailable, that primary vaccination and revaccination being both necessary for the prevention of small-pox, both alike ought to be legislated for, and that it will be a huge blunder on the part of any Government to make a new vaccination law and to omit from it all provision for the systematic maintenance and encouragement of national revaccination.

THE recent action of the General Medical Council in regard to the employment of unqualified assistants will probably be challenged at the approaching meeting. It is not likely to be seriously modified in the sense of giving a new lease to the old practice of doing a great part of the work of medical practice with the help of unqualified assistants. There, doubtless, is a proportion of unqualified assistants who have practically completed their curriculum and whose

[1] See Dr. Savill's Report to the Royal Commission on the Warrington Epidemic.

non-qualification is an accident or a misfortune for which they are to be sincerely pitied. And possibly the General Medical Council may consider that their case is entitled to some special consideration at the hands of the medical authorities. Be this as it may, t is evident that in the future much of the work now, or till lately, done by unqualified assistants will have to be done by men recently qualified. It is of great moment under these circumstances that these men should be encouraged and advised by their teachers to take an opportunity of seeing all they can of private practice during their curriculum. There is undoubtedly something in the complaint of general practitioners who employ assistants that the unqualified assistant is more useful to them than the qualified. This remark is made too frequently and with too much obvious feeling to be altogether disregarded. It is too apparent to be disputed. The unqualified assistant has been in private practice nearly all his days and it has been a kind of education to him. He has probably seen every variety of it—the good practice, the cheap practice, the branch practice, and the practice with innumerable clubs attached to it. He is familiar with dispensing and the ready use of ordinary drugs and their doses, perhaps too familiar. The common diseases are easily recognised by him. He has besides, and not altogether to his discredit, if not an interest in the business aspect of practice, no aversion to it or to taking his fair share in the attention which it requires. All this will have to be recognised by the qualified men who are to do the work of the present unqualified assistants and should be recognised by their teachers. If it is not so recognised much inconvenience will be felt in the near future by a very large class of practitioners who have to conduct practice on a large scale for small rates of remuneration or over awkward areas of country.

The General Medical Council has already to some extent recognised the importance of this element in medical education. Soon after the introduction of Direct Representatives into the Council by the Act of 1886 the defects of the curriculum in this respect were pointed out, chiefly by the Direct Representatives themselves. They showed that in the examinations at least there was a conspicuous absence of tests of the knowledge of common diseases, and they were well supported in this course by such men as the late Sir WILLIAM GULL, Sir SAMUEL WILKS (then Dr. WILKS), and others. It was natural that the Direct Representatives should insist on such defects in medical education, as they represented so largely the general practitioners of the country as distinguished from its consultants. The Council adopted their views but with a certain reluctance. The Council is made up predominantly of medical teachers or the representatives of teaching and examining bodies. They understand little of education apart from a medical school or a large hospital—perhaps naturally so. And though they conceded in their regulations that six months of the last year of study might be spent in pupilage to a practitioner they have never insisted that such a pupilage should be compulsory. Fortunately the late Notice concerning the employment of assistants recognises this regulation of the General Medical Council and does "not apply so as to restrict the proper training and instruction of *bonâ-fide* medical students as pupils."

One way out of the difficulty in which busy practitioners find themselves, owing to their being deprived suddenly of the power to employ unqualified assistants, is to encourage this education in general practice which was contemplated by those who urged the Council to require some time to be spent under the supervision of a practitioner who had the means of teaching. The Council can do much in this way to mitigate the inconvenience which it is alleged has been caused by the recent Notice and which otherwise is likely to extend over several years. Some would go so far as to insist on such an education in practice being required from every man before he becomes qualified, but we question if such compulsion is altogether advisable, although much may be said for it. It has drawbacks as well as advantages. The old race of practitioners had very little other education, and among the eminent leaders of the profession now living there are few into whose education such an element did not enter and who would not now maintain that it was one of the most valuable parts of their training. The education of lawyers has been almost entirely, and is still largely, the mere education of practice and constant contact with legal work and cases. No doubt in their profession the systematic teaching of law and the principles of law has been defective and needs to be improved, but in medical education it is the reverse. We could do with a little more contact with cases in their every-day occurrence and aspect; and it is not improbable that one result of the recent action of the General Medical Council will be to provide a remedy for this very defect. The Council is not a mere academic body. As a Council it has none of the exclusive interests of a mere examining body or a teaching body or, as in the case of a university, of both. It has to recognise the great business of medical practice in every part of the country and in every kind of population and to train a profession familiar with disease in its practical points and capable of rendering to those who suffer from it ready and effective help.

ATTENTIVE readers of the medical journals may make a pretty good forecast of the nature of the business which is likely to occupy the time of the General Medical Council when it holds its sixty-fifth session, which will commence on Tuesday next at 2 o'clock, especially if they also study the Council's minutes and those of its Executive Committee. A recent communication seems to show—for we have not yet all the facts before us—the chance of a somewhat sharp passage of arms between Mr. VICTOR HORSLEY and the new President as to the right of members of the Council to have access to the documents and records of the Council whenever they please. Both are strong men, having had considerable experience of business as well as of science, and both must be credited with jealousy for the reputation of the Council as a business body as well as one representative of the most liberal of the professions. The question raised by Mr. HORSLEY is very important and seems to us to be very easy of solution. The difficulty

will be to ascertain how it is that so simple a question can be a cause of heat or friction between two members of the Council who are so distinguished and who might be thought capable of settling much more difficult ones with ease.

To pass to other and more agreeable matters, there are two subjects on which the Council will not have much more to say at this or, we trust, any subsequent meeting and in regard to which it may fairly be congratulated on its action. We refer to the question of foreign practitioners, largely English, practising in Italy, and the subject of the true principles that should be the basis of any legislation on the subject of midwives. We mention these subjects here only to offer our own acknowledgment of the good work done by the Council. The representations of the Council supported by the Foreign Secretary have sufficed to elicit from the Government of Italy the declaration that it is no longer their intention to legislate in a sense unfriendly to those practising in Italy without the sanction of Italian degrees. The effective action of the Council in arresting, by its representations to the Government, the progress of the Midwives Registration Bill, which would have left the Gamps very much where they are and which, moreover, had the almost unanimous disapproval of the medical profession, is a matter of too recent history to need further mention here.

The question of defects in preliminary education is likely to be again brought before the Council in two ways. The Chairman of the Examination Committee is expected to give the results of a correspondence with the Director of the Medical Department of the Army, who in his last valuable returns expressed himself unable to give the Council information as to the Preliminary Examining Body which had passed candidates showing great deficiency in general education. It is greatly to be regretted that he could not give the information asked for, for this is one of the chief means by which the Council can identify the bodies whose examinations are faulty and it is hoped that Sir DYCE DUCKWORTH will be able to induce the Director of the Army Medical Department to afford similar information to that which the Director of the Navy Medical Department supplies. But the question of the efficiency of the preliminary examinations recognised by the Council will be raised in a broader and more searching manner. It is understood that the College of Preceptors feel aggrieved at the reflection thrown on the examination for their second-class certificate and that the whole question of the standard of this examination, as compared with other examinations of a similar standard which are still recognised, will be raised. Our readers will remember that the members of the Council seemed to doubt whether they were not acting in a halting way in the somewhat timid course which they took. The subject will doubtless be further elucidated at the approaching meeting.

Another question of interest which may be expected to be raised again is that of the extinction of the class of unqualified assistants, but this very important matter is treated in another column. It is to be hoped that the President of the Council will be able to give some good account of his action in the way of securing an interview with the President of the Local Government Board concerning the very loose manner in which death or burial certificates can be obtained.

The question of the Disciplinary Powers of the examining bodies is emphasised every day by one case or another and it will be disappointing if some progress is not reported on the part of these bodies. They cannot be too often reminded that they owe to their diplomates the friendly correction of errors of conduct at an early stage when a word of suggestion would avert greater errors which bring men under the risk of being charged with infamous conduct in a professional respect. Apart from the actual programme of business, which, of course, we have not seen, there are other subjects of great interest, the further discussion of which may be expected, including Mr. THALE'S views of excessive and superfluous examinations. We have said nothing of Penal cases, but we have said enough to show that the Council has work to do which will require its careful consideration and the best use of its time.

Annotations.

"Ne quid nimis."

THE PASSING OF A GREAT MAN.

WE do not intend to give any detailed obituary notice of the great man who has just passed from among us. Our readers have before them the ample story of Mr. Gladstone's grand career in all the daily papers and in most cases it will be the province of such papers to discuss political matters upon which we are unable as a medical journal to take a view. But at the same time we desire to register our feelings of profound admiration for the dead statesman's lofty ideals, unrivalled intellectual powers, and wonderfully sweet and buoyant temperament. In Mr. Gladstone a lowly trust in God was joined to the highest aspirations for the good of humanity, and the sense of the loss which the nation feels itself to have sustained by his death cannot be adequately expressed. Medicine, its science and practice, falls as a part of the social scheme beneath the domination of a real national leader, so that in common with the rest of the community we rejoice when our leader is a good man as well as a great one, and while rejoicing benefit. It is unnecessary to point to special acts or speeches that we may prove Mr. Gladstone to have been the friend of those who follow our calling, though to do so would be easy. Being the man that he was it was inevitable that he should sympathise with us and with all who work to help the weak. For Mr. Gladstone was exactly "the man of mercy" whom the Son of Sirach has described, as he was and is, also, one "whose glory shall not be blotted out" but "whose name liveth to all generations."

"THE LIMITS OF PROFESSIONAL SECRECY."

MR. E. A. BARTON, in a letter under this title in our issue of May 7th stated a situation which has often caused difficulty to medical men, who will be grateful to him for having ventilated the subject. We are of opinion that in a general sense, if a medical practitioner is engaged by an employer to professionally attend an employé he ought not to divulge to such employer the nature of the illness of the patient. Of course he should exercise his discretion in the matter. There could be no harm done if the illness were of a

simple nature—simple, that is to say, as regards its bearings beyond its medical aspect. We can imagine circumstances which might render it wise and obligatory on the medical practitioner to inform the employer of the nature of the servant's ailment—e.g., in a case of infectious disease. We do not think an employé would recover damages from a medical man for making known this complaint, provided always that the facts could be substantiated and that they were communicated without malice. There could not be a valid contract between the employer (who pays for) and the attending practitioner except as to attendance and remuneration. It is no part of a medical man's duty to act as a secret police agent. We should advise him to inform the employer that he should consider any information he might obtain in his professional capacity as strictly private between himself and the patient and not to be divulged except with the free consent of the latter. We consider that secondary syphilis, for the purposes of the argument, should be classed as an "infectious disease," since through ignorance, negligence, or inadvertence it might be conveyed to other members of the household. Pregnancy or disease arising from alcoholism ought not to be divulged to the employer without the consent of the servant.

THE QUEEN'S VISIT TO NETLEY.

ON Saturday, May 14th, the Queen paid a second visit to the Royal Victoria Hospital, Netley, to inspect the invalids who have lately returned from the North-west frontier of India, to offer her sympathy to those who have lost health or been wounded in support of the nation's weal, and to decorate with the highest national reward those in hospital whose valour has of late been so conspicuous. Accompanied by Princess Christian, Princess Henry of Battenberg, and Princess Victoria of Schleswig-Holstein, and attended by the Duchess of Roxburghe, Major-General Sir John M'Neill, Major the Hon. H. C. Legge, and Lieutenant Ponsonby, Her Majesty travelled from Windsor *vid* the Great Western and South-Western lines, and after a run of two hours arrived at the Netley station at half-past four o'clock. The afternoon was magnificent, the sun shining brilliantly. At the station the Queen was received by General Davis (commanding the Southern District), by Colonel Creagh (A.A.G. at Netley), and Major Sumner, A.D.C. The Earl of Northbrook (Lord-Lieutenant of the county) was also present, accompanied by his daughter, Lady Emma Crichton, and her husband, Brigadier-General the Hon. Henry Crichton, commanding the Portsmouth Brigade of Volunteers. The boys of the training ship *Mercury* formed a guard of honour at the station and as the Royal carriage passed Her Majesty was saluted and the band played the National Anthem. The road from the station to the hospital was densely packed with spectators and the Queen received an enthusiastic greeting. Her Majesty arrived at the entrance to the hospital at ten minutes to five o'clock and was there joined by Prince Maurice of Battenberg who had been driven over from Lyndhurst with his tutor. The guard of honour at the hospital was supplied by the East Lancashire Regiment, whilst the Northumberland Fusiliers kept order in the grounds. Under the portico the Queen was received by Surgeon-Major-General Nash, P.M.O. of Netley, and presented with a beautiful bouquet by Miss Stevenson, the daughter of Surgeon-Colonel W. F. Stevenson, Professor of Surgery in the Army Medical School. The following officers were presented to the Queen by Surgeon-Major-General Nash: Surgeon-Colonel J. Lane Notter (Professor of Hygiene), Surgeon-Colonel W. F. Stevenson (Professor of Surgery), Surgeon-Colonel K. Macleod (Professor of Medicine), Brigade-Surgeon-Lieutenant-Colonel Blennerhassett, C.M.G., Brigade-Surgeon-Lieutenant-Colonel W. E. Webb, Surgeon-Lieutenant-Colonel W. L. Chester and Surgeon-Major W. Dick. Miss Norman, lady superintendent of nurses, was also introduced to the Queen, who proceeded in her chair along the lower corridor, passing a file of convalescents, to the lift, by which she was conveyed to the surgical division of the hospital. Here the Royal party visited the bedsides of the wounded, Her Majesty speaking words of kindly sympathy to every patient. The Queen went into nearly all the wards. In the corridor Piper Findlater of the Gordon Highlanders and Private Vickery of the Dorset Regiment were stationed; they were presented to Her Majesty and the impressive ceremony of pinning the Victoria Cross on the left breast of each was accomplished, the Queen commending them for their bravery and congratulating them on attaining the highest honour a British soldier can have conferred upon him. The tour of the surgical division over, the Royal party visited the medical division, the Queen seeing during her whole inspection nearly 900 patients. When Her Majesty again reached the lower corridors Lieutenant Pears of the Cameronians was presented to her, he being one of the officers who was wounded on the frontier; he has been under treatment for some weeks in the hospital for a bullet wound of the leg. It had been arranged that Her Majesty should leave Netley at half-past five o'clock, but at that hour the Queen had not completed her visit, and so as not to disappoint any patient she gave directions that the journey should be postponed for half an hour, by which time she had succeeded in accomplishing her mission of sympathy. At six o'clock the Queen entered her carriage, but before doing so she expressed to Surgeon-Major-General Nash her great satisfaction at all she had seen and with all the arrangements made for her. While Her Majesty was passing along the lower corridor Piper Findlater played "Haughs of Cromdale" on the pipes which have lately been presented to him. The Queen was looking exceedingly well and on emerging from the hospital showed considerably less fatigue than on the occasion of her former visit; she was enthusiastically cheered on leaving the hospital and all along the road to the South-Western railway-station.

TWICKENHAM AS A HEALTH-RESORT

A CORRESPONDENT writes: "Recently the contractor to the Twickenham Urban District Council for the removal of house refuse deposited many cartloads of the contents of 'dust'-bins on a piece of ground (which is being rapidly covered with houses) within 20 yards of the windows of my dwelling-house, and I called the attention of the medical officer of health and of the inspector of nuisances to the deposit and asked for an immediate removal of the nuisance created. An inspection of the filth revealed the usual contents of 'dust'-bins—decaying vegetation, fish offal, empty tins, bones, scrapings, &c.—and the stink from it was already plainly noticeable in my house. The medical officer replied stating that he had drawn the attention of the contractor to the nuisance and had instructed the inspector of nuisances to visit and report should any nuisance exist in the future. A few shovelfuls of earth—not sufficient to cover it up—were thrown on the filth, and I, not thinking this a sufficient 'abatement' of the nuisance, wrote again to the medical officer of health and urged him to order its complete removal. To this the officer replied stating that there was 'just cause for complaint' and that the contractor had 'undertaken to cover up with soil to the depth of 15 or 18 inches the whole of the refuse which had been shot at this spot, and that no more shall be shot there.' This covering up (which has not been done) I did not and do not deem satisfactory, and accordingly, under Section 106 of the Public Health Act, I asked the Local Government Board to order the removal of the filth. The receipt of my letter was duly acknowledged the next day, and a further communication was received seven days after, saying that the

Local Government Board had no power to interfere in the matter. I then went to the offices of the Local Government Board and was courteously received by one of the officials, who explained that although the Board had the power to interfere they never exercised that power and would not do so in particular cases: they would only do so where a sanitary authority generally neglected its duty. If the Board were to act in individual cases the staff of officials would require to be largely augmented. The Board could therefore only recommend me to apply to a magistrate to order the removal of the filth. I may mention that last summer a much larger quantity of house refuse was deposited on land in the street on the left hand side of me, with the result that, in addition to the stink arising, the whole neighbourhood was pestered with a plague of flies for many weeks. This same land is now covered with a front row of houses and more are being built!" Our correspondent now asks us to give him our opinion of the matter. If the facts are correctly stated by him we have no hesitation in saying that a serious breakdown in local government is revealed in this small matter. Firstly, the urban district council should know better than to dump stinking refuse within nose-range of the ratepayers. Secondly, it is illegal to build immediately upon such "foundations," and a watchful eye should be kept upon those responsible for the building operations now proceeding to see that they do not transgress the law. Thirdly, a covering of 18 in. of earth is not, when it is put there, a drastic measure for the abatement of the nuisance, though it would undoubtedly have a great remedying effect. As, however, we learn from our correspondent that eighteen days after the contractor had undertaken to cover up the filth masses of it still remained exposed, it is clear that the method of abatement has not received due trial. Fourthly, why did it take a week for the Local Government Board to find out that they had no powers—or, rather, no powers that they intended to exercise? Our recommendation to our correspondent is that he should take competent and unbiassed witnesses to the spot to support his statements if necessary and that he should apply to a magistrate for an order compelling the urban district council's contractor to remove the filth. This measure would possibly give more trouble than covering the mass over with soil, but we are certain that the able medical officer of health will agree with us that it is a surer method of abatement, while the fact that the contractor failed to do for so many days what he had undertaken to do encourages us in the view that if he is given a little trouble now it will do him no harm in the future. For he has certainly entailed much trouble on a fellow citizen. The story is not a good advertisement for the neighbourhood. If houses are being built at Twickenham on such foundations as our correspondent indicates, and if any inhabitant of Twickenham may wake up and find that the contents of other persons' ashpits, scullery pails, and middens have been added to his frontage, Twickenham will soon be known as a suburb to be severely avoided.

THE SMOKE NUISANCE: AN INTOLERABLE STATE OF THINGS.

IT is fortunate for Londoners that the present period of the year happens to be spring and not winter or late autumn, for the Welsh coal strike appears to have given opportunity to hotel and restaurant proprietors and others to commit a serious breach of hygienic law. The appearance of several of the great thoroughfares of the metropolis has for the last few weeks forcibly suggested the "black country." Never was London deluged in blacker smoke on all sides than it has been recently. The Strand in particular, that avenue of cafés, restaurants, and hotels, is a disgrace as it is a reproach to the public health authorities concerned. For the last few weeks this thoroughfare has been bathed in murk and gloom and the atmosphere has been offensive with sulphurous emanations and irritating smuts. The nuisance continues at the time of writing with unabated vigour and we possess a carefully kept record of the foul vomiting of several chimneys in the immediate vicinity of the offices of THE LANCET. It goes on, not for minutes, but for hours, and is not only a nuisance to health, but a source of considerable injury to property. The effect on buildings decorated with light colouring is disastrous and the paint everywhere rapidly assumes a deteriorated appearance. All endeavours to keep windows clean are utterly futile. And to open them is only to invite layer upon layer of soot to cover our books, papers, and manuscripts. Even at Westminster they have noticed it, for in answer to a question put by Mr. Labouchere in the House of Commons last week it was stated that the matter was one with which it was the business of the County Council to deal. The plea that the nuisance is caused through the difficulty of getting Welsh or comparatively smokeless coal is idle. The smokiest coal can be burnt without evolving dense or almost solid smoke by the adaptation of a suitable and simple smoke-consuming contrivance above the furnace. It is certain that if the meteorological conditions of winter had prevailed the smoke would have been locked in by particles of moisture and the worst possible kind of fog would have hung over the metropolis. It is the duty of the London County Council to set in motion the powers vested in them under the Public Health Act, containing, as it does, a clause which runs as follows: "Any chimney (not being the chimney of a private dwelling-house) sending forth black smoke *in such quantity* [the italics are ours] as to be a nuisance shall be deemed to be a nuisance liable to be dealt with summarily in a manner provided by this Act." Then why are the offenders not "dealt with summarily"? Since the above was written we are glad to record that as a result of the representations of many solicitors and others in Lincoln's Inn-fields proceedings were taken on the 18th inst. against the Metropolitan Electric Supply Company for having on twenty days allowed the chimneys of their works to emit black smoke in such quantities as to constitute a public nuisance. An order for the abatement of the nuisance was made by consent with £5 5*s*. costs on the first summons and 6*s*. on each of the nineteen others. We trust that this will lead to the suppression of the nuisance which continues to exist in a great many other places.

HOSPITAL ACCOMMODATION ON BOARD PASSENGER VESSELS.

THE rapid growth of public opinion in relation to matters sanitary, together with the increasing number of persons who for one or another reason "go down to the sea in ships," cannot fail to attract more and more attention to the sanitary condition under which the floating population lives. A considerable number of our port sanitary authorities have within recent years done excellent work in this direction, though there are, we regret to say, still some who have contributed next to nothing towards the general well-being of the sailor's existence. In matters of construction, however, the powers of port sanitary authorities are somewhat limited, and a badly arranged vessel is not likely in practice to be much modified by any powers which they possess. In a word there is at present no proper guarantee that a vessel will be constructed with due regard to the health and comfort of those who may from time to time occupy her. What we really need, but are not likely at present to obtain, is that

the plans of proposed vessels shall be submitted to some authority or authorities capable of advising, and to a certain extent of insisting, upon adequate ventilation, drainage, and cleansing arrangements together with a proper provision of hospital and lavatory accommodation. Pending the advent of this machinery port medical officers of health may exercise no little influence on the construction of ships in the future by drawing public attention to the bad arrangements obtaining on existing vessels and pointing out how such defects may be obviated. We are glad to see that Mr. Wellesley Harris, the medical officer of health of the borough and port of Southampton, has taken this view of the situation and that in his current report he gives an account of the hospital accommodation of 23 passenger vessels frequenting that port. Neither the names nor the tonnage of the vessels in question are furnished, but having regard to the fact that not a few of the finest liners afloat arrive and depart from Southampton we may reasonably conclude that Mr. Harris's observations have reference to some of the largest shipping companies in existence. The results of the inspection are arranged in tabular form in the report, and it is at once apparent that much reform is needed; for instance, in a vessel carrying no less than 1230 of passengers and crew there is but *one* hospital with five beds, and although in relation to the total number of persons carried this gives one hospital bed to 246 persons, it is clear that in actual practice, there being no separate accommodation for each sex, or presumably for the crew, nothing approaching this ratio really obtains. We are told, too, that the door of the hospital opens into the third-class dining saloon and that there is a water-closet in the hospital separated from the rest of the interior by a wooden partition. Clearly, as Mr. Harris remarks, this hospital is useless as a means of isolation. There are several other vessels on the list to which comments similar to the foregoing would apply, but on the other hand we note five vessels, carrying, all told, from 940 to 1450 persons each, where the hospitals are regarded as "very satisfactory for all purposes." In summing up the hospital question Mr. Harris thinks that much reform is necessary as regards the situation, cubic capacity and ventilation, and the proportion of baths to crew and passengers. He thinks that well aft on the poop deck is the best place for ships' hospitals, and in large passenger liners, despite the proximity of the propeller and the range of motion there experienced, this view is on the whole a sound one. Of course, the main issue from the view-point of preventive medicine is that the hospital, which perhaps as a rule is used for non-infectious cases, can be used with safety for infectious diseases when necessary; but at the same time we must have due regard to the comfort of the invalids and to the accessibility of the hospital during monsoons, &c. Mr. Harris has done well to draw attention in his report to hospital accommodation afloat, and although the public can hardly be expected to render much assistance they may bring into operation the laws of supply and demand by showing a preference for such vessels as are properly equipped in this particular.

SEDENTARY EMPLOYMENTS.

VERY little observation will suffice to convince anyone of the difference which exists between those who follow sedentary, and those engaged in outdoor, occupations as far as their physical appearance goes. The city clerk, the employés in shops, and those who follow sedentary occupations, whether male or female, do not usually present anything like the healthy appearance, nor have they the colouring, the healthy facial expression, or the robust aspect and upstanding carriage, of those who live in the country or at the seaside, or of those who follow an out-of-doors life and take sufficient physical exercise. But making every allowance for the depressing effect of sedentary habits and occupations in these respects how much of it is avoidable and attributable to the unhygienic conditions, personal and otherwise, under which such occupations are carried on? It will be frequently found that the offices, rooms, and places of business in which clerks and others are employed for the greater part of the day are small, badly lighted, ventilated, and warmed, that the air is more or less stagnant and foul owing to complicated or bad structural arrangements, with probably narrow, tortuous, dark passages, that the water-closets are improperly placed, and that a good deal of overcrowding exists. Now although a sedentary life is not, of course, the healthiest kind of life it is nevertheless more or less healthy in proportion as the local conditions are healthy or otherwise. Clerks and city employés are not generally robust folk, they usually possess a feeble circulation, their work is nerve-exhausting, entailing as it does various degrees of mental tension and strain of eyesight, and sedentary work is, moreover, cold work. Those employed are liable from the nature of their duties and the closeness of the atmosphere in which they have to pursue them to headaches and a feeling of exhaustion which probably induces many of them to have recourse to "nips" of alcohol. The necessary remedies obviously are fresh air and light, together with warmth; the incoming air requires to be warmed during the greater part of the year in this climate. Business people in the city, even to put the matter on merely economical grounds, do not practically get the best attainable out of those in their employ for want of proper care and attention to these details, to say nothing of the inconvenience and pecuniary loss arising from frequent absences from temporary causes of ill health. Great improvement has no doubt taken place of late years and most of the banks and large city offices are well provided in these respects, but there still remains much to be done which could be effected if enlightened views about the laws of health and hygiene were more generally recognised than they are.

THE POSITION OF THE HOSPITAL MEDICAL OFFICER AS WITNESS AT AN INQUEST.

AT an inquest held recently at Lowestoft on the body of a man who died in the hospital there, Mr. H. Bournes Walker, one of the honorary surgeons to the institution, was called to give evidence as to the cause of death. Before doing so he said that he was bound to make some remark as to the conditions under which he had been summoned there that day. This was the fourth time upon which he had been called as a medical man to give expert evidence as to the cause of death and had received no fee whatever. That fee was refused on the ground that he was a hospital surgeon and he thought it was manifestly unfair that because he gave his services to a charitable institution the Crown should demand his attendance at an inquest without fee. His duty consisted in treating patients, but when death unfortunately ensued he considered that his duty ceased. He had nothing to do with a patient after he had died in the institution. But the Crown stepped in and said that he must perform certain duties. He had performed a very fatiguing and unpleasant necropsy by order of the coroner, a task which had engaged his attention for no less than four hours, and now he had to give expert evidence. He thought it only fair to himself and his colleagues to protest against being compelled to give expert evidence without receiving any fee. The coroner (Mr. C. W. Chaston) thought the protest had been rightly made. He fully sympathised with Mr. Walker, and he thought the law, as it applied to the case under notice, was

wrong. He very much doubted when the Act was made if it was intended to prevent a fee being paid to a medical witness in such cases. But the county council were not to blame in the matter. He had consulted their deputy clerk and learned that their feelings were in accord with his own, but he regretted that in the present state of the law no fee could be paid. There was a time when some coroners did pay and he himself had stretched a point, but if he were to pay now the Government auditor would surcharge him. He had, however, communicated with Mr. H. S. Foster, M.P., and the matter had been debated by the council of the Coroners' Society, who said that it was an injustice and thought that some steps should be taken to get the law altered. But why did not the medical men go to their own strong society to get the law altered? He himself should be very glad to see a fee paid in such cases. Mr. Walker thanked the coroner for his expression of opinion, and we take the opportunity, in behalf of hospital officers, of doing the same. We are not prepared to say flatly that all hospital medical officers should always be paid for all evidence at all inquests, but it is certain that discretion in the matter should be vested in the coroner.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

THERE proved to be a wealth of subject at the disposal of the speakers on the occasion of the annual dinner of this society, which took place at the Hotel Cecil on Tuesday, May 17th. The Pharmacy Acts Amendment Bill was discussed, the New Pharmacopœia was a common topic at the table, a code of ethics was enthusiastically upheld, quackery and delusive and subtle advertisements were denounced, and lastly an interesting reference was made to liquefied hydrogen by Professor Dewar, who has recently achieved this result in a practical manner. Professor Dewar, in reply to the somewhat comprehensive toast "Science," referred to the close relationship of chemistry to pharmacy and to the excellent and original research which many pharmacists had taken up with results of far-reaching interest and importance to chemical science. He would be sorry to say how much the work of investigation at the Royal Institution had cost, but it had largely been defrayed by the contributions of friendly men of science and probably in no other country would the work have been possible without Government aid. The Hon. W. F. D. Smith, in responding to "The Houses of Parliament," complained of the pressure of public business which had largely militated against the Pharmacy Acts Amendment Bill, of which he was the introducer, receiving the consideration which it deserved. There was little chance, he feared, of a new measure being passed this session. In the meantime the matter should be strongly urged upon the notice of Ministers and no time should be lost on the part of pharmacists themselves to put forward the strongest possible representations in favour of amendment. Mr. G. T. W. Newsholme (Vice-president), in giving the toast, "The Medical Profession," expressed approval of the action of the General Medical Council in the steps which they had taken to improve the status of the profession and the placing of restrictions upon unqualified men; he wished a similar course could be more severely adopted in the pharmaceutical profession. In reply to this toast Sir Walter Foster said that the medical profession owed much to pharmacists. They had given invaluable assistance towards the completion of a new Pharmacopœia which was a national work. He trusted that the Pharmacopœia would prove a means of eradicating the widely-advertised nonsense about certain drugs and preparations. The public required to be protected against such statements and eventually education, he confidently hoped, would put a stop to all quackery. Mr. Bryant, President of the Royal Medical and Chirurgical Society, with whose name also the toast was coupled, endorsed the previous speaker's remarks and acknowledged the help of the committee of the Pharmaceutical Society and of Dr. Attfield in the accomplishment of the new Pharmacopœia. The toast of "The Society," coupled with the Health of the President, was proposed by Sir J. Crichton Browne and Mr. Walter Hills responded. The company present was a large one and included many representative men of science and medicine. We congratulate the society on its success and on its admirable aims in regard to making the pharmaceutical profession an honourable and dignified one.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT IN SCOTLAND.

THE Secretary of State is now prepared to receive applications for the appointment of medical referee under the Workmen's Compensation Act, 1897, in Scotland. The arrangements adopted for Scotland are the same as those already announced for England and Wales, except that in the distribution of appointments the sheriffdom is substituted for the county-court circuit. The duties and the fees of the referees and the qualifications required from candidates are exactly the same. All applications should be addressed to the Private Secretary, Home Office.

THE RIVER BRENT.

THE Middlesex County Council are promoting a Bill to make more effectual provisions for preventing the pollution and obstruction of the streams of the County of Middlesex and to confer further powers on the County Council of Middlesex for that purpose. This Bill contains sections relating also to the granting of loans to local authorities, to questions concerning main roads, and to other matters with which we are not concerned. The preamble of the Bill states: "Whereas the waters of the Brent and other streams of the County of Middlesex or parts thereof are, especially in dry seasons, so polluted by sewage and otherwise as to cause a nuisance and to endanger the health of the residents in their vicinity," that the Middlesex Council wish to have power to take means to preserve the purity of the water, to dredge the river, to shorten bends, to cut trees which may obstruct navigation, and to place weirs on parts of the river. Certain powers are also asked for in relation to weirs on the Grand Junction Canal and to ensure the purity of the water of the Brent reservoir. It is provided that in case of dispute between the canal companies and the County Council matters shall be settled by arbitration. District councils are to be authorised to contribute towards the expenses of the County Council for the inspection of lands for any purpose connected with carrying out the provisions of the Bill. Power of entry is provided and samples of sewage effluents may be taken. Sanitary authorities are to afford facilities for factories to drain into their sewers. No new sources of sewage pollution are to be allowed and liquid sewage is no longer to be sent into the river or into the streams which feed it. Existing sources of pollution are to be discontinued and provisions are made for enabling the Council to ensure that this is done. Owners are to be served with notices to abate within a reasonable time any nuisance which may exist and the Council are to have power to stop outlets to sewers which at present discharge into the stream or its effluents. Weeds and offensive matters are not to be thrown into the stream. Factories are not to discharge polluted liquids into it. The river must not be dredged without licence from the council nor may the water be abstracted from it. At the present time the supply of water to the Regent's Canal and its collateral cuts are obtained

from a reservoir on the Brent in the parishes of Kingsbury, Willesden, and Hendon. The Brent reservoir was constructed prior to the year 1852 and is maintained under powers of various Acts of Parliament, amongst which there is a local and personal Act of the thirty-third year of George III., chapter 80 (1793). This is the Act which authorised the construction of the Grand Junction Canal. In 1851 an Act called the Regent's Canal Reservoir Act was passed which authorised an enlargement of the Brent reservoir. Under these Acts provision was made for the delivery from time to time into the River Brent of such a quantity of water as should be lost by the construction of the works authorised by these Acts. In the year 1892 the Regent's Canal City and Docks Railway Act was passed and under its provisions the North Metropolitan Railway and Canal Company became owners of the undertaking and proprietors of the Regent's Canal. It is found that the amount of water flowing down the River Brent is materially diminished and that it is insufficient to keep the stream in a cleanly state.

THE CONTROL OF INFECTION AND CONTAGION IN SCHOOLS.

IF every layman were possessed of such medical knowledge as to enable him to recognise the earlier symptoms of infectious disease we should be in a better position to control and to prevent epidemics than we are in at present, but pending the advent of this state of affairs we must perforce do the best we can with the imperfect material at our disposal. If all our school-children could be examined daily by medical men who had had exceptional experience in infectious disease and in diseases of the skin we should be able to reduce the damage done by schools *quâ* infection to a minimum, and it may be that before the next century has far advanced we shall see some such system as this generally in force. Meanwhile we must ask for the assistance of the school teacher and of the parent, and the former of these may render very valuable aid by virtue of the fact that he knows the children and is thus able to detect any marked departure from their normal condition. The teacher must, however, have certain rules to guide him in arriving at a conclusion as to what course he is to take, and it is in this direction that he may well look for the assistance of the medical officer of health. Dr. Meredith Young, the medical officer of health of Crewe, has recently forwarded to us a placard relating to "Particulars of certain Infectious or Contagious Diseases for the Guidance of School Teachers," a copy of which is hung up in each class-room of every school in Crewe. The diseases in question are divided into two classes—*A* and *B*. In the case of *A* all children from the infected house are to be excluded from school; in the case of *B* the exclusion of the actual sufferer is alone insisted upon. In class *A* are scarlet fever, diphtheria, measles, German measles, whooping-cough, chicken-pox, mumps, influenza, and small-pox; in class *B* are erysipelas, ringworm, skin diseases of the head, scabies, and ophthalmia. The placard is divided into three columns. In the first is the name of the disease; in the second are the signs and symptoms of each disease together with the channels by which infection is supposed to be given off; and in the third column is set forth the period for which in each instance the children should be excluded from school. The suggestions are that when the teacher considers as a result of his observations that a child may be suffering from any of the diseases enumerated the child (and in certain cases all the children from the same house) shall be sent home with a note to the parents asking them to have the child examined by a medical man without delay. The parent is also to send word to the teacher as to the result of the medical examination. In the case of scarlet fever, diphtheria, and small-pox the children are not to return until a certificate is received from the medical officer of health, but in the case of all the other diseases the teacher is apparently to exercise his discretion after consulting the memorandum. Apparently in the case of class *A* no discretion is left to the teacher as to sending home the other children from the same house, but it appears to us that it might be well to modify this clause so as not of necessity in a doubtful case to send away all the children in the first instance. There will probably, too, be some difference of opinion amongst medical men as to the inclusion and omission of certain diseases in class *A*; no reference in either class is made to enteric fever. But what in practice the memorandum amounts to is that if a child appears to be ill or presents any eruption or rash he or she should be sent home, and this is no doubt an excellent arrangement. The difficulty will begin when the parent is invited to call in a medical man. Dr. Young casts a wide net in enumerating the channels through which infection may be given off, but it is well to err on the safe side. The memorandum is one of considerable interest both from an academic and utilitarian standpoint, and it might be profitably discussed by the Society of Medical Officers of Health.

CEREBELLAR AND SPINAL SYMPTOMS IN MEMBERS OF THE SAME FAMILY.

IN a recent number of the *Revue de Médecine* Dr. Pauly and Dr. Bonne record an interesting observation of three brothers who showed similar symptoms of disturbance of the nervous system. There was no evidence of hereditary weakness, for several sisters were quite healthy and there was no morbid condition evident in the parents. The symptoms commenced in the two older brothers between the ages of twelve and fourteen and in the youngest brother at the age of six years. Difficulty in walking was the first thing noticed in the two elder brothers, nystagmus in the youngest. In all these during rest the legs were slightly flexed and could not be fully extended. There was also marked contraction of the adductors. The gait showed a combination of weakness and spasticity. In the youngest patient, who was eleven years of age at the time of the observation, walking was no longer possible except with assistance. There was no ataxy either in standing or in walking. There was no paralysis in the arms, but there was a little tremor on voluntary movement. In all these brothers there were nystagmus, slow and monotonous articulation, exaggerated reflexes, and commencing optic atrophy. Sensation and intelligence were quite undisturbed. The cases resemble closely those described a few years ago by Dr. Sanger Brown and by Dr. Pelizäus and Dr. Higier and probably depend upon defective development of the nervous system analogous to what is found in Friedreich's ataxy, although not identical with the conditions underlying that disease.

OPENING OF A NEW HOME AT THE CHALFONT EPILEPTIC COLONY.

THE experiment made by the National Society for the Employment of Epileptics of establishing an industrial colony where sane epileptics who were debarred by their affliction from obtaining employment might not only find opportunities for useful work but might also receive the care and supervision necessitated by their complaint has proved so successful that the number of colonists will shortly exceed 100. On May 12th a large number of supporters of the institution visited the colony, which is situated in a very beautiful part of Buckinghamshire. Among those present were the Duke and Duchess of Marlborough, the Duchess of Bedford, Sir

William Broadbent, Mr. and Mrs. Passmore Edwards, Mr. Micholls (chairman of the committee), Dr. Buzzard, Colonel Montefiore, Dr. Fletcher Beach, Dr. Nicolson, C.B., Miss Caine, M.B. Lond., Mrs. Burgwin, and Dr. Colman. The new Victoria Home for men was opened by the Duchess of Marlborough and afterwards the foundation stones of two new homes, one for boys and one for girls, were laid by the Duke of Marlborough and Mrs. Passmore Edwards respectively. In responding to a vote of thanks the Duke of Marlborough expressed his firm conviction that the important questions for public men in the future would be those dealing with the best means of ameliorating the condition of the masses of the population. He considered that although the initiation of charitable enterprises was in this country left to private generosity and enterprise, yet they ought to receive some encouragement at the hands of Government. There are now four homes open, each accommodating 20 colonists, and when the children's homes are open there will be 40 more inhabitants of this little village. The chairman announced that the committee were anxious to obtain funds in order to build a house for a resident medical officer. With so large a number of colonists there should certainly be no delay about such a step. When children are admitted the need for a medical superintendent will be even more urgent than it is at present and we have good reason to believe that no application for a Government grant towards the expenses of education is likely to be entertained until there is a resident medical officer. Up to the present nearly all the homes have been built through the munificence of one man—Mr. Passmore Edwards. Surely there are other wealthy men, knowing possibly from their own family experience how great a boon such an institution must be to the poor, who can come forward and make it possible for the committee to provide adequate medical supervision and prompt medical assistance in cases of accident or emergency.

STREET NOISES.

AT last a step in the right direction has been taken with regard to the curse of street noises. It will be remembered that in November, 1897, a man named Kruse was convicted by the Kentish magistrates and fined £1 for conducting a religious service in the open air after being requested to desist. The conviction was obtained under a by-law of the Kent County Council to the following effect:—

"No person shall sound or play upon any musical or noisy instrument or sing in any public place or highway within fifty yards of any dwelling house after being required by any constable or by an inmate of such house personally, or by his or her servants, to desist."

The conviction was appealed from and judgment was at length delivered on May 14th in the Queen's Bench Division, the court consisting of the Lord Chief Justice, Sir F. Jeune, Lord Justice Chitty, and Justices Mathew, Wright, Darling, and Channell. The Lord Chief Justice delivered a judgment which was concurred in by all except Mr. Justice Mathew, and Sir F. Jeune gave a judgment to the same effect. The conviction was upheld. Lord Russell remarked that the contention that the by-law should contain the qualification that the music should be an annoyance would render it inoperative, for who was to be the judge of what was or was not an annoyance? Now if the Kent County Council can pass a by-law of this kind there is no earthly reason why the London County Council should not do likewise. Only in addition to the "music" question it must contain a clause to prohibit the yelling of newspaper hawkers. As we have said over and over again there are plenty of newspaper sellers who do not yell and who yet make a living. The nuisance daily gets worse, the Strand and Piccadilly-circus are simply unbearable for most of the day, while the more strictly residential districts are pestered on Sundays with small boys crying the ordinary Sunday papers and in addition since the war began with "sturdy vagrants" who howl "late Sunday speshuls" containing, to judge by the following morning papers, lies of the most unblushing description. The honest, if not sweet-voiced, costermonger may be put up with, but the "runner" or purveyor of what used to be called "cocks"—i.e., the "awful slaughter" innuendoes—must be put down with a heavy hand and the sooner the London County Council see to it the better.

THE ROYAL COMMISSION ON THE DISPOSAL AND TREATMENT OF SEWAGE.

IN our remarks on the constitution of this Commission in an annotation in THE LANCET of May 14th we should have stated that two of the commissioners are engineering authorities—viz., Major-General C. Phipps Carey, R.E., one of the deputy engineering inspectors to the Local Government Board, and Mr. C. P. Cotton, M.I.C.E., chief engineering inspector to the Local Government Board for Ireland. It is probable that sub-commissioners will also be added who are competent to investigate the bacteriological and chemical sides of the question.

ENGLISH MEDICAL MEN IN ITALY.

THE General Medical Council and the Royal Colleges of Physicians of London and Surgeons of England are to be congratulated on the result of their efforts to induce the Italian Government to abandon its intention of making it illegal for English medical men to practise in Italy without acquiring an Italian diploma. Such a proposal in all the circumstances and relations of the two countries was felt here to be unreasonable and illiberal and unworthy of the Italian Government and people. Its abandonment, on the other hand, will be regarded as another proof of the friendly and generous feeling which Italy has always shown to our country and countrymen. The profession will not forget the service which Lord Salisbury and the English Ambassador at Rome have rendered in regard to this matter.

HEMANS v. COLGATE AND ANOTHER.

AN action against two medical men has been successfully defended by the London and Counties Medical Protection Society through their solicitors, Messrs. Le Brasseur and Oakley. The action was brought in the Queen's Bench Division, before the Lord Chief Justice and a Special Jury, by Mr. Henry Hemans, an engineer in England and Buenos Ayres, against Dr. Henry Colgate of Eastbourne, who acted as the plaintiff's medical adviser, and Mr. George Arthur Skinner, surgeon, of the Waterside Hydropathic Establishment, Upperton-road, Eastbourne, in whose institution the plaintiff was received and detained, it was alleged, from Nov. 29th, 1895, till Jan. 9th, 1896, when he escaped. He sought to recover damages for negligence in treatment and for false imprisonment. The plaintiff's case was one of overwork and required, according to Dr. Colgate, the Weir Mitchell treatment and rest for six weeks. He wished to go to Matlock, but went to the Eastbourne establishment on Dr. Colgate's advice. He soon complained of noises and that the establishment was unsuitable for him. He was dissatisfied with his room and with the environment generally. He alleged that his clothes were taken away and that a letter to his daughter to remove him was suppressed. Under cross-examination these statements were much weakened. The door was open all day and he admitted that it never occurred to him that his clothes were in the wardrobe. At the close of his evidence the jury intimated that in their opinion no case had been made out. The Lord Chief Justice seemed to be of the

same opinion throughout and he observed that in the plaintiff's state of health he might have regarded as troubles things which would not have affected other people. Finally verdict and judgment were entered for the defendants with costs. We need not say that we concur in the justice of the verdict and congratulate the defendants on such a righteous end to the annoyance which such a case implies to medical men.

"THE REMUNERATION (P) OF POOR-LAW MEDICAL SERVICE."

MR. HORACE SWORDER, the medical officer of health of Luton Borough, writes to us to point out the inaccuracies in a paragraph which appeared recently in the *Daily Telegraph* and upon which we founded some comments last week. Mr. Sworder is not medical officer to the Union Workhouse and has not to supply 10,000 or any other number of bottles of medicine out of his salary which, moreover, was not correctly stated. We are sorry to have misrepresented Mr. Sworder's position.

MEDICAL SOCIETY OF LONDON: ANNUAL CONVERSAZIONE.

THE 1897-98 session of the Medical Society of London was closed on May 16th by the delivery of the annual oration and a conversazione of the Fellows and their friends. The orator for the year was Dr. Frederick Roberts and his oration, which appears in full in another part of this issue, was listened to by an overflowing audience. Sir William Broadbent proposed and Mr. A. E. Barker seconded a vote of thanks to Dr. Roberts for his eloquent and interesting address and the vote was enthusiastically carried. A conversazione followed in the society's rooms which were beautifully decorated with palms. The annual gathering was certainly one of the most successful which has taken place, thanks to the arrangements of the honorary secretaries, Dr. Robert Maguire and Mr. W. H. Battle, and the registrar, Mr. Hall.

LONDON'S PLAYING FIELDS: AN APPEAL.

AMONG the many things which are needful for promoting the health of London's teeming millions is the provision of adequate space in which the workers can indulge in open-air games for recreation; but owing to the encroachment of the builder the provision of such spaces becomes year by year more difficult. The London Playing Fields Committee, of which H.R.H. the Duke of York is President, have already provided over 100 cricket pitches and 18 football grounds in various places round London for the use of clerks, workingmen, and boys who are able to pay a small sum for maintenance, thus leaving the limited area in public parks and commons entirely free for the use of the poorest players. The committee, however, hold these grounds on lease only and from time to time they have to be given up for building purposes. One of the spaces held by this committee is at Raynes Park, Surrey, called the Prince George's Ground, after the name of the Royal President of the committee. This comprises about 25 acres and the field has been laid out at a cost of £1100 for football and cricket. It is held under a lease of 10 years dating from 1891, but up to the end of the present year the committee have the opportunity of purchasing the site for the sum of £10,000. Towards this amount H.R.H. the Duke of York headed a subscription list last year with £10 and H.R.H. the Duchess of York gave £5. The appeal has resulted in a sum of £1345 paid or promised, but as it is necessary to complete the purchase fund in 1898 the committee ask the help, not only of lovers of cricket and football, but of all who realise the importance and the difficulty of maintaining the bodily health and development of our vast city population. Donations to the fund will be received by the chairman of the London Playing Fields Committee, the Hon. E. Chandos Leigh, 45, Upper Grosvenor-street, W.; Mr. E. N. Buxton, Knighton, Buckhurst-hill, Essex (treasurer); Mr. T. Hall Hall, 5, New-square, Lincoln's-inn, W.C. (deputy-chairman); Mr. H. D. G. Leveson Gower, 11, Birchin-lane, E.C. (secretary); or they may be paid directly to the bankers, Messrs. Barclay and Co., Limited, 1, Pall-mall East, S.W. All cheques and postal orders should be made payable to "Prince George's Ground Purchase Fund" and crossed "Barclay and Co., Limited."

PERIODICAL PARALYSIS OF THE SUPERIOR OBLIQUE MUSCLE.

IN a recent number of the *Neurologisches Centralblatt* an abstract appears of an interesting case recorded by Dr. Aug. di Luzenberger in *Manicomio* XIII. The patient was a man, aged twenty-nine years, whose mother had suffered from migraine. At the age of twelve years, after a long walk in the sun with his head uncovered, he was seized with severe unilateral headache, with loss of appetite, nausea, and diplopia. At first the attacks occurred almost every week, lasting a day, and the headache and diplopia came and went almost simultaneously. In the course of a year they became less frequent, but lasted longer, finally persisting for fifteen days. The last attack observed by Dr. Luzenberger lasted twenty days. In this the headache and nausea began in the afternoons and lasted till bed-time. The diplopia, however, was continuous. The attack was accompanied by loud pulsation in the head and the right temporal vein was better filled than the left, although there was no asymmetry of the head. The diplopia was found to depend upon paralysis of the superior oblique muscle and the eyes presented no other abnormality. The headache was got rid of by moderate doses of bromide, but the diplopia persisted for fifteen days' longer and then disappeared without leaving any change in the eyes. The temporal vein also on the side on which it had been distended became normal. Dr. Luzenberger suggests that the underlying cause of the phenomena is a periodical swelling of the cavernous sinus with consequent pressure on the first branch of the fifth nerve and also on the fourth. The case, of course, is similar to others which have been described in which, however, the paralytic phenomena have been the result of an affection of the third nerve.

A COMMITTEE OF INQUIRY INTO THE ALLEGED INJURIOUS EFFECTS OF X RAYS.

IT having been alleged that injurious effects on the human body have been caused by exposure to x rays it was decided at a meeting of the council of the Roentgen Society on April 5th to nominate a committee to collect information on the subject. The following members were selected, with power to add to their number: Professor Sylvanus P. Thompson (president of the society), Dr. David Walsh (secretary of the society), Mr. Thomas Moore, Dr. Barry Blacker, and Mr. Ernest Payne (Hatchlands, Cuckfield, Sussex), who is acting as secretary to the committee. We are informed that the committee will be glad to hear from all workers with x rays of any case of injury that may have come under their notice after exposure of a patient to the rays and in order to obtain accurate reports the committee have prepared a set of questions which have been framed with a view to elicit opinion and collect information to show whether the injury was the result of any of the following causes: (1) the x rays themselves directly; (2) some electrolytic or electro-thermal action of a leakage discharge

current from the leads or from the terminals of the tube; (3) some action due to the varying electrostatic charges on the surface of the tube; (4) some combination of these; (5) some other hitherto unrecognised kind of radiation emitted simultaneously with the x rays; or (6) some other cause hitherto unobserved. The secretary of the committee will be glad to send copies of the questions to any medical man or other worker in x rays who may know a case about the circumstances of which he is willing to give particulars. No names will be published in connexion with the information supplied except by the distinct consent or request of those concerned.

UNIVERSITY OF LONDON.

THE election of a Fellow of the Senate of the University of London will take place on Tuesday, May 24th, and the nomination lists as well as the addresses are in the hands of the graduates. The nomination is largely in favour of Mr. Fletcher Moulton, Q.C., who will evidently poll a very considerable majority of country graduates, whilst almost every graduate who is a London teacher is supporting Dr. Benson. The question, therefore, resolves itself into this: shall country graduates determine the needs of a local University for London, and shall uniformity of the examination standard take the place of a well-considered curriculum of education? The suggestion of Mr. Moulton's committee that "teaching functions should be added to the present work of the University through a supplemental charter framed so as to confer the necessary powers" is obviously impossible and would be opposed by every teaching institution in London.

A CONVERSAZIONE will be given by the British Balneological and Climatological Society on Wednesday, June 8th, at 9 P.M., at Limmer's Hotel, Conduit-street, when Dr. G. Vivian Poore will deliver an address on "Circumstances which Influence the Effectiveness of Climatic Treatment." There will be an exhibition of meteorological instruments by Messrs. Negretti and Zambra and Dr. W. S. Hedley will show a Radiant Heat Apparatus.

THE dinner given by the Lord Mayor of London in the interests of the London Hospital on Wednesday night last proved a very successful function. New annual subscriptions to the extent of £4500 were announced and donations amounting to £39,000. Among these donations were two anonymous ones, of £25,000 and £10,000 respectively.

WE understand that Mr. Collings has drawn up a draft report which will be presented to the Petroleum Committee on June 10th. The end, therefore, of a very long and protracted inquiry is near and the report will be awaited with interest by a large number of persons.

SIR MATTHEW WHITE RIDLEY, in answer to Mr. Pickersgill and Sir Charles Dilke, has intimated in the House of Commons his intention to order a prosecution in respect of an alleged breach of the Factory Acts in connexion with recent cases of phosphorus poisoning.

HER MAJESTY THE QUEEN has sent £100 to the London Hospital in aid of the special appeal now being made.

MEDICO-PSYCHOLOGICAL ASSOCIATION. — The spring meeting of the Northern and Midland Division of this association will be held at Cheadle Asylum, near Manchester, on May 25th, 1898. Mr. G. W. Mould will open a discussion on the new Lunacy Bill, and will also provide lunch and dinner for the members attending.

THE REGISTRAR-GENERAL'S ANNUAL SUMMARY FOR 1897.

THE Registrar-General's annual summary of births, deaths, and causes of death for the year 1897 has just been issued. Like its predecessor for 1896 this summary contains a useful and succinct account of the mortality, not of London only, but of thirty-two of the other great English towns, and if only arrangements could be made for its production somewhat more promptly than at present after the close of the year to which it relates the value of this publication both to the sanitary branch of our profession and to the public generally would be greatly enhanced. In its present advanced state of development, which it attained for the first time in 1896, the summary seems to leave little to be desired taken as a record of mortality alone in our great centres of British industry. But we confess to a feeling of disappointment at the thought that although so much has been done of late years to perfect the English system of notification of those important and destructive maladies which are communicable from person to person no attempt has hitherto been made to collect and publish a record of such maladies, although they are known to levy an oppressive death-rate on the most valuable lives of our population. The summary now before us shows that in the Statistical Office of Somerset House the State possesses a department competent to deal with the national records of mortality in such fashion as to extract from them the maximum of instruction for preventive purposes which such partial records are capable of rendering. It would therefore seem to need but a slight addition to the work of that office if a similarly detailed record could be added of those cases of infectious sickness which are not necessarily fatal, but an accurate knowledge of the prevalence of which in our industrial centres is, from a sanitary standpoint, even more valuable than the most accurate statement of mortality could possibly be. The returns of the Registrar-General are at present published at weekly and quarterly as well as yearly intervals, and it is reasonable to surmise that as a properly trained staff at Somerset House is constantly engaged in this work the development now suggested would necessitate but slight modifications in the establishment already existing. The deaths registered within the 52 weeks of the year 1897 in the 33 great towns of England were equal to a rate of 19·1 per 1000 of the aggregate population, or 1·7 per 1000 more than the death-rate of England and Wales in the same year. Calculated with due regard to the differing age-constitution of the several populations, the death-rates ranged from the lowest, 13·6 in Croydon and 15·2 in Brighton to the highest 26·8 both in Liverpool and in Preston. The corrected death-rate of London in 1897 was 19·4 and was considerably lower than the average rate in the preceding ten years. The presence of large public institutions in certain parts of London unduly raises the recorded death-rates of the areas in which they are situated, whilst the mortality of other areas from which patients have migrated to those institutions is unfairly lowered. Until the deaths occurring in public institutions have been distributed to the sanitary areas from which the patients originally came it is impossible to calculate reliable rates of mortality for these areas. The rates of mortality for metropolitan sanitary areas were published for the first time in the annual summary for 1896, the establishment of a quinquennial census for London having rendered it possible to frame trustworthy estimates of district populations.

Some of the London sanitary areas afford striking examples of the necessity for the distribution of mortality just referred to. The City of London, for instance, contains amongst other institutions St. Bartholomew's Hospital and the City workhouse. The deaths registered last year in the City numbered 1054, but of these 653 occurred in public institutions and were mostly deaths of persons belonging to outside areas. After distribution of these deaths the number belonging to the City was only 642. The uncorrected death-rate of London City therefore stood at 35·0 per 1000, whilst the corrected rate did not exceed 21·3. On the other hand, in the Bermondsey sanitary area only 1411 deaths were registered last year, but when the deaths of Bermondsey residents which took place in institutions outside its

boundaries are included the death total is raised from 1411 to 1883 and the death-rate from 16 5 per 1000 to 22·1. In the same manner the death-rate of St. George-in-the-East was raised from 21·9 to 26·4 and that of St. Saviour's from 17·1 to 24 6. Infantile mortality—i.e., the proportion of deaths under one year to births registered—was equal last year to 177 per 1000 in the 33 great towns and was 1 per cent. above the decennial average. The proportions ranged from the lowest, 131 in Huddersfield and 144 in Brighton, to 219 in Salford, 220 in Burnley, and 262 in Preston. In London infantile mortality averaged 159 per 1000 births and was slightly above the average. After distribution of the institution deaths infantile mortality was equal to 116 per 1000 in Plumstead, 121 in Stoke Newington, and 130 in the City of London; in the other metropolitan areas it ranged upwards to 193 in Limehouse, 195 in St. Saviour's, and 197 in St. George-in-the-East. A table is given which shows in a summary form the number of lives saved and the number lost in London last year as compared with the previous decade. The net gain in life saved is represented by 7651 lives. In other words, had the average death-rate in 1887–96 continued throughout 1897 there would have been sacrificed 7651 lives in addition to those actually lost by death. As compared with the average there was an excess last year of 222 deaths from diphtheria, 1156 from diarrhœal disease, 475 from cancer, 282 from premature birth, 135 from urinary disease, and 134 from accident. Under most of the other headings the registered mortality was below the average. There were only 18 deaths from small-pox last year in the 33 great towns, as compared with 732, 450, 120 and 25 respectively in the four preceding years. Of these deaths 16 occurred in London, 1 in Bristol, and 1 in Hull. Measles caused a mortality equal to 0 55 per 1000 in the great towns. The rates varied from 0 03 in Norwich and 0·07 in Leicester to 2 22 in Salford and 2·77 in Preston. In London the mortality from this disease was at the rate of 0·43 per 1000 and was therefore above the average. In metropolitan sanitary areas the rate ranged from 0·02 in Paddington to 1·42 in St. George-in-the-East. Scarlet fever caused a mortality of 0·18 per 1000 in the great towns, against an average of 0 27. In Preston and Bradford the rate was only 0 04 per 1000, but it rose to 0·32 in Huddersfield, 0·33 in Liverpool, and 0 35 in Leicester. Scarlet fever caused a mortality of 0·18 per 1000 in London, which was decidedly below the average; the rate did not exceed 0·06 per 1000 in Marylebone and Stoke Newington, whilst it equalled 0·40 in Bermondsey and 0·54 in Rotherhithe. The mortality ascribed to diphtheria averaged 0·31 per 1000 in the great English towns, which is below the rate in either of the four previous years. In Sunderland and Preston the rate was only 0 03 per 1000, but it was as high as 0·57 in Burnley and 0 62 in Wolverhampton. In London the rate averaged 0 51 per 1000 and was lower than in either of the three preceding years. In metropolitan sanitary areas the diphtheria rate ranged from 0·13 in St. James's, Westminster, and 0·17 in St. Olave to 0 73 in Clerkenwell and Bermondsey and 0 80 in Woolwich. Whooping-cough gave rise to a death-rate of 0·41 per 1000 or 0·14 below the average in the 33 great towns. The lowest rate was 0·07 per 1000 in Croydon and in Swansea and the highest 0·31 in Salford and in Sheffield. In London the death-rate from this disease averaged 0·41 per 1000 and ranged from 0·11 in Kensington and 0·13 in Lee to 0·73 in Bermondsey and 0·74 in Clerkenwell. Continued fevers, mainly enteric, gave rise to a mortality of 0·18 per 1000, which is slightly below the average. The lowest rates were 0·07 in Croydon and in Swansea, and the highest 0·31 in Salford and in Sheffield. The rate averaged 0·13 in London and was slightly below the decennial average. Among sanitary areas, the lowest rates from enteric fever were 0·05 in Rotherhithe and Plumstead, and the highest 0 29 in Stoke Newington and 0·30 in the City of London. In the 33 great towns diarrhœal diseases caused an average mortality of 1·24 per 1000, which was higher than that of either of the 10 preceding years. The lowest rate was 0·21 in Swansea and the highest 2·23 in Preston and in Hull. The rate averaged 0·92 in London and ranged from 0·16 in St. Martin-in-the-Fields to 1·55 in Shoreditch and 1·81 in St. George's, Southwark. The death-rate from phthisis in Registration London was equal to 1·71 per 1000, as compared with rates of 1·83 and 1·73 respectively in the two years preceding. After distribution of the deaths from phthisis which had occurred in public institutions the death-rate from that disease in the metropolitan areas ranged from 0·74 in Hampstead, 0·94 in Lewisham, and 1·10 in Lee to 3·11 in St. Luke, 3·22 in St. Saviour's, and 3·36 in the Strand sanitary area. Unfortunately the Registrar-General's summary does not afford the means of comparing the death-rates from phthisis in extra-metropolitan districts; this is one of the very few defects which we have noticed and would gladly see remedied in future numbers of what we regard as a most valuable publication.

REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS.

III.—MINUTES OF EVIDENCE AND APPENDICES.[1]

THE Blue-book was published at the end of last week, and much useful information will be found in the Appendices it contains. The first place is given to the "Report on a Visit paid to certain Places in Belgium, Germany, and Denmark," which is signed by three of the Commissioners and Professor J. McFadyean, who accompanied them in place of Sir George Brown, who was unable to leave London at the time. This Report is dated June 12th, 1897, and it is almost a pity that it could not have been published separately. On many points it amplifies the general Report, in connexion with which it should be read.

The Belgian Government, in 1895, was the first to draw up comprehensive regulations for dealing with bovine tuberculosis, and it is interesting to note that they were led to do so from the knowledge gained as to the prevalence of the disease by the complete system of meat inspection instituted in 1890. The regulations provided for the very extensive use of tuberculin by veterinary surgeons, and animals reacting to the test were to be isolated from the healthy and their sale was only to be allowed for the meat market, the limit of time for slaughter being one year. Animals showing clinical symptoms of the disease were to be slaughtered at once. Compensation was given under certain restrictions to the owners of cattle the carcasses of which were condemned as unfit for food. Provision was also made by the erection of large quarantine sheds at each place where a line of railway crossed the frontier for testing with tuberculin animals imported from neighbouring countries.

At the time of the Commissioners' visit the regulation had been in force about a year and during that time some 22,000 animals had been tested, involving an expenditure of about £40,000 in compensation.

Many persons have urged the adoption in Great Britain of a similar method for dealing with bovine tuberculosis, but the impression received by the Commissioners in Belgium was that the attempt to stamp out the disease in the native dairy stock had proved too onerous to be sustained and that if the internal measures prove unworkable or a failure the effect of the frontier quarantine, so far as it was applicable to tuberculosis, must be regarded as superfluous and extravagant.

This first measure, admittedly experimental, was found to be too drastic, as the tuberculin test was made almost compulsory on all cattle in consequence of the fact that if tuberculosis was found in an animal post mortem none of the other animals which had occupied the same shed were allowed to be sold except for the meat market unless they failed to react to the test. Since the visit of the Commissioners the law which they saw at work has been modified in such a way that in future action will only be taken by the State in cases where animals are visibly affected with the disease. The terms of this new measure are printed in full in the Appendix.

In the same Report, under the heading "Germany," a concise account is given of the system of meat inspection in the public slaughter-houses, together with valuable statistical matter on the subject taken from the annual reports by the directors of the abattoirs in Leipsic and Dresden. A description is also given of the method of insurance against loss by condemnation of carcasses adopted by the farmers and butchers in these two cities.

The Commissioners state that "in Copenhagen we found ourselves with men who were able to show a very remarkable

[1] Nos. I. and II. were published in THE LANCET of April 30th and May 7th, 1898, respectively.

degree of success in grappling with tuberculosis and in eliminating it from their herds," but as they quote in their general Report the description of their visit to Denmark it is unnecessary to refer further to it here.

The Appendix contains important statistics, such as have never appeared elsewhere, on the mortality from various forms of tuberculous disease in several age periods from 1851 to 1895, furnished by Dr. Tatham, Superintendent of Statistics, General Register Office. The information was called for from a desire on the part of Commissioners to learn whether it was possible from mortality figures to establish a relationship between the consumption of meat and milk and tuberculous disease in man. The tables comprise (*a*) all forms of tuberculous disease, (*b*) phthisis, (*c*) tabes mesenterica, (*d*) tuberculous meningitis, and (*e*) scrofula and other forms of tuberculous disease. Dr. Tatham has supplied a memorandum in explanation of the tables, his conclusion being that in the course of the last forty-five years there has been a substantial diminution in the mortality attributed to tuberculous disease in England and Wales, but that the data at our disposal do not warrant the attempt to estimate either the amount or the proportion of decrease which has taken place between the earlier and the later periods referred to. Two diagrams which he appends—one showing the annual variations in the mortality from tabes mesenterica and tuberculous meningitis from 1875 to 1895, the other showing the same with regard to tabes mesenterica and diarrhœa—bring out the close connexion which exists between the latter two diseases, as the curves in both rise and fall together. This relationship between diarrhœa and tabes mesenterica he adduces in support of his view that the latter is a very indefinite cause of death, and that the former is not unfrequently mistaken for it.

Somewhat similar tables are also furnished of the death-rate from tuberculous diseases in Glasgow by Dr. Chalmers and in Manchester by Dr. Niven.

A useful summary appears of the enactments in general statutes and of the general orders and model by-laws of the Local Government Board which are applicable to London and England and Wales, relating to (1) unsound meat, milk and milk products, (2) slaughter-houses, and (3) dairies, cowsheds and milkshops. For purposes of comparison there is a similar summary of the Scottish general and local Acts on meat and milk inspection, and of the regulations in force in the principal British colonies and in the United States. Seeing that much has been done in Continental countries to advance our knowledge of the subject, translations of the regulations on meat and milk inspection, with especial reference to tuberculosis in Germany, France, Belgium, Denmark, Norway, and Switzerland, have been made by the secretary. The Blue-book therefore forms a useful reference work on these points.

THE IRISH LOCAL GOVERNMENT BILL.

II.[1]

In a previous article a sketch was given of the provisions and general tendency of the Bill at present before Parliament for the reform of local administration in Ireland. Attention was directed to its broadly democratic character, its general similarity, with such modifications as the special circumstances and needs of the sister island demanded, to the Bills adopted in recent years in England and Scotland, the generous character of its financial arrangements, and some of the points which specially affect the interests of the medical profession. The Bill has at all events the merits of courage, thoroughness, and consistency. It does not attempt to mend or tinker. It makes no pretence of patching up a system which is recognised to be an anachronism and which, whatever its merits, can manifestly be no longer maintained. It sweeps away most of the cherished and time-honoured privileges of the Irish gentry and leaves them, if they wish to retain a share in local administration, to take their chance at the polls. The grand jury system, as is now recognised by everyone whose opinion is worth considering, belongs to an order of things which has passed away for ever. As Judge O'Connor Morris says: "The grand jury system was part and parcel of the Protestant Ascendancy which until recent times was the distinctive feature of all Irish government. The grand juries were long confined to the Protestant caste; they were nominated, not elected, bodies composed of the leading landed gentry; they had almost absolute control over the administration of their respective counties and had a power to raise a local rate to defray the charge, a mode of taxation imposed on the occupiers of the soil in four-fifths of Ireland, at least the peasantry of the subject Catholic people. ..... The Irish Protestant squirearchy knew how to rule and every grand jury had good men of business; the police they appointed kept Whiteboyism down; the roads they constructed were the admiration of Arthur Young." By degrees the powers of the grand juries were curtailed and the central government of Dublin Castle assumed some of their functions. "The grand juries are still assemblies of county magnates; though they have been thrown open to Catholics since 1793, they are still for the most part composed of Protestants. They are selected by the sheriffs of their counties—that is, virtually, by officials of the central government; they are subject to no kind of popular choice. In theory and to a great extent in fact they administer the local affairs of the counties, including those of the smaller towns and villages of these; they make presentments—i.e., vote money for the chief public buildings, the main roads, and other public works within the counties and generally their towns; they impose a rate known as the county cess to defray the charges of these and other expenses. They are, however, ruled at many points by the central government; this appoints several of their chief officers; it subjects their expenditure to a strict audit; it has long replaced their local police by the great constabulary force of the State, and for many years they have been obliged by law to make 'imperative presentments' for public works of different kinds, such as hospitals, lunatic asylums, and courthouses, and to repay advances made to them by the Treasury." In recent times they have acquired additional powers—viz., to assess compensation for malicious injuries which is levied upon the ratepayers, and to provide for extra police in districts where crime exceeds a certain rate. The "presentments" of the grand juries require to be fiated by a judge of assize.

The Bill affects materially Irish Poor-law administration. The Irish Poor-law dates from 1838. Ireland is divided into 159 unions, and these are subdivided into electoral divisions and wards for the administration of the law. The unions are placed under boards of guardians which are controlled by the Poor-law Commissioners and to some extent by the Local Government Board. Every electoral division in rural districts returns a guardian elected by the ratepayers by a cumulative vote. The elected guardians form only one-half of the board, the other half consisting of *ex-officio* guardians. In addition to administering the Poor-law the guardians are the sanitary authorities for all rural and many urban areas. The charges of the unions are defrayed by a poor-rate assessed by the boards of guardians. In the case of lands and tenements of more than £4 in value the poor-rate is paid by the occupier like the county cess, but the occupier if he is rated at £4 or upwards deducts half of the poor-rate, which is paid by the landlord. If the occupier be rated at £4 or less the landlord pays the whole of the poor-rate. It will thus be seen that the Poor-law administration is the most democratic part of Irish local government, but the *ex-officio* guardians have been a stumbling-block and the present Bill proposes to sweep them away altogether. The boards of guardians have done their work fairly well and if fault must be found in some instances, it should be recognised that their task has often been a difficult one. They have had to deal with a great mass of poverty and to endeavour at the same time to keep down the rates. No doubt many of the poor houses are overcrowded, in many cases they are quite undermanned as regards medical attendance, and the retention of lunatic cases which should have been transferred to the asylums has sometimes amounted to a scandal. The boards of guardians have not always treated their medical officers well or seconded their efforts to bring the work of the Poor-law infirmaries and hospitals in line with modern medical and surgical progress. They have been often grudging in their allowances as regards extra fees of any kind and also with regard to leave of absence. Perhaps these things might, under all the circumstances of the case, have been expected. It is to be hoped that the new district councils, which will

[1] No. I. was published in THE LANCET of May 14th, 1898.

henceforth discharge the functions of boards of guardians, will do better.

The Bill takes from the grand juries all their fiscal and administrative functions, which will be transferred to the county councils, but leaves them the same criminal jurisdiction which grand juries in England possess. The county councils will obtain certain powers never possessed by the grand juries—viz., the assessment and levying of the poor-rate, the control of the lunatic poor, and certain powers enabling them to cope with cases of exceptional distress. The subordinate bodies, or district councils, will be elected on the same lines as the county councils, and there will be one such council for each union. These district councils will vote the lesser public works and they will take over the duties and privileges of the boards of guardians, excepting the assessment of the poor-rate, which, as already stated, will rest with the county council. All the assemblies created by the Bill will be subjected to the jurisdiction of the superior courts of Ireland, and the Local Government Board, though stripped of most of the large powers which it at present exercises, will retain a certain amount of control over the councils for the counties and other districts as regards expenditure on roads and it will have a voice in the appointment of some of their chief officers.

It will be noticed that there are many things which the Bill does *not* do. It does not seem to touch private bill legislation, which apparently will go on as before in London. This is a palpable blot which will some day demand remedy. It is not reasonable that no Irish railway can be constructed, no dock built, no extension of a municipal boundary effected, no new water-supply introduced, no sanitary reforms instituted without a Parliamentary inquiry at Westminster—an inquiry often tedious and always costly. It is not to be denied that there is some counterbalancing advantage in having vexed Irish questions tried by bodies so competent and so impartial as an average Parliamentary Committee, but on the other hand this machinery is quite too cumbrous and elaborate for many of the questions which come before it. Ireland stands as regards this question on a somewhat different footing from England and Scotland. She is a poor country and can often ill afford the cost of a Parliamentary inquiry. Then the cost of bringing witnesses to London is considerable and greater than that incurred under similar circumstances for an English or Scotch bill. It is to be hoped that in the future some machinery may be devised for dealing on the spot with some of the questions above mentioned. The Bill does not seem to contemplate any collective action of two or more counties for any purpose whatever. It is generally believed that a very important member of the present Government was at one time in favour of provincial councils in Ireland, i.e., a council for each of the four provinces of Leinster, Munster, Ulster, and Connaught. This plan whatever might have been the objections to it from other points of view, would at least have secured united action on the part of much larger areas than that of the existing counties. It must be remembered that England and Scotland present no analogy to the Irish provinces. Leinster, Munster, Ulster, and Connaught are each definite entities, with a good deal of local feeling and local tradition. Whether any plan could be devised for enabling several counties to act together for a common object—an end certainly in itself desirable—is worth the attention of practical politicians. Apparently the Bill does not contemplate anything of the kind. It is important to note that the Bill leaves the control of the police in the hands of the central government, a provision the wisdom of which will be challenged only by extreme partisans.

The debate on the second reading of the Bill showed clearly that there is no hearty or thoroughgoing opposition to the measure on the part of any important section of the House of Commons. The party led by Mr. Dillon and a section of the English and Scotch Radicals object to the financial regulations as involving a dole to the Irish landlords, but the general feeling of the House clearly was that without some provision of this sort the Bill would be quite an impossibility. Some Irish Unionists, on the other hand, view with alarm the large taxing powers with which the new councils—to be elected on a low franchise and frankly democratic in constitution—will be entrusted. They would desire some security to prevent owners of property from over-taxation and extravagance on the part of the councils. As was pointed out in explaining the financial provisions of the measure, it has been the aim of the framers to discourage wasteful expenditure and to give the new bodies full benefit of any economy which they may exercise. It is a point worth full and careful consideration whether these precautions are adequate to their declared object, and whether in some way property should not have greater influence upon the new councils. The proposal to elect the members by cumulative vote does not seem a happy one. Some better means could perhaps be found for securing the owners of property against ruinous over-taxation. Mr. Gerald Balfour is of opinion that the new councils will be inclined to parsimony rather than to extravagance. That remains to be seen, but it is not difficult to understand the fears of those who apprehend quite a different state of things.

One of the most important and delicate questions raised by the Bill is the relations henceforth to be maintained between the new councils and the central Local Government Board, and it would appear that some of the points sure to arise are left purposely undetermined. Probably there were good reasons for this course, but it may give rise to serious inconvenience in the future. The Bill is, of course, mainly in the direction of decentralisation, and the Local Government Board will be shorn of many of its most important prerogatives. This was inevitable, inasmuch as the Board is a nominated body and destitute of any true democratic element. The choice lay between enlarging the constitution of the Board or curtailing its powers, and the Government have chosen the latter alternative. Yet it can hardly happen that the relations between the new councils and the Local Government Board will permanently remain as determined by the present Bill. The framers of the Bill have to a certain extent shirked a difficult and perplexing problem, but have probably evaded a present embarrassment at the cost of laying the foundations of future trouble. Is it possible to have a central body in Dublin capable of dealing with some of the questions now decided at Westminster by means of private bill legislation? and if such a body is desirable and practicable, can it be made representative and popular in its constitution? THE LANCET does not concern itself with politics and this particular phase of Irish local government trenches on the political domain. Without expressing any opinion on the subject, it may be pointed out that bold and comprehensive as the present Bill most undoubtedly must be considered, it yet leaves a very important part of the subject untouched.

In his speech during the second reading debate Mr. John Morley dwelt specially upon this point, recalling Mr. Disraeli's remark that the Irish executive was the weakest in the world, and quoting with approval Lord Salisbury's words uttered in 1885: "Local authorities are more exposed to the temptation of the majority to be unjust to the minority when they obtain jurisdiction over a small area than is the case when the local authority derives its sanction from and extends its jurisdiction over a wider area. In a large central authority the wisdom of several parts of the country will correct the folly and mistakes of one. In a local authority that correction is to a much greater extent wanting, and it will be impossible to leave that out of sight in any extension of local authority in Ireland." To set up local bodies with large powers and a popular constitution, and then to attempt to control them by a non-elective Board sitting in Dublin would be a manifestly mistaken and short-sighted policy. The Local Government Board in England has large powers and its authority is seldom if ever challenged, although its constitution is not on a popular basis. But then it must be borne in mind that the President of the English Local Government Board is always a member of the Government of the day, is often in the Cabinet, has a seat in the House of Commons, and is directly responsible to that chamber. The Irish case is different and much more difficult. The present Bill does much but it is clear that it leaves a good deal undone.

The special medical questions which arise in connexion with the present Bill are the following: (1) the selection, position, and duties of dispensary medical officers; (2) the administration of the Poor-law infirmaries and fever hospitals; (3) the administration of the county and municipal asylums for the lunatic poor; (4) the administration of the Public Health Acts in Ireland; and (5) the selection and control of coroners. The remainder of this article will be devoted to some general considerations relating to these various questions, which will be considered in detail in the succeeding article.

Speaking generally, the Bill enlarges the sphere of popular control in medical, as in other, matters. With a few minor

restrictions the new councils will possess complete control of all institutions devoted to the care of the sick and lunatic poor. The powers of the Lord Lieutenant as regards appointments are reduced but not altogether abrogated and some of these powers will be still further curtailed as time goes on. The administration of Poor-law medical relief has been hitherto one of the most democratic parts of Irish local administration, and though it has not been a failure, neither has it been a great or unqualified success. In the election of dispensary medical officers political and sectarian feeling has often had very considerable play, yet it would be untrue to allege that bad appointments have been common or that the electors have disregarded professional fitness in making their choice. The worst that can be said is that the system itself is so imperfect that it would be a miracle if it worked really well. The dispensary medical officers are as a class overworked and underpaid. Their districts are too large and the amount of work is such that it is often quite beyond the powers of any man to discharge it with thoroughness and fidelity while finding time for private practice, which the exiguity of the fixed remuneration makes it indispensable for him to cultivate. It is much to be regretted that for even the worst paid and most laborious appointments there has too often been a shoal of candidates. While such is the case it is almost idle to complain of the disproportion between the salaries and the work. The medical profession has in such matters the remedy in its own hands. If it were once made clear that suitable candidates could not be obtained for these dispensary appointments the elective bodies would soon recognise the necessity of better salaries and a more reasonable adjustment of duties. The Poor-law infirmaries and fever hospitals in Ireland are often overcrowded and the medical service is deficient in quantity though often good in quality. Cases are not unknown where a medical officer is responsible for 500 or 600 patients. It need hardly be pointed out that under such circumstances adequate medical care and supervision are simply physically impossible. The asylums are, on the whole, among the best managed institutions in Ireland and their fortunes under the new *régime* will be a crucial test of the practical value of democratic methods in administration. They are at present controlled by boards nominated by the Lord Lieutenant and usually composed of the local gentry together with some of the leading merchants and professional men. Hence the changes effected under the Bill will be particularly manifest in connexion with asylum administration. Almost the only case in which the Bill tends in a direction not increasingly democratic is in the election of coroners. At present in rural districts they are chosen by popular election on the Parliamentary franchise. Henceforth they will be appointed by the new county councils, just as at present in some of the boroughs they are appointed by the municipal councils. No one will regret this change, the present election of coroners by popular vote being unsatisfactory and, unless under peculiar circumstances, exciting very little popular interest.

THE ASEPSIS OF TOWNS AND DWELLINGS.

AT the request of the Organising Committee of the International Congress of Hygiene and Demography held at Budapest, 1894, Professor Corfield prepared a series of resolutions relating to the sanitary conditions of towns and dwellings. These resolutions were submitted to a special joint meeting of three of the Sections of the Congress and were the subject of a very animated debate. They were ultimately referred to an international committee consisting of the following members: Professor Corfield, London (proposer); Dr. Pistor, Berlin (seconder); Herr Andreas Meijer, chief engineer of Hamburg; M. G. Bechmann, ingénieur en chef des ponts et chaussées, Paris; Professor Fodor, Budapest; Mr. Arthur Cates, architect, London; Herr Berger, chief architect, Vienna; Herr Lindley, engineer, Frankfort-on-Maine; and Dr. A. J. Martin, member of the Consultative Committee of Public Hygiene of France.

The resolutions were revised by the committee and were submitted to the International Congress recently held at Madrid, where they were adopted as resolutions of the Congress. They may be taken to represent the maximum amount of agreement possible at the present moment among sanitarians of different European countries. They are as follows:—

1. That the general health of the population is improved and the spread of diseases prevented in towns and dwellings by the immediate removal of all foul matters and by a copious supply of pure water.
2. That the paving of streets should be smooth and as far as practicable impervious to facilitate cleansing and also to prevent contamination of the subsoil.
3. Special measures should be taken in the construction of houses to prevent the access of ground-air and moisture to the floors and walls.
4. House drains should be arranged so as to avoid stagnation of their contents and to secure a rapid flow to the street sewer. Their walls should be impervious to liquids and gases, they should be freely and continuously ventilated and provided with syphon-traps to prevent the access of foul air to the houses.
5. The public sewers should be so constructed as to ensure the rapid and uninterrupted flow of the sewage to their outlets. They should always be freely ventilated.
6. The streets should be as wide as possible in proportion to the height of the houses; this proportion should be fixed in each locality, regard being had to local circumstances and to climate. Every inhabited building should be well lighted throughout its whole depth and arranged so as to have an access of air from at least two sides.
7. Special regulations should be made in each locality by the public authorities with the view of enforcing the practical application of the principles herein laid down. Governments and municipalities should resolutely and energetically carry out the preceding recommendations, especially those concerning the healthiness of dwellings.

THE "ANYTOLES."

AN important group of oily bodies of interest in medicine has recently been prepared, and the results of an investigation by Dr. F. Loeffler of the University of Greifswald have been embodied in a paper on the subject. The starting-point of the research was ichthyol, from which a definite substance, the active principle, so to speak, was isolated by Helmers some years ago. Ichthyol, as is well known, is a bituminous substance containing a large amount of sulphur and is obtained by treating the products of distillation of a bituminous quartz found in the Tyrol with sulphuric acid and then neutralising with ammonia. It has been used with encouraging results in rheumatic and skin affections and in the early stages of gonorrhœa. Its composition is allied to that of a sulphonate and this has suggested the preparation of sulphonic compounds by the action of sulphuric acid on certain mineral oils, resin oils, and other hydrocarbons. In this way some interesting compounds possessing remarkable properties have been prepared. Perhaps the most important property of these sulphonates of hydrocarbons is that they are capable of rendering certain insoluble substances soluble in water. This capacity varies with the hydrocarbon employed. Eventually it was found that hydrocarbons containing about 10 per cent. sulphur chemically combined are most suitable. If these hydrocarbons are treated with concentrated sulphuric acid, then neutralised with ammonia and the insoluble portion precipitated with alcohol, a product is obtained which possesses a comparatively very great solvent action on bodies insoluble in water. This ammonia salt derived from a hydrocarbon and remarkably rich in sulphur is called by Helmers "anytin" and it is this substance which appears to possess to a remarkable degree the property of rendering substances otherwise insoluble in water soluble, and preparations thus made soluble are called "anytoles." Thus phenol converted into soluble form by means of anytin is called "phenol-anytole." The following anytoles are now prepared, specimens of which have been submitted to us: cresol-anytole, containing 50 per cent. cresols and 50 per cent. anytin; meta-cresol-anytol, containing 40 per cent. meta-cresol and 60 per cent. anytin; creasote-anytole, containing 40 per cent. creasote and 60 per cent. anytin; guaiacol-anytole, containing 40 per cent. guaiacol and 60 per cent. anytin; benzine-anytole, containing 20 per cent. benzine and 80 per cent. anytin; eucalyptol-anytole, containing 25 per cent. eucalyptol and 75 per cent. anytin; peppermint-anytole, containing 25 per cent. peppermint oil and 75 per cent. anytin; wintergreen-anytole, containing 20 per cent. wintergreen oil and 80 per cent. anytin; turpentine-anytole, camphor-anytole, iodine-anytole, &c., all containing similar proportions of active constituent with "anytin."

A series of experiments has been conducted with the view of determining the bactericidal power of such compounds. Obviously some advantage might be gained from the fact of

the active disinfecting agent being made more soluble in water in this combined form. Anytin as a bactericide appears by itself to behave very similarly to ichthyol. Diphtheria bacilli, streptococci and anthrax germs are very susceptible to anytin, whilst other pathogenic organisms are little affected. It appears to be more energetic against diphtheria streptococcus than ichthyol, but less active against other bacteria. Next, the effect of the compounds of anytin with well-known disinfectant substances, that is, the anytoles, was tried with results which showed a remarkable superiority of the anytoles over the disinfectant substances which they contain. Further, meta-cresol-anytole prevents the coagulation of albumin on boiling. A 10 per cent. solution does not appear to damage catgut. After 48 hours the strength of the threads is not affected and they may therefore be exposed for from thirty-six to forty-eight hours by which time all spores will have been destroyed; the threads are then preserved in spirit. As the greater part of the anytole will have been soaked out of the threads by the spirit they may be used without fear of causing irritation. A 3 per cent. solution of meta-cresol-anytole scarcely attacks the skin and a 1 per cent. solution not at all, whilst an ordinary 3 per cent. carbolic solution, which is inferior in action, makes itself felt on many skins. Practical proof of the value of anytole for the disinfection of the hands was obtained. Meta-cresol-anytole appears to be a valuable application for infected wounds. The same anytole appeared to be satisfactory applied as plugs of cotton-wool in the nostrils in ozæna. Solutions of 1 per cent. strength do not irritate the uterine cervical mucous membrane and the mucous surfaces of the vaginal and male urinary tract would appear to tolerate the application of 1 per cent. meta-cresolanytole in the same way. As ichthyol is rapidly fatal to gonococci it might be supposed that meta-cresol-anytole would be even more active. Ichthyol has been internally administered with excellent results in chyluria, and here, again, it is suggested meta-cresol-anytole would probably give even better results. A 3 per cent. solution of meta-cresol-anytole has an energetic action on recent diphtheria processes corresponding to the disinfecting action established on cultures of diphtheria bacilli. It is not, however, able to kill the bacilli, but, like anytin, has an action on the diphtheria toxin. Experiments on animals by Dr. Loeffler would indicate that the two preparations—cresol-anytole and anytin—may be advantageously employed in the local treatment of diphtheria, especially as they have little action on the mucous membranes.

There seems little doubt that these new preparations may be used with advantage in certain pathological conditions, but the evidence on this point cannot be regarded yet as complete. Further investigation is being conducted and clinical trials made. This series of compounds promises, at any rate, to be of great therapeutical interest.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

DEBATE OF THE "FIRST YEAR OF MEDICAL STUDY."

AN extraordinary Comitia of the Fellows of the Royal College of Physicians was held on May 12th, the President, Sir Samuel Wilks, Bart., being in the chair.

On the motion of the REGISTRAR the letter from the Medical School of Guy's Hospital read at the last meeting was referred to the committee of management.

Dr. W. R. Huggard, Dr. Oswald Browne, Dr. C. J. Arkle, Dr. J. Wiglesworth, Dr. F. Parkes Weber, Dr. H. J. Campbell, Dr. H. G. Turney, Dr. G. R. Murray, Dr. A. Newsholme, Dr. B. A. Whitelegge, and Dr. J. F. W. Tatham were admitted to the Fellowship.

The report of the examiners for the Murchison Scholarship was read, recommending that it should be awarded to Mr. J. Basil Page of St. Mary's Hospital. Mr. Page was then introduced and presented with the scholarship by the President.

The adjourned discussion on the proposal made by the committee of management to recognise as a year of medical study a year spent in the study of physics, chemistry, and biology at schools and institutions approved for the purpose was then resumed. The amendment, which had been moved by Dr. Payne and seconded by Dr. Pye-Smith, was:—"That the scheme proposed in the report of the committee of management be not adopted without a rigorous scrutiny of the list of institutions recognised for instruction in chemistry, practical chemistry, and biology."

The PRESIDENT having briefly stated the position, Dr. CHURCH said that anyone who had passed the required preliminary examination in general education was admitted on the Medical Students' Register of the General Medical Council if he were pursuing his scientific studies at one of the institutions recognised by the committee of management. In other cases, although the student might have received scientific instruction, he could not register until he had entered at a medical school. It was true, as Dr. Payne had said, that very few Scottish universities recognised such institutions and the University of Oxford did not recognise any. Dr. Church pointed out that there was a time when the teaching of these sciences was practically confined to medical schools, and the majority of the teachers were members of the medical profession. But it was very different now and, provided that there was satisfactory evidence that the means and facilities for such instruction were sufficient, there was no reason why it should not be given to students before entering on their medical course. He thought that this would be to the advantage of their hospital work, and he believed that the steps taken by the committee of management would secure that the teaching of science was of good quality.

The REGISTRAR explained the method adopted by the committee before placing any institution on the list of places recognised as properly equipped for this science teaching.

Dr. STEPHEN MACKENZIE supported the amendment, contending that the committee's proposal would deprive the student of the advantages secured by the five years' curriculum, diminish the period of his subjection to "collegiate influence," scatter his places of instruction, and conduce to cramming. It would also deprive him of the opportunity of dissecting whilst pursuing his scientific studies, whilst the medical schools would be still compelled to provide this science teaching for the higher examinations. It would be more logical for the medical schools to agree to cease to hold these classes and to relegate the subjects to preliminary education.

Dr. R. LEE, who doubted whether the General Medical Council had any legal power to register medical students, moved that the report be referred back to the committee.

Dr. J. K. FOWLER said that 12 out of 18 medical schools had supported the scheme of the committee. He pointed out that at present the able student was at a disadvantage, especially as under the former four-years' scheme it was found that the average time taken in preparing for qualification had been four years and nine months. The proposal would give the student four complete years of strictly medical study and would tend to give definiteness to the work of the first year at a medical school.

Dr. WASHBOURN seconded Dr. Lee's amendment, as it would enable the committee to put the regulations in a simpler form. He felt that anatomy and physiology should occupy at least two winter sessions and one summer session. It was important that the student should obtain his knowledge in the correct way and that the regulations and examinations should afford a safeguard against "cram."

Dr. Payne having withdrawn his amendment in favour of that proposed by Dr. Lee,

Dr. PYE-SMITH opposed the scheme, contending that it was not carrying out the spirit of the five years' curriculum, nor did he think it well that the medical student should be of the status of a schoolboy. He reminded the College that medical schools had made great sacrifices to equip and maintain admirably appointed laboratories and teaching staffs, on whom this proposed change would fall heavily.

Dr. COUPLAND would prefer the General Medical Council to be urged to postpone registration of medical students until these strictly preliminary scientific subjects had been passed. There would then be no longer need for the medical schools to provide instruction in elementary science, although of course ample scope existed for advanced instruction in these sciences as applied to anatomy, physiology and pathology.

Dr. PAYNE pointed out that the proposal of the committee was a new departure in its procedure. At present institutions are recognised as suitable for science instruction *before* registration, but now they were to be recognised as open to

students *after* registration. Was it seriously desired to make a board school a "medical school"?

Dr. NORMAN MOORE defended the procedure of the committee in recognising science schools and pointed out that whenever such recognition took place it was reported to, and sanctioned by, the College. The regulations of the examinations might be somewhat involved but they had to meet all exceptions to the general rule, nor was it desirable to be constantly changing them. The vast majority of the medical schools had approved of the proposed change. At present a student is encouraged to study physics, chemistry, and biology before entering at a medical school; he may pass the examination, but his five years' course only counts from the date of his entry at the medical school; in fact, he is in the same position as if he had deferred taking his science till then. And yet a student who passes the Preliminary Scientific (M.B.) Examination of London University can take his degree in four years. If the scheme were adopted the student would still have four complete years to enjoy the benefits of "collegiate influence." All that was proposed was that by recognising work at approved institutions carefully selected all students would be put on the same footing.

A division was then taken, when there voted for the amendment 17, against 30. The original proposition adopting the committee's scheme was then put and carried by a large majority.

The report of a special committee appointed on Oct. 28th, 1897, to consider the subject of elementary biology was then received, and its adoption was moved by Dr. GEE, chairman of the committee. A large number of teachers of the subject and school authorities had been consulted, and the committee recommended that in order that the time devoted to the study of biology should not encroach on that given to anatomy and physiology, the regulation for the second examination as to twelve months' dissection be modified by the addition of the following:—"This period of dissection must be subsequent to having received instruction in the subjects dealt with under sub-paragraph 2—(*a*) chemistry and physics and practical chemistry, and (*c*) elementary biology—in accordance with its regulations."

Dr. CHURCH seconded the motion, which was adopted, as was a further resolution to refer the report to the committee of management.

A communication was read from the Foreign Office, in reply to one from the President, on the subject of proposed legislative restrictions affecting foreign practitioners in Italy. The Marquis of Salisbury forwarded a copy of a despatch from H.M. Ambassador at Rome stating that the Italian Government do not contemplate any such change in the laws.

A communication was read from the Secretary of the Royal College of Surgeons of England enclosing a recent judgment of Mr. Justice Wright affecting the rights of the corporation.

Reports were read from the Finance Committee and from the Examiners for the Licence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on May 12th, 1897, the President, Sir WILLIAM MAC CORMAC, Bart., being in the chair.

Mr. W. D. Spanton of Hanley, Staffordshire, was introduced, signed the by-laws, and was admitted a Fellow of the College.

Mr. Percy Furnivall, F.R.C.S. Eng., was introduced and the President handed to him the Jacksonian Prize with the document declaratory of the award.

The Chairman of the Library Committee reported that Mrs. William Hunter had, at the suggestion of Mr. Thomas Bryant, presented to the College 43 volumes of works on medicine, surgery, and anatomy which formed part of the library of her husband, the late Dr. William Hunter of Rothesay, N.B., and which originally belonged to Surgeon-General William Hunter. The best thanks of the Council were voted to Mrs. Hunter for her valuable donation to the library.

A motion was brought forward that the Council should authorise a special gown to be worn by the Fellows of the College. The principle was approved and a committee was appointed to consider and report as to the form.

It was unanimously decided that an appeal should be entered against the judgment of Mr. Justice Wright and Mr. Justice Channell on the payment of corporation duty by the College.

A letter was read from the committee acting for the Fellows and Members of the College who signed the petition claiming the right of electing the representative of the College on the General Medical Council; with it was forwarded a copy of protest against the recent decision of the Council in course of signature by Fellows and Members. The Secretary was directed to inform the committee that their letter had been laid before the Council.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Crewe Urban District.—Dr. Meredith Young, in presenting his first annual report, congratulates the Crewe sanitary authority on the completion of the new isolation hospital—which, by the way, he regards as having prevented a severe epidemic of scarlet fever during the last quarter of 1897. Dr. Young advises the erection of a refuse destructor and of a public abattoir, and he insists strongly on the necessity for putting an end to the numerous old privies, &c., which still obtain in Crewe by substituting for them the water-carriage system. We note in connexion with the isolation hospital that no cases of scarlet fever are sent home until all otorrhœa, rhinorrhœa, or albuminuria has ceased. This is an excellent precaution, but we fear that in some few cases the patient may have to take up a very prolonged sojourn in hospital. Desquamation is, too, we are told, carefully sought for on the scalp, this being a locality which is regarded as especially liable to be overlooked. The question, however, suggests itself as to whether a slight scurfiness on the scalp after scarlet fever can be considered as desquamation. Doubtless the scalp desquamates early in the disease, but after the peeling process has been followed from the head down to the feet and the feet have been seen to pursue the usual desquamative process we should hesitate to retain a child for an indefinite period owing to what might be termed a "branny" desquamation of the scalp. However, too much care cannot be exercised in discharging patients after scarlet fever and it is well to err on the safe side. We are glad to see that the parents of discharged children are told that the hospital authorities cannot guarantee that the patients are in all cases free from infection. This practice may be profitably carried out at all fever hospitals.

Bournemouth Urban District.—The water company which supplies Bournemouth with water has, Mr. Philip Nunn reports, always afforded him every facility for making any investigation and he regards the care and precautions taken by the company as eminently satisfactory. In October last he, together with the borough engineer and the engineer of the company, visited the filtering beds, reservoirs, collecting areas, and pumping stations, and it must be a source of satisfaction to the public to know that everything was then well protected against possible pollution. A somewhat unusual form of nuisance had to be dealt with during the year under notice in the shape of the carcass of a dead whale some 70 ft. long, which was left high and dry on the beach. After considerable delay 25 tons of flesh and offal were removed to the borough destructor.

Bilston Urban District.—The danger of introducing measles into a hospital devoted to the treatment of scarlet fever was well illustrated in Bilston during 1897. One boy who had been admitted on November 5th with scarlet fever contracted a fatal attack of measles three weeks later, and a girl admitted on November 18th suffering from scarlet fever died from measles on December 18th. Cases such as these show the importance of adequate small ward accommodation at a fever hospital and also the necessity of maintaining a staff of nurses to enable complications of this nature to be adequately dealt with. Dr. Ridley Bailey, when he became aware of these two cases of measles, very properly refused to

admit any more patients until the whole building had been thoroughly cleansed.

St. Marylebone Sanitary District.—Mr. Wynter Blyth expresses regret in his current annual report that the trade are colouring butter and margarine by aniline dyes, instead of, as formerly, by anatto or other vegetable colours of a harmless nature. It would, he thinks, be difficult to take action in the matter unless the colouring agent could be shown to be harmful in minute doses, or rather if an accumulation of such doses could be proved to be detrimental to the human economy.

St. Mary's, Stoke Newington, Sanitary District.—Dr. Henry Kenwood, in referring to the control of measles and whooping-cough through the agency of information derived from public schools, regrets that the regulation of the London School Board requiring the teacher to notify to the medical officer of health when a child is excluded on account of infectious disease should not be regularly carried out. In this connexion it might perhaps be well if provisions such as those contained in Section 57 of the Public Health (Scotland) Act, 1897, were made applicable and a parent or teacher were fined for knowingly permitting a child to attend school who has been suffering from infectious disease or who resides in a house where such disease exists or has existed within a period of three months unless such child produces a satisfactory certificate from the medical officer of health.

Liverpool Port District.—Dr. E. W. Hope reports that 3879 vessels were examined by the port sanitary inspectors during the year 1897 and on board of 2064 of these one or another sanitary defect was discovered. This seems a very large percentage, but perhaps the vessels examined were selected by virtue of there being a probability in favour of some insanitary condition. It would have been some guide in this sense had the total number of vessels frequenting the port been given. There were 63 cases of infectious diseases landed from vessels arriving in the port during the year, 27 of the cases being of enteric fever and 20 of measles; only 3 cases of small-pox were recognised. Amongst the non-infectious cases arriving in the port were 14 of beri-beri, 30 of dysentery, 242 of malaria, and 39 of tropical anæmia. As regards emigration, Dr. Hope states that the diminution which began in 1891 was still further marked during 1897, the total number, 87,414, being 10,865 less than in 1896.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6291 births and 3577 deaths were registered during the week ending May 14th. The annual rate of mortality in these towns, which had been 18·4 and 17·4 per 1000 in the two preceding weeks, further declined last week to 16·6. In London the rate was 15·7 per 1000, while it averaged 17·3 in the thirty-two provincial towns. The lowest rates in these towns were 10·0 in West Ham, 10·2 in Brighton, 11·7 in Cardiff, and 11·8 in Bristol; the highest rates were 20·0 in Plymouth, 21·8 in Manchester, 22·1 in Bolton and in Halifax, and 22·6 in Liverpool. The 3577 deaths included 383 which were referred to the principal zymotic diseases, against 468 and 408 in the two preceding weeks; of these, 133 resulted from measles, 115 from whooping-cough, 50 from diphtheria, 32 from diarrhœa, 27 from "fever" (principally enteric), and 26 from scarlet fever. No death from any of these diseases was recorded last week in Plymouth; in the other towns they caused the lowest death-rates in Portsmouth, Swansea, Nottingham, and Huddersfield; and the highest rates in Bristol, Norwich, Liverpool, and Salford. The greatest mortality from measles occurred in Bristol, Derby, Halifax, and Bradford; and from whooping-cough in Leeds, Sheffield, and Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 20 in London, 6 in Birmingham, 4 in West Ham, 4 in Cardiff, and 3 in Burnley. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in those hospitals and in the London Fever Hospital at the end of last week was 2246, against 2334, 2302 and 2271 on the three preceding Saturdays; 229 new cases were admitted during the week, against 241, 205 and 209 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 274 and 226 in the two preceding weeks, rose again last week to 232, but were 81 below the corrected average. The causes of 44, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Manchester, Salford, Leeds, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the five preceding weeks from 24·2 to 21·7 per 1000, further fell to 19·8 during the week ending May 14th, but exceeded by 3·2 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 10·3 in Paisley to 19·6 in Dundee and 23·3 in Glasgow. The 325 deaths in these towns included 32 which were referred to measles, 26 to whooping-cough, 12 to diarrhœa, 6 to "fever," 4 to scarlet fever, and 3 to diphtheria. In all, 83 deaths resulted from these principal zymotic diseases, against 96 and 90 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was 1·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 35 and 27 in the two preceding weeks, rose again to 32 last week, and included 27 in Glasgow, 2 in Edinburgh, and 2 in Dundee. The deaths from whooping-cough, which had been 34 and 29 in the two preceding weeks, further declined to 26 last week, of which 17 occurred in Glasgow, 5 in Dundee, and 3 in Edinburgh. The 6 deaths referred to different forms of "fever" showed a slight further increase upon recent weekly numbers, and included 5 in Glasgow, where 2 of the 4 fatal cases of scarlet fever were also registered. Of the 3 deaths from diphtheria 2 occurred in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 137 and 129 in the two preceding weeks, further declined to 109 last week, and almost corresponded with the number in the same period of last year. The causes of 30, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·4 and 24·5 per 1000 in the two preceding weeks, further declined to 22·5 during the week ending May 14th. During the past four weeks the death-rate in the city has averaged 23·9 per 1000, the rate during the same period being 16·9 in London and 18·6 in Edinburgh. The 151 deaths registered in Dublin during the week under notice showed a decline of 13 from the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 9 in each of the two preceding weeks; of these, 3 resulted from whooping-cough, 2 from "fever," 1 from diphtheria, and 1 from scarlet fever. These 7 deaths were equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 2·0 in London and 1·9 in Edinburgh. The fatal cases of whooping-cough, which had been 3 in each of the two preceding weeks, were again 3 last week. The deaths referred to "fever," which had been 2 and 3 in the two preceding weeks, declined again to 2 last week. The mortality from scarlet fever and from diphtheria corresponded with that recorded in the preceding week. The 151 deaths in Dublin last week included 38 of infants under one year of age, and 35 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recent weekly numbers, while those of elderly persons showed a further decline. Seven inquest cases and 4 deaths from violence were registered; and 65, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

HEALTH OF THE TIRAH FIELD FORCE.

DURING the late military operations on the North-West Frontier of India, extending from June 28th, 1897, to the break up of the Tirah field force in February, 1898, the maximum number of British troops employed at any one time numbered some 18,000. The very alarming reports as to the extent of invaliding appear to have been on a par with others *ad captandum vulgus*. Up to April 12th, 1898, only 489 men passed through Deolali invalided to England, including 106 from gunshot wounds and 163 from ague; 202 represent all other diseases. 44 of the latter were the results of dysentery, 29 debility, 19 enteric fever, 17 secondary syphilis, 14 remittent fever, 10 diarrhœa, 8 rheumatism, and only 2 from heat stroke, and 1 from bronchitis. The very low percentage speaks volumes for the endurance of the troops, for the sanitary arrangements made by all departments and for the treatment of the sick in the field and general hospitals of the army; the figures are in marked contrast to those of the Crimean period of forty years ago, when "light equipment" was in vogue *de rigueur*, and a veteran force of 27,000 men landed on Sept. 19th, 1854, without ambulances, field hospitals, or a trained medical corps, to be reduced at the end of two months to 11,000 men fit to carry arms.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon George W. Bell to the *Crescent*. Staff-Surgeons: Alfred J. Pickthorn to the *Marathon;* William M. Craig to the *Galatea*, and John J. Dinnis to the *St. Vincent*. Surgeons: Shirley H. Birt to the *Crescent*, Arthur E. Kelsey to the *Collingwood*, lent to the *Devastation*, temporary.

ARMY MEDICAL STAFF.

The under-mentioned Surgeon-Captains are appointed to be Surgeon-Majors: Charles G. Woods and Henry T. Baylor. Surgeon-Major Hall has left Woolwich for Jamaica. Surgeon-Major Elderton has assumed medical charge of women and children, Marlborough Lines, Aldershot. Surgeon-Major Younge has arrived for duty in the Thames District, and Surgeon-Major H. J. Barratt has been posted to the Station Hospital, Canterbury, for duty.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie, M.D., Bengal Establishment, retires. The services of the undermentioned officers are replaced at the disposal of the Government of Bengal: Surgeon-Major Grainger (Bengal), Surgeon-Captain Brown (Bengal), Surgeon-Captain Green (Bengal), Surgeon-Captain Moir (Bengal), and Surgeon-Captain Stevens (Bengal). The services of Surgeon-Major Cunningham (Bengal) are replaced at the disposal of the Government of the Punjab. The services of Surgeon-Major Pemberton (Madras) are replaced at the disposal of the Government of Madras. Surgeon-Lieutenant-Colonel McCloghy and Surgeon-Captain Arnim have respectively delivered over and received charge of the office of the Deputy Sanitary Commissioner, Sind Registration District. Brigade-Surgeon-Lieutenant-Colonel Sir. A. S. Lethbridge, K.C.S.I., and Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E., receive the two extra pensions of £100 each available for the Bengal Medical Establishment for the year 1898–99, and Brigade-Surgeon-Lieutenant-Colonel F. H. Blenkinsop and Brigade-Surgeon-Lieutenant-Colonel J. Arnott the pensions due to the Madras and Bombay Establishments respectively.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant H. E. Mortis to be Surgeon-Captain.

VOLUNTEER CORPS.

Royal Engineers: 1st Middlesex: Surgeon-Major R. M. P. Low, M.B., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. *Rifle:* 1st Volunteer Battalion the King's (Liverpool Regiment): Keith Waldegrave Monsarrat, M.B., to be Surgeon-Lieutenant. 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment: Ransom Pickard, M.D., to be Surgeon-Lieutenant. 3rd Lanarkshire: Surgeon-Major A. Napier, M.D., to be Surgeon-Lieutenant-Colonel. 1st Cinque Ports: Henry James Holman to be Surgeon-Lieutenant. 5th (West) Middlesex: Charles Arthur Goulett to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: William Bridgett Pritchard to be Surgeon-Lieutenant.

THE SPANISH-AMERICAN WAR.

Notwithstanding that the newspapers devote columns to the subject of the war between Spain and the United States there is really little or nothing to be chronicled in the way of reliable or important news. With Admiral Cervera's departure with his Spanish squadron from Curaçao we, like the squadron, are simply at sea, the only difference being that the Spanish Admiral knows whither he is going and why and we do not! Attempts will be made by the American fleet to intercept him, but it is simply a matter of conjecture whether they will be successful or not, or when and where the big naval battle alleged to be looming in the near future will take place, or even whether it will occur at all. It seems clear that the Americans have for the present, as we surmised would be the case, relinquished the idea of sending a large force to Cuba as impracticable, on account of the transport and sanitary difficulties in the way. The United States must have command of the sea before doing so, as probably no one knows better than Captain Mahan himself. It will in the meantime subject the naval, military, and medical authorities of the States to a great strain to equip and transport the large land force required by Admiral Dewey for the occupation of Manila. A large hospital and sanitary service will be required to accompany the force proceeding there, for the Americans are quite alive to the fact that there may be much inefficiency from sickness among the troops for whom adequate preparations will have to be made.

THE ROYAL MILITARY TOURNAMENT.

The opening of the Royal Military Tournament at the Agricultural Hall, Islington, was preceded by a private rehearsal and luncheon on Wednesday last, May 18th. As we announced last week the pageant this year is called "Shoulder to Shoulder" and is representative of the sister services who fought side by side at Cadiz in 1596 and at Gibraltar, Alexandria, and El-Teb at periods between 1704 and 1884. Those who are responsible for the arrangement of this excellent spectacular performance certainly deserve the appreciation which the audience showed with regard to this part of the programme. The inclusion of Piper Findlater among the *personnel* of the pageant was a happy idea. The ever-popular musical ride by the Royal Horse Guards (the Blues) was received with hearty applause, as was also the musical drive by G Battery of the Royal Horse Artillery. In this some new and daring movements have been introduced. The displays by the Army Gymnastic Staff and class of non-commissioned officers under instruction at the Gymnasium, Aldershot, were well received. The rehearsal included tent-pegging, jumping, the *melée*, &c., and concluded with a realistic representation of the capture of Benin. That the present Tournament will be a success there can be no doubt.

SOLDIERS' AGES AND FLAT OR DEFORMED FEET.

With regard to the alleged and actual ages of recruits and young soldiers we can understand that, according to a recent War Office Order, a commanding officer has to determine the point in consultation with a medical officer as to whether there are sufficient physical signs present for believing a man to have really reached the age of nineteen years; but as regards another ruling we confess we do not quite appreciate the force of it. The Secretary of State for War, we are told, has had his attention drawn to the number of men invalided from the army on account of flat or deformed feet. In future such men are to be sent to the gymnasium to see whether the physical defect cannot be remedied or improved by a suitable course of physical exercise. Assuming that the case be really one of flat or deformed feet we are very sceptical about the removal of the defect by this means. It depends of course upon its nature and extent whether improvement can be effected in this way—especially at a soldier's age. Care in examining recruits and attention to the careful fitting of soldiers' boots strike us as a more likely method of overcoming the evil.

DEATHS IN THE SERVICES.

Staff-Surgeon Josiah Austen, on May 2nd He was appointed surgeon in the Navy in 1852 and was promoted staff-surgeon in 1861.

Surgeon-General James Irvine, Bengal Army (retired), on May 3rd, at Clifton, Bristol, in his seventy-sixth year.

THE LATE INDIAN FRONTIER WAR.

Everything remains quiet on the frontier and in the Khyber. Some sickness is reported, however, among the British troops at Jamrûd and Bara.

Surgeon-Major-General S. A. Lithgow, M.D. Edin., C.B., D.S.O., has been selected for the appointment of honorary physician to the Queen, rendered vacant by the death of Surgeon-General S. Currie, M.D. Edin., C.B. Surgeon-Major-General Lithgow was appointed to the army in February, 1855, and during his long service has been several times on active service in the field, including the Indian Mutiny, 1857–59. He took part in the Soudan Expedition of 1884–85 on the Nile and was principal medical officer on the lines of communication. He was mentioned in despatches, received the medal and clasp, and was created a C.B. He was again in the Soudan in 1885–86 and was mentioned in despatches and received the Distinguished Service Order. In 1890 he took part in the operations of the Zhob Field Force in India and was again mentioned in despatches.

Surgeon-Major A. C. A. Alexander, Coldstream Guards, is the Principal Medical Officer in charge of the Royal Military Tournament at the Agricultural Hall, and he is assisted by Surgeon-Captain G. W. Tate, M.B., A.M.S. Veterinary Major Rowe, A.V.D., is in charge of the horses.

Correspondence.

"Audi alteram partem."

THE PROSECUTION OF REGISTERED PRACTITIONERS BY THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—The recent prosecution by the General Medical Council of Mr. H. K. Hunter, L.S.A. Lond., of Gamlingay, Cambridgeshire, for assuming the titles "Physician and Surgeon" must have come as a surprise to most members of the profession. It undoubtedly seems strange that the Council should use its funds in prosecuting a registered medical practitioner whilst hosts of unqualified persons are permitted to practise medicine and surgery with impunity. After reading the report of the case of the proceedings in the *Times* of April 8th last I communicated with the Registrar of the General Medical Council, asking for information as to who ordered the prosecutions, as I had no recollection of the facts of the case having been brought before the Council. From him I learnt that the General Medical Council, when *in camerâ* on Nov. 25th of last year, directed, on the recommendation of the Penal Cases Committee, the prosecution under Section 40 of the Medical Act of 1858 of certain persons, amongst whom was Mr. H. K. Hunter.

I shall feel obliged if you will permit me to state in your columns that I had not the slightest idea that the name of a registered practitioner was among those recommended for prosecution by the Penal Cases Committee. I was under the impression that the persons reported upon by the committee were those only whose names had already been removed from the Medical Register and still continued to practise and use medical titles. Had I known that the name of a registered practitioner was included in the list I should have dissented from the recommendation. I have reason to believe that many of the other members of the Council—the Penal Cases Committee excepted—were likewise ignorant of the fact that Mr. Hunter was a registered practitioner. This, however, I freely confess does not relieve us of our responsibility as being parties to the action. We ought not to have assented to the recommendation of the Penal Cases Committee without having had all the facts of each case before us. That the Council should have been placed in such an unfortunate position indicates that our methods of procedure are faulty. Instead of referring cases reported to the Council for prosecution to a small committee, it would, in my opinion, be far better that the cases should be considered by the Branch Council for the division of the kingdom in which the persons complained of practise. It is therefore my intention at the forthcoming session of the Council to propose that the Penal Cases Committee be not reappointed, and that penal cases be hereafter referred for consideration and report to the respective Branch Councils. Should this proposal be adopted we may hope that the law officers of the Council may not again be called upon to prosecute a registered practitioner under similar circumstances.

I am, Sirs, yours faithfully,

GEORGE BROWN,

Direct Representative for England and Wales.

Gibson-square, Islington, N., May 17th, 1898.

"A METHOD OF EXPOSING AND OPERATING ON THE KIDNEY WITHOUT DIVISION OF MUSCLES, VESSELS OR NERVES."

To the Editors of THE LANCET.

SIRS,—A few days ago I read in a paper by Joseph Price a quaint sentence which accurately describes a good deal of what is published now: "Frequently some one of our medical or surgical brothers comes running out of the bushes crying, 'I have found something.' It is usually a bug, an antitoxin, or a new method."

I can neither confirm nor correct Mr. Mayo Robson's statement that Mr. Greig Smith approved of the principle of exposing the kidney without cutting muscular fibres, but as I taught him to open the abdomen by splitting open the muscular sheath and separating the fibres of the *rectus* I have no doubt he also approved of and practised what I also taught him, to open the loin similarly, whether operating on the kidney or the colon, by what Mr. Mayo Robson believes is a new method. If its history is a matter of importance then I ought to put it on record that I was taught it in Edinburgh by the late McKenzie Edwards as the best way to imitate a sphincter in colotomy thirty-five years ago and that I have practised it uniformly ever since, with an incision, I should say, about one-third the size indicated by Mr. Mayo Robson.

I am, Sirs, yours faithfully,

Birmingham, May 14th, 1898. LAWSON TAIT.

"THE DANGER OF ASPIRATING THE LIVER."

To the Editors of THE LANCET.

SIRS,—Surgeon-Lieutenant-Colonel Hatch, I.M.S., has done well in drawing attention in the *Indian Medical Gazette* for April, 1898, to the possibility of aspiration of the liver producing a fatal hæmorrhage into the cavity of the peritoneum. This important fact is but little known and has been seldom referred to in writings on the treatment of liver abscess. Surgeon-Lieutenant-Colonel Hatch recommends caution in the operation of aspiration of the liver for diagnosis of abscess; but you go further and state that "the operation offers no advantages to compensate for its undoubted risk" and recommend its total disuse.[1] This view will not, I believe, commend itself to the majority of surgeons and, if adopted, will result in patients dying from liver abscess unrelieved because their condition remains undiagnosed. The advantages of the operation are the certainty of diagnosis as to the presence of an abscess and its position if a positive result be obtained, and its almost certain absence if pus be not reached on the insertion of the needle at three or four situations. The books notwithstanding, there are no symptoms or physical signs on which the surgeon can depend for indicating the necessity of operation in cases of suspected abscess of the liver; perhaps of the latter œdema of the skin is the most valuable, but it is very seldom apparent, not oftener than in 4 or 5 per cent. of the cases—a sense of fluctuation may be left out of consideration, as it is hardly ever perceptible. I have discovered by means of aspiration liver abscess in cases where the classical symptoms of this complaint were all absent, and where only pain over the liver and the patient's history warranted a bare suspicion of its presence, and I have found it on post-mortem examination in cases which during life exhibited no sign of it. Probably no disease presents cases in which diagnosis is more difficult than it is in some

[1] THE LANCET, May 14th, 1898, p. 1343.

cases of liver abscess, and in these "prospecting" the organ with an aspirator affords the only certain data on which to form an opinion. I have treated a large number of cases (over 150) in which abscess of the liver was present or suspected, and my routine plan has been to aspirate first at one or more points and then to operate on a positive result being obtained. In those cases in which pus was not reached no evil effect was ever perceived, the only result being a very considerable decrease of the pain previously felt, and this whether the amount of blood removed was great or small. The needle employed should no doubt be small, and that it be too narrow to permit the pus to flow freely, through it in some cases is hardly an objection, because even under these circumstances sufficient for merely diagnostic purposes may be obtained on separating the needle from the indiarubber tube and blowing its contents on to the palm of the hand.

In the face of the cases related by Surgeon-Lieutenant-Colonel Hatch and of others one must admit a certain amount of risk from aspiration of the liver, but the ratio of fatal cases to the total number treated is almost infinitesimal and should be disregarded. The fact that THE LANCET is read all over the world by medical officers who are likely to have these cases to treat must be my excuse for asking you to give space to this letter.

I am, Sirs, yours faithfully,

W. F. STEVENSON, Surgeon-Colonel A.M.S.,
Professor of Surgery, Army Medical School.

Netley, May 15th, 1898.

THE POLICE AND THEIR AMBULANCE ARRANGEMENTS.

To the Editors of THE LANCET.

SIRS,—The Home Secretary's reply in the House of Commons to a question about first aid in London, as reported in THE LANCET of May 14th, seems to me to deserve more attention than it has yet met with at the hands of the press, since it affects in a marked degree the safety of all those who daily pass along our thoroughfares. With reference to the ambulance work rendered by the police on the occasion of the collapse of a building in Westminster on April 21st the following undisputed facts may be noted. No first aid was rendered on account of "the presence of a great and excited crowd" (springing up, I suppose, instantaneously); cabs were used to convey the injured to the hospital, for there could be no time to get any other means of conveyance, as they were removed to the hospital and under treatment within four minutes of the accident. Out of the 70 constables present who, we are told, were competent to render first aid not one was called upon to treat a single case.

It is superfluous on my part to comment upon the curious reason given by the police for not rendering first aid or upon the hasty method of getting these poor injured men to the hospital, as both are exactly upon all fours with the ordinary manner adopted by the police in treating the every-day accidents in our streets. They only bring out in strong relief the main fact that no ambulance work of any consequence is carried out by the police in the case of street accidents. If ever there was a case in which first aid ought to have been promptly rendered the catastrophe at Westminster was the one and it is not creditable to this city that the police ambulance arrangements should turn out to be such a failure.

I am very much afraid that the remarks of the Home Secretary were not thoroughly understood by the House of Commons or the Members would never have cheered the admission that no first aid was rendered in a case where it was so essentially required. Surely the time has now arrived when the Government should make some attempt by inquiry or otherwise to discover what is wrong and why we cannot have some more efficient system of first aid employed in our streets. During this year, judging from previous statistics, I estimate there will be 12,000 accidents in the streets of London (including the City), and, as you have stated elsewhere,[1] these only form a small portion of the cases which would require assistance and I ask, therefore, in the name of humanity, the suffering humanity that is before our eyes, whether you cannot do something to draw the attention of the Government to this crying want. Your power is great and could hardly be used in a better cause.

I am, Sirs, yours faithfully,

HEATON C. HOWARD.

[1] Hospital Sunday Fund Supplement, May, 1895.

THE VICE-PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

To the Editors of THE LANCET.

SIRS,—I desire to intimate through the columns of THE LANCET that I have relinquished the intention which I had formed to seek the Vice-Presidency of the Royal College of Surgeons in Ireland at the approaching election in June next. When I expressed to the Fellows my determination to offer myself for that office I felt that my long service to the school and College as an examiner and Councillor and my seniority as a surgical teacher and as a hospital surgeon might reasonably deserve recognition by the Fellows and that I might hope to be honoured with election to the office which I seek. Unhappily, personal and domestic circumstances prevented me from giving prominence to my candidature until others had occupied the ground in some degree, and as a contest is extremely distasteful to me and in my opinion is not to the advantage of the College I have thought it best to refrain from presenting myself for the vice-chair until the next vacancy may occur. I desire, however, to assure the Fellows that under any circumstances I shall do so when that time arrives and that meanwhile I shall hope to retain my seat on the Council, for re-election to which I now offer myself. With this assurance before them I trust that my friends and supporters will not be induced to pledge their votes to any other candidate for a succeeding vice-presidency.—I am, Sirs, yours faithfully,

L. HEPENSTAL ORMSBY, M.D. Dub., F.R.C.S. Irel.

Merrion-square, Dublin, May 16th, 1898.

"THE DIPLOMA OF THE APOTHECARIES' SOCIETY."

To the Editors of THE LANCET.

SIRS,—Whilst agreeing with Dr. Bateman that Mr. Victor Horsley is an admirable Direct Representative, and likewise agreeing in some degree with his remark as to the "unwisdom of the prosecution" of the L.S.A. London for assuming the title "Physician and Surgeon"—as after all said there is scarcely more than a technical distinction between the L.S.A. and multitudes of others who adopt the same title—be it said to the credit of the General Medical Council, however, that they have got on the right scent, as an intolerable amount of snobbism exists at the present day with regard to the use, or rather abuse, of this title. Until a comparatively recent date this kind of braggadocio was confined to the slums, whereas now the infection has spread to innumerable refined and suburban localities. One of these I happen to know where three medical men, respectively graduates of a university, have in addition to the ordinary plate representing their qualification another plate underneath especially limited to the title, "Physician and Surgeon"; and as to another instance I know an M.R.C.S. and L.R.C.P. Edin. who, in giving a testimonial in a local paper, inserted "Physician" after his name, ignoring altogether the "Surgeon."

I am, Sirs, yours faithfully,

London, May 15th, 1898. M.R.C.S., L.R.C.P. EDIN.

THE MILITARY HOSPITAL AND SANITATION AT CADIZ.

(FROM OUR SPECIAL CORRESPONDENT.)

IN face of the trouble which is besetting the whole Spanish nation it is hard to criticise severely the shortcomings which unfortunately are but too evident. As Cadiz is the nearest Spanish port to Cuba and America I naturally imagined that the town would be in a state of feverish activity. I have nothing to do with the military aspect of the question, but from the sanitary point of view Cadiz is the natural landing place for the sick and

wounded from the seat of war. Consequently I imagined that members of the Red Cross fraternity would be seen everywhere making extensive preparations, and my first care on reaching Cadiz was to call on the president of the local Red Cross Society. My consternation may, however, be better imagined than described when I was told very quietly that the association did not exist as an active body in times of peace. This was April 25th, and that same evening it was proposed to hold a meeting to see if anything could be done. Naturally it is now too late to do anything which will be really effective. As the Red Cross Society was in this passive condition I imagined that in any case the ordinary military services would be in active working order. Consequently I went to the military hospital, but here also I found the same state of stagnation—indeed, it was all so bad that I felt quite discouraged and incapable of entering into details. Here and there a ward was shown to me as being "a little better," and in a yard there were a few men engaged digging up the earth for the purpose of laying a drain which it was imagined would remove some of the stench arising from the latrines. But the drain was a square brick drain and therefore is likely to contaminate the surrounding subsoil and cannot, by reason of its shape, be self-cleansing. On all sides in the building there were rafters and angles and dusty corners. The one redeeming feature is the fact that there is some open ground and some old structures are being demolished. Also just outside the hospital the construction of a large theatre has been commenced and abandoned. The roofless walls would make a fine enclosure and give shelter from the wind in cold weather and shade in hot weather. This would be an excellent place for the erection of tent hospitals. The one thing to be done is to evacuate all, or nearly all, the wards. Then all the open spaces should be utilised to establish tent hospitals. Place the wounded under canvas and then they will enjoy efficient ventilation. All the existing drains and closets should be closed up after pouring down the greatest possible quantity of disinfectants. The tent hospitals should be provided with portable earth closets; the soil to be removed and fresh earth supplied every day. By thus saving the patients from the hospital, camping them out in the open air, and breaking off all connexion with existing drains some hopes could be entertained of their recovery. What is, however, so wonderful is the fact that some of the patients actually recover in spite of the insalubrious condition of this military hospital. Such a fact speaks volumes in favour of the Spanish soldier. He is so abstemious, so steady, so sober, that it is very difficult indeed to kill him. British troops would die in such a hospital, but some, at any rate, of the Spanish soldiers survive. It is impossible not to admire these patient, all-enduring soldiers, but is it right to take advantage of these qualities and make their wonderful vitality an excuse for gross neglect? During the siege of Paris in 1870–71 it was found that the best results from operations, the fewest cases of blood-poisoning, &c., occurred at the American ambulance and this was an ambulance established under canvas. In spite of the Siberian winter which then prevailed the wounded who were nursed under canvas prospered and there were a greater number of recoveries at the American ambulance than at other ambulances where the wounded were treated within the walls of houses. Now, in the poverty-stricken condition of Spain it is useless to propose the building of model hospitals. Besides, even if the means were found for such, hospitals could not be built in time to be of service for the present war. On the other hand, tents are cheaper and can be erected rapidly. Also, in the event of a bombardment, a shell falling on a tent hospital would not do as much mischief as if it fell on a hospital of stone or brick. Now, according to certain telegrams, it would seem as if a naval engagement might take place near Cadiz. This may be followed or accompanied by a bombardment of the town. The danger rests in that case with the splinters as well as with the shell. A wall is of no use against a shell; the fragments of the masonry only add to the number of the splinters. The resistance which the wall offers causes the shell to burst; but a shell would pass through the canvas of a tent without bursting. If, however, a shell bursts outside a hospital then a masonry wall is of use in sheltering the patients and attendants from the fragments. Consequently a tent hospital surrounded by walls represents perhaps the ideal of safety if the walls are not too near to the tent. The shell striking the wall placed at a little distance from the tents bursts in the wall and no one is hurt. If the shell does not strike the wall it may pass through the tent, but without bursting, and would therefore cause no damage unless it happened to hit someone, which is the lesser probability. The danger is due to the numerous fragments rather than to the unexploded and entire shell. In view of these considerations, and as it is absolutely impossible to rebuild the Cadiz military hospital in time to be of service during the present war, the one thing to be done is to establish tent hospitals in the surrounding open spaces and to put the patients under canvas. In so beautiful a climate as that of Andalusia this would be no hardship and financially this would also be the very best way out of the difficulty.

As for Cadiz itself, the town consists of a number of narrow, ill-drained streets. An elaborate plan for the drainage of Cadiz was prepared in 1893. It has remained in the pigeon holes of the municipality ever since. There I found it neatly packed in cardboard with red ribbon bows. It looked very pretty and doubtless it is a very good scheme, but it will be time to discuss its merits when there is a serious prospect of its being carried out. Moreover, I was not able to meet with anyone who seemed capable of giving me a clear account of what it was proposed to do, and from all I heard and saw I was convinced that Cadiz would remain in its present insalubrious condition for some time to come. Of this unwholesome state of affairs I had ample opportunity of judging, for there had been a storm and the sewers, under the pressure of the water, emitted the foulest odours all over the town. It seemed as if hundreds of cesspools were being emptied simultaneously and, as bad sewers are little better than cesspools, the storm waters were actually performing some such Augean task. Yet, notwithstanding all this, when the storm was over the air became so limpid, the sky and waters so blue, that all nature seemed to smile with peace and plenty. Fruits and flowers abounded on all sides and the orange blossoms and bushes of heliotrope, were so bright and sweet that they soon made me forget the stench of the overloaded sewers. But a little care, a slight knowledge of the elementary principles of hygiene and their practical application to everyday life, and what a perfect and ideal town such a place as Cadiz would become. To think that there should be so much foulness, such filth and bad sanitation just where Nature shows herself in all perfection. Let us hope that that drainage scheme, so carefully tied up with red ribbon, will not slumber very many years more in the archives of the Cadiz *Ayuntamiento*.

Cadiz, May.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Outbreak of Plague in Calcutta. — Lessons of the Plague.—Increase in Kurrachee.—The Plague among Rats.

NOTWITHSTANDING the attempts of the authorities to keep undeclared the cases of plague in Calcutta the outbreak is now unmistakeable. The occurrence of the disease in the metropolis of India is a national calamity, because it seems almost bound to spread not only throughout the city itself but among the 80,000,000 people inhabiting Lower Bengal. The conditions of life of the great mass of the people are very similar to those of the people in Bombay and the natives live among equally insanitary surroundings. The mortality from plague in Bombay during the eighteen months of its visitation may be put down at one fortieth of the population, and the ratio of mortality among those attacked averages nearly 75 per cent. Bombay, therefore, has not suffered severely compared with the results of epidemics elsewhere, but the damage done to trade has been enormous. This injury has in all probability been greatly increased by the adoption of a system of quarantine—a system which has over and over again been condemned and which has once more been found to be valueless. The plague in Bombay has also taught other lessons. It has been found that the discovery of cases is most difficult notwithstanding the house-to-house visitation and the other measures adopted to obtain this result. If, therefore, notification be so imperfect the isolation of a percentage of plague cases only must cause this measure to fall very far short of completeness. Segregation of "contacts" again being dependent upon the other

measures must be still less successful. These lessons from the plague in Bombay have been learnt by the authorities in Calcutta and it has already been intimated that the severe repressive measures carried out by the Plague Committee in Bombay will not be adopted. Emptying infected houses and giving the occupants the option of inoculation or segregation promise a much better hope of success. The benefits of inoculation cannot now be disputed, and while for many reasons anything like compulsory inoculation should not be introduced, yet very considerable pressure can be exercised to further its adoption. If it be brought directly home to the minds of the people that it is less than the other evils of repressive sanitary measures the people will probably agree to it. This can be done by giving to an inoculated person the privilege of unrestricted freedom. Such a course would not only tend to make inoculation popular but must prove of immense benefit in many other directions.

The plague in Bombay city itself is rapidly on the decline. Some of the outlying districts prevent the mortality falling to its normal limits. There is reason to believe that the death-rate from so-called fevers is distinctly lowered in the presence of plague. The lowered birth-rate in Bombay, as well as in Poona, during the plague outbreaks is explained by the exodus of women to surrounding districts. In the Punjaub and in Kurrachee the disease seems to be spreading considerably. In the latter city from 30 to 40 fresh cases are being discovered daily. The mortality is very high. Some of the English medical men and nurses have recently been sent to give urgently required assistance and a large staff of practitioners and nurses are about to leave for Calcutta in anticipation of the great demands likely to be made upon their services. These recent outbreaks in Kurrachee and Calcutta, as well as the extension of the epidemic in other districts, conclusively show that the advent of the hot season has little influence in restraining the virulence of this disease. It occurs on high ground as well as at the level of the sea, on dry ground as well as in towns which are more or less waterlogged, in hot weather as in winter, and in the wet season as at other times of the year. The coincidence of the disease occurring in the rat at the commencement of an outbreak among human beings is the one prominent factor amongst the observed associated phenomena.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Deaths under Chloroform.

A CASE of death under chloroform occurred at the General Hospital on May 3rd and was subsequently the subject of an inquiry by the coroner for the city. The patient was a child, aged ten years, the operation being for an affection of the nose and throat. Dr. Sidney Haynes in his evidence stated that he had examined the child previously and had found no contra-indication to the use of chloroform. He had administered it in about 6000 cases and this was the first death which had happened under his care. The coroner (Mr. Bradley) in addressing the jury said that according to a medical paper he had before him there appeared during the last few years to have been an alarming increase in the number of deaths taking place whilst patients were under anæsthetics. In 1887 the number of deaths was 16, whilst in 1897 they reached 96. The jury returned a verdict to the effect that the deceased died whilst under an anæsthetic which was properly administered. At the same time they thought that in such cases parents should be informed that an anæsthetic was proposed to be used and their consent in writing should be obtained. The question was considered by the medical committee of the hospital subsequently. The number of deaths occurring in the hospital was stated to have been in 1892, 1; in 1893, 2; in 1894, 2; in 1895, 2; in 1896, none; in 1898, 2—in the first three months of the year. Obviously the number of operations in which anæsthetics are administered should be considered in any statistics of this kind. Letters have been written to the daily press upon the subject by medical men, a form of discussion to be deprecated and one calculated to raise undue alarm in the public mind. The medical committee have taken the wisest course in appointing a sub-committee to inquire into the whole subject of purity of the anæsthetic used, the dosage, and the conditions generally affecting the issue.

Boric Acid and Butter.

A prosecution by the Birmingham Corporation was conducted at the police-court on May 10th against a tradesman for selling butter containing boric acid. Half a pound of the butter which had been purchased contained boric acid at the rate of 70 gr. to the pound. Dr. Hill, the public analyst, stated that boric acid had powerful physiological effects; it created irritation of the stomach, was a depressant of the heart, and produced congestion and sometimes hæmorrhage of the kidneys. Out of 37 samples of food which he had analysed twelve months ago 20 were adulterated with boric acid. Dr. A. P. Luff, analyst to the Home Office, said that he was decidedly of opinion that 70 gr. of boric acid to the pound in butter would be noxious to health. A fine of 20*s.* and costs was imposed, the costs to include £5 towards the expenses of the prosecution. The question resolved itself into one of amount. Can 1 per cent. of boric acid, as in this instance, be looked upon as excessive, so as to be injurious to health? The Bench decided in the affirmative, and whatever the effects of this dose might be in the quantity of butter eaten they showed that the adulteration could not be effected without breaking the law as they interpreted it on this occasion.

Extraordinary Deaths.

On May 11th, an inquest was held at Dudley on the body of a woman aged sixty-five years, who met with her death in an exceptional manner. After kneeling at the grave of her brother in the cemetery she made an effort to rise, but in doing so fell into the vault over which she was kneeling and disappeared from view; when taken out she was dead. Her weight was 16 st. 12 lb., the vault was from 8 to 9 ft. deep. On May 4th an inquest was held on the body of a woman, aged thirty-three years, the subject of delusions. The deceased was found on the floor of the house dead, her clothing saturated with water, and a pool of water around. There was nothing found to account for her condition. The canal was a quarter of a mile away. The medical man who made the post-mortem examination said that he came to the conclusion that the deceased had died from asphyxia caused by water—practically drowning. He added that according to an American authority a case was recorded where a person who had been immersed in water had recovered sufficiently to walk a considerable distance and had then died. From the condition of the deceased's body and clothing he thought that she had been completely immersed in water. The jury found that death was due to drowning but that there was no evidence to show how the drowning was caused—a conclusion which must be viewed as exceptional in the history of deaths from drowning.

May 17th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Farewell to the late Principal of University College, Liverpool.

THE leave-taking of Dr. G. H. Rendall, the late principal of University College, Liverpool, which took place on May 6th in the Arts Theatre of University College, was a highly interesting ceremony. The Earl of Derby, the president of the college, took the chair on the occasion and the meeting was also graced by the presence of the Lord Mayor of Liverpool and the Lady Mayoress; members of the college council; members of the senate and professorial staff, among which the medical element was largely represented; and also by numerous prominent citizens. Eulogistic references to the many high qualities possessed by the late principal were made by the Earl of Derby and Mr. E. K. Muspratt, the vice-chairman of the council of the college. Not the least interesting feature of the ceremony was the address presented to Dr. Rendall by the students' representative councils on behalf of the male and female students of the college. The president asked Dr. Rendall to unveil a medallion memorial to the late Mr. George Holt, a great benefactor of the college. The public farewell to Dr. Rendall was concluded by a banquet in the evening at the Adelphi Hotel, which was again presided over by the Earl of Derby. The company was large and representative and the

proceedings passed off in the most harmonious manner. The toast of "Victoria University" was proposed by Ian Maclaren (the Rev. Dr. Watson) in a felicitous speech, and was replied to by Principal Boddington, vice-chancellor of Victoria University.

Death of Mr. David Garnet Hurter, M.B., Ch.B. Vict.

The death of Dr. D. G. Hurter at the Liverpool Royal Infirmary on May 11th from typhoid fever, contracted while actively engaged in the discharge of his duties as house physician, cast a gloom over the entire hospital and medical school. Only in July last had young David Hurter obtained honours in the final examination for the M.B. Vict., and his subsequent work in the hospital fully bore out what his student life had shown him to be—a man of original mind and tireless industry. Born in 1875, he was educated in Switzerland and subsequently in Liverpool, joining the Liverpool Medical School in 1892. Among the distinctions obtained during his student career were gold medals in anatomy and medicine, a silver medal in forensic medicine, and certificates of honour in physiology and physics. In October last he was appointed house physician at the Liverpool Royal Infirmary, as stated in THE LANCET, and only last month he was appointed house surgeon, a post he was unhappily never destined to hold. On Sunday, May 15th, a memorial service was held in the chapel of the Royal Infirmary, which was numerously attended by the members of the staff and many of the deceased's colleagues and friends, by all of whom his early death is deeply lamented.

Death of Mr. Thomas Gordon, M.A., M.D. Edin.

The death of Dr. Thomas Gordon, which occurred on May 11th from typhus fever after an illness of ten days, came as a great surprise to his numerous friends and patients. Dr. Gordon graduated at the University of Edinburgh in Arts and Medicine. He was the youngest son of the late Mr. John Gordon of Montrose, N.B., and after practising for a short time in London removed to Broadgreen, near Liverpool, eventually settling down in Liverpool. The deceased was well known in golfing circles. How and where he contracted the illness which resulted in his death at the age of forty-five years has been a matter of anxious investigation on the part of the health authorities.

Ladies' Charity and Lying-in Hospital.

The vacancy in the outdoor medical staff of the Ladies' Charity and Lying-in Hospital has been filled by the appointment of Dr. William Tweedale Thomson, a graduate of the University of Edinburgh.

Hospital for Consumption and Diseases of the Chest.

Messrs. Lockett have contributed the sum of £100 towards the new building fund of this charity.

A Female Registrar of Births and Deaths.

The West Derby Guardians have recently appointed Mrs. Richard Edwards, wife of the retiring registrar, to the post of registrar of births and deaths for the Litherland district.

Presentation to Mr. Charles Langton by the Hospital Saturday Fund Committee.

An interesting gathering was held on the 14th inst. at the Liverpool Royal Infirmary to witness the presentation of an illuminated address subscribed for by the committee of the Hospital Saturday Fund to Mr. Charles Langton upon his retirement owing to ill-health from the post of chairman, an office which he had held for many years. Mr. Langton has devoted his life to hospital work. If not the oldest he is one of the oldest members of the committee of the Liverpool Royal Infirmary. He has been chairman of the Nurses' Home in Dover-street, and for many years has been a member of the committee of the Children's Infirmary. Mr. Langton in a graceful speech thanked the committee of the Hospital Saturday Fund for the good feeling they had always evinced towards him whilst he was their chairman.

May 17th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Title of Doctor of Medicine.

THOMAS PAINE HETHERINGTON was on May 13th prosecuted before the Mayor of Newcastle-upon-Tyne and other magistrates for illegally using the title of Doctor of Medicine. For many years this man has been making a considerable income by holding himself out as a specialist in the treatment of venereal disease. His defence was that he was registered as a dentist and a doctor of medicine of the United States of America; that his father and grandfather had both carried on the same trade in Newcastle without interruption; and that he did not charge for advice, only for medicine supplied, which he said he had a licence to sell. The magistrates fined Hetherington £20 with costs and a cheque was immediately handed in for the amount. This is an important case and probably only one of many likely ere long to come before the magistrates. It demonstrates that the existing law is able to put a stop to some forms of unqualified practice. Unfortunately it is not at present able to altogether prevent unqualified practice, but now that the General Medical Council has prohibited the employment of unqualified assistants by medical men there are good grounds for applying to Parliament to strengthen the law so as to make it possible to put a stop to the practice of medicine and surgery by unqualified men unconnected with qualified practitioners.

The Health of Newcastle-upon-Tyne during the Year 1897.

Dr. H. E. Armstrong, the medical officer of health, has just submitted his annual report for the year 1897. The death-rate has been less than that for the whole of the 33 large towns of the United Kingdom—viz., 18·7 per 1000. There have been fewer deaths from zymotic diseases than in 1896. Dr. Armstrong dwells upon the necessity of the dairies outside the city being regularly inspected, as several cases of enteric fever in the city had been traced to some of them. During the year house accommodation for 1173 families had been provided and 2173 marriages were registered, the highest number on record since 1874. The report is a most satisfactory one.

The Site for the New Infirmary, Newcastle-upon-Tyne.

On April 22nd a public meeting was called by the Mayor of Newcastle for the purpose of confirming the action of the Town Council, which is promoting a Bill before Parliament one item of which is for permission to hand over to the governors of the Royal Infirmary 10 acres of the Leazes upon which to build the new infirmary which Mr. J. Hall has undertaken to erect. The meeting was held in Olympia, which is the largest hall in the city, and was presided over by the Mayor. It was not largely attended and to the general surprise a considerable majority of those present voted against the Bill. A poll was demanded and towards the end of the present month the result will be known. It will be a most unfortunate thing if the property owners and the ratepayers declare against the Bill, and it is believed that there will be an overwhelming majority of votes recorded in favour of the promotion of the Bill. In the meantime meetings of workmen are being held and largely attended at the street corners of the town, where addresses are delivered by town councillors and others in favour of the Bill. Whether it is altogether a wise thing thus to appeal to one section of the community upon an important question affecting the interests of all the inhabitants of Newcastle is a question upon which there is room for more than one opinion. Certainly it tends to introduce a class element into the controversy which it is extremely desirable not to stir up. If by any chance Mr. John Hall's gift of £100,000 should be lost to the sick and lame poor that will be one of the greatest misfortunes possible. The infirmary position is a strong one—the whole of the acting staff have expressed their opinion that the Leazes would be an excellent site, and it is one of those mentioned by Mr. J. Hall in his letter to the committee upon which he would be willing to build. The stewards of the freemen and the corporation are willing to allow the infirmary to be built upon the Leazes. The opposition comes from a section of the freemen, from some property owners residing near the Leazes and from a number of Novocastrians who are unwilling under any circumstances for any part of the town moor to be built upon—for which view there is undoubtedly much to be said. It is announced that should the poll be in favour of building the infirmary on the Leazes the Bill will be opposed in Parliament. It is to be hoped, however, should the poll be in favour of the Bill, the opposition will cease. It would be far better for all concerned that the town should be allowed to manage its own affairs.

Gratuitous Medical Aid in Newcastle-upon-Tyne.

At the weekly meeting of the committee at the Royal Infirmary on May 13th a member stated that 83,000 persons

received relief from the various medical charities in the city during the year 1897—some 40 per cent. of the inhabitants of the town. From the reports of the charities it may appear that 83,000 persons received relief, but it is exceedingly doubtful as to whether this is so. It is more than probable that the same person is entered many times as a patient, and even if 83,000 persons did receive relief it is quite certain many of them were not resident in Newcastle. The idea is prevalent that too many persons are relieved by the medical charities, and the matter having been raised and relegated by the committee to the medical staff of the infirmary to inquire into and report upon, some reliable data are likely to be obtained.

May 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Commissioner of the Local Government Board in Ireland.

SIR FRANCIS MACCABE, the Medical Commissioner of the Local Government Board, has recently retired under the "65" rule after a long and distinguished career in the public service. He filled the position of a medical inspector under the board for many years and was appointed a Royal Commissioner to inquire into the causes of the high death-rate in Dublin in 1879. He has been since then a member of several departmental commissions to investigate matters in connexion with prison dietaries and lunacy administration in Ireland. The ability with which he discharged his difficult duties has never been questioned. The appointment of his successor in office was publicly announced on May 12th, but it had been known for many months that the able and efficient medical inspector for the Dublin district had proved himself to be the only proper successor to Sir Frances Maccabe. The name of Mr. Thomas Stafford as chief medical inspector under the Local Government Board is well known. It is recognised with satisfaction that he as the new medical commissioner will deal with the responsibility as regards the management of the union hospitals and the dispensing medical officers in Ireland under the new board, of which he is now a member, in a large and commonsense fashion and with a keen regard to the requirements of modern science in connexion with sanitation.

Londonderry Lunatic Asylum.

The Privy Council have sanctioned an increase of £50 to the salary of the medical superintendent, Dr. Hetherington.

The Medical Staff of the Tirah Expedition in India.

Amongst the officers specially mentioned in Sir William Lockhart's despatches I find the name of a Belfast man, Surgeon-Major Samuel Ferguson Bigger, M B. Lond. He left his residence, Ardrie, Belfast, in September, 1897, while enjoying a well-earned leave after the Chitral campaign, to take part in the Tirah expedition. Sir William Lockhart writes: "The officers of the Army Medical Staff and of the Indian medical services have fully maintained their high reputation by their attention to the sick and wounded both under fire and in hospital." Dr. Bigger has been gazetted a Surgeon-Lieutenant-Colonel.

The Belfast (Corporation) Hospitals Bill.

Information has reached Belfast that the opposition to this Bill, which comes before a Select Committee of the House of Commons this week, has been withdrawn.

The Proposed New Asylum for County Londonderry.

There can be no doubt that throughout the county of Londonderry there is a widespread opposition amongst the ratepayers to the erection of the new asylum at Londonderry and this on many grounds. It is argued that owing to the poor agricultural prospects it is unfair to increase taxation for the erection of new buildings when many of the unfilled workhouses in different parts of the counties might be utilised for the housing of harmless lunatics; and it is also felt that the new asylum will not be at all central in its position and that the county is not properly represented on the board of governors. The delay in reference to the contracts (as reported in THE LANCET of May 7th, p. 1287) has again drawn attention to the matter, and at the Limavady Board of Guardians on May 16th it was resolved, after a very important discussion, to pass the following motion: "That the building of the new asylum for this (Londonderry) county be postponed in view of the new Local Government Bill becoming law." It was complained by some of the speakers that the Derry people and the Derry boards had not treated the county ratepayers fairly over this matter. It seems that although the ground for the new asylum at Derry has been purchased no contract has as yet been taken for the building. It is thought the Government want pressure brought to bear on them and that they may leave the whole matter of the erection of the new asylum over until the passing of the Local Government Bill, when of course an entirely new aspect will be put on the matter.

The Weather in Ulster.

We are at present experiencing in Ulster exceptionally bad weather. The nights are cold, severe frosts prevailing, while the days are sunless with frequent showers of rain, often accompanied with hail. Not for years have we had such a cheerless May.

Can Poor-law Medical Officers call in Consultants? Important Decision.

A case in which consultants and Poor-law medical officers were very much interested and which was listed for trial before the County-court judge has just been brought to a termination. Some notes on the subject have already appeared in THE LANCET. About three years ago a sealed order was issued by the Local Government Board to the effect that a Poor-law medical officer is at liberty to call in assistance if required with the consent of the guardians if the delay would not be injurious, but if the case proved to be very urgent then the services of "the nearest duly qualified medical practitioner" should be requisitioned. At the instance of Poor-law medical officers the Irish Medical Association wrote to the Local Government Board pointing out that "the nearest duly qualified medical practitioner" may not be in a position to render the required assistance and asking the board to define exactly how the medical officer should act under the circumstances. The Local Government Board declined to give the desired information and in polite language suggested that the subject was not one about which the association need concern itself. Some months ago a man was admitted to the Mitchelstown Workhouse Hospital suffering from depressed fracture of the skull in connexion with which serious symptoms had set in. The master, at the request of Mr. Walsh, the medical officer, telegraphed for Dr. Corby of Cork. Dr. Corby saw the patient in consultation with Mr. Walsh and proposed operation, but the patient persistently declined to permit it. In due course Dr. Corby applied to the guardians for his fee, but they stated that they could not pay it as the terms of the sealed order of the Local Government Board had not been complied with. Dr. Corby wrote to the Local Government Board explaining the circumstances of the case, suggesting that the Board could not have intended that their sealed order should have been interpreted so literally, and asked them to instruct the guardians as to their duties. The Board simply forwarded the letter to the guardians, but on being still further pressed they hinted that if the guardians passed a cheque for the amount of the fee they (the Local Government Board) would probably raise no objection. However, the guardians feared being surcharged by the auditor and persisted in refusing to pay. Dr. Corby accordingly instituted legal proceedings and, knowing the case would have far-reaching effects for the profession, engaged counsel. A defence was entered by the guardians, but there was an unexpected development a few days prior to the commencement of the sessions. The guardians' solicitor wrote to say that acting on the instructions of the Local Government Board auditor he was prepared to consent to a decree for the debt and costs. This action of the Local Government Board is regarded as the prelude to the withdrawal of the objectionable sealed order, especially as the *personnel* of the Local Government Board has been almost completely changed during the past week.

May 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Immunity of Arabs against Typhoid Fever.

M. VINCENT (Val-de-Grâce) stated at a meeting of the Academy of Medicine held on May 10th that he has found that French soldiers are on an average a hundred times more

subject to typhoid fever than native soldiers, a singular observation, because this disease is in general serious when it attacks Arabs. The comparative exemption of the Arabs depends, in his opinion, neither on a previous attack nor on a slow acclimatisation consequent on residence in towns, but on a natural immunity comparable to the immunity of negroes against yellow fever or of Algerian sheep against anthrax. M. Vincent endeavoured to discover if the blood obtained from Arabs caused agglutination of typhoid bacilli. The blood of 23 natives was used for that purpose, but it presented no distinct serum reaction, the phenomena being exactly the same as those yielded by the blood of persons susceptible of the infection of typhoid fever. This constitutes a new proof that the agglutinating power of blood is not necessarily connected with immunity, whether natural or acquired, and that the serum reaction is a reaction of infection and perhaps of defence, but not a reaction of immunity.

Orthoform in Gynæcology.

At the same meeting of the Academy of Medicine M. Pozzi presented a communication by Dr. Blondel on Various Applications of Orthoform in Gynæcology, especially for the Production of Local Anæsthesia of the Uterus in the Treatment of Endometritis and even in Curetting. Orthoform, the scientific name of which is para-amidometoxybenzoic acid, is a derivative of cocaine and possesses a similar anæsthetic power, which may, however, be prolonged for twenty-four hours and is, moreover, absolutely harmless. Dr. Blondel has employed for uterine dilatation laminaria tents which had been kept for eight days in ether saturated with orthoform and were found to produce in almost all cases only slight pain. A series of 50 patients were successfully treated for endometritis in an average period of three weeks by the employment of intra-uterine drainage with antiseptic gauze soaked with glycerine, a treatment which Dr. Blondel has made use of for six years with good results. Hitherto it has been rather painful, but after the addition of orthoform suspended in the glycerine the patients have felt no pain and have been enabled to go about during the time that they refrained from following their occupations. Curetting could be effectually performed without pain if the uterus was filled with orthoform gauze an hour before the operation.

Statistics of Diphtheria.

At a meeting of the Société Médicale des Hôpitaux held on April 15th M. Sevestre submitted statistics of diphtheria in the Children's Hospital during the year 1897. Among 580 patients the total mortality was 17·4 per cent. If the deaths which occurred during the first twenty-four hours after admission be deducted the mortality falls to 10·8 per cent. Various doses of serum were given, the average amount injected being 20 c.c. There were 341 cases of croup, among which intubation was performed on 202 children. At the same meeting M. Richardière submitted to the society the statistics of diphtheria at the Hôpital Trousseau for the first six and the last two months of the year 1897. It included 696 patients, of whom 125 died, giving a mortality of 17·9 per cent. On deducting 31 cases in which death occurred in less than twenty-four hours after admission the mortality is reduced to 13·5 per cent. Among these patients 344 cases of diphtheria which were not operated on gave a mortality of 4·1 per cent. Intubation was performed on 172 children, of whom 47 died, giving a mortality of 27·2 per cent. The cause of death after operation was almost invariably broncho-pneumonia. Among 11 cases in which primary tracheotomy was resorted to there were 5 deaths, or a mortality of 45·4 per cent. Secondary tracheotomy, after intubation, was performed 55 times; only 11 of these children survived.

The New Director-General of the Assistance Publique.

Dr. Napias, member of the Academy of Medicine, Inspector-General to the Ministry of the Interior, founder and general secretary of the Society of Public Medicine, has just been appointed Director-General of the Assistance Publique at Paris, in succession to Dr. Peyron, who resigned with the intention of devoting himself to politics and offered his services to the electorate of Seine et Oise but has not been successful. Dr. Napias is an eminent authority on all questions of poor relief and hygiene. His sterling qualities, both as a thinker and a man, are recognised on all sides and it will be generally admitted that no better selection could have been made.

A Notorious Murderer.

The notorious Vacher, who was arrested last year after having committed 20 murders according to his own confession and probably more than as many again, has been examined by three medical men familiar with mental disorders, Dr. Lacassagne, Dr. Rebatel, and Dr. Piéret. They divided the scope of the examination into distinct sections. Dr. Piéret took up the part of Vacher's life previously to his manifold crimes, from childhood until joining his regiment. He pointed out the prisoner's hereditary defects, his life in monasteries, his endeavour to murder his sweetheart followed by attempted suicide, and lastly his confinement for a year in a lunatic asylum. Dr. Lacassagne examined the period during which the various crimes were committed, a task which involved the study of more than 200 police records. According to him the prisoner's responsibility is unquestionable, full and complete, and the precautions which he took after each of his crimes to put the police off his track show the professional criminal. Finally, Dr. Rebatel has made a study of the man since his imprisonment, during which he feigned insanity and said that he was a messenger from heaven. The general conclusion of the three experts combined, arrived at after a long and conflicting discussion, was that the prisoner's hereditary defects and his antecedents were such as to warrant the opinion that his responsibility for his actions was in some degree impaired.

Medical Victims to Duty.

Dr. Davaine has just died at the age of twenty-nine years, a victim to duty. Some days ago he was sent for to attend a young child from whom he contracted diphtheria which has proved fatal. M. Gaume, a hospital *externe* at Lyons, has died after a short illness from acute septicæmia, the result of making a post-mortem examination of a case of gangrene.

May 17th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Seidel Trial.

A SENSATIONAL trial, in which members of the medical profession were especially prominent, took place recently before a law-court at Brunswick. The events which led up to these proceedings happened a considerable time ago. The chief surgeon of the Brunswick General Hospital, Professor Seidel, formerly an assistant to the celebrated Professor von Volkmann, was said by some medical men of the town to have infringed the laws of professional etiquette by attending patients of other practitioners. Professor Seidel having heard of this talk, and being unable to obtain a retractation of the charge, unfortunately committed an act of violence by assaulting the author of these rumours with a whip. On account of this it was proposed that he should be excluded from the medical associations of Brunswick, but before the question came to the vote he committed suicide. It was understood from letters left by him addressed to his family and his friends that the occurrence above mentioned was not the only cause of his death, but that there were other intrigues which had rendered his position insupportable. It had been reported to the Government of Brunswick, which has the control of the hospital, that Professor Seidel had neglected his duties by not visiting the hospital wards regularly, that he had caused the death of a patient by performing a laparotomy when he was suffering from a furuncle on one of his fingers, and that he was not sufficiently careful with respect to antisepsis. These rumours, which originated chiefly with Professor Seidel's assistants, induced the Government to interrogate them officially and to open an inquiry. It was also intimated to Professor Seidel that he was suspended from his functions until the completion of the inquiry, but his death occurred before this intention was carried out. In his last letters Professor Seidel declared that he was driven to commit suicide principally by the behaviour of his assistants, whom he had believed to be his friends, and he implored his family to do everything to vindicate his honour. His brother accordingly applied to the leading surgeons of Germany to ask their opinion on the alleged misdemeanours of the deceased. There was a nearly general opinion that the Government of Brunswick had erred in suspending Professor Seidel before he had had an opportunity of defending himself and that the assistants had behaved improperly in intriguing against their chief. Professor von Bergmann of Berlin wrote a letter in which this opinion was expressed in an especially severe

way and it was published by the brothers in the leading papers of Brunswick, where the whole affair had naturally caused an immense sensation. The Government and the assistants thereupon prosecuted the brothers for libel. The trial lasted for five days and the professors of surgery of the two neighbouring universities—Professor Braun of Göttingen and Professor von Bramann of Halle—attended throughout the whole proceedings as medical experts. A great number of witnesses, old patients, hospital nurses, former assistants, &c., were summoned and gave evidence to the effect that the patients liked Professor Seidel and had never felt themselves neglected by him. As to the non-observance of antiseptic precautions it was stated in evidence that the death of a patient which had been attributed to Professor Seidel's carelessness was caused by perforative peritonitis following appendicitis. Other charges made against Professor Seidel were, in the opinion of the experts, not sustained. The greatest sensation was caused when Professor von Bergmann, although seriously ill, appeared before the court demanding to give evidence. The Public Prosecutor was desirous that he should not be heard, for, being the author of the offending letter, he must eventually be regarded as an accomplice of the defendants; but the court, nevertheless, allowed him to speak. In his evidence Professor von Bergmann declared that if a hospital officer could be suspended on charges like those which were imputed to the late Professor Seidel no surgeon could in future be sure of not becoming the defendant in a prosecution and that nobody would undertake to perform operations. The rules of antisepsis were not so precise as was believed by the assistants. He dealt very severely with the behaviour of the latter, saying that he could not criticise them adequately without committing a new offence. He was glad to say that it was the only instance, so far as he knew, of assistants endeavouring to undermine the position of their chief, to whom they ought rather to feel indebted. The other experts coincided in this opinion. The brothers of Professor Seidel were found "not guilty," a verdict which was received by the audience with great applause. The court in delivering judgment on the sixth day of the trial said that the accusations against the late Professor Seidel had been proved to be unfounded and that the defendants had not acted libellously in contradicting them. The whole press published detailed reports of the proceedings and the action of the Government and the assistants was generally condemned.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Quarantine Regulations at El Tor.

THE old regulations for the landing and examination of pilgrims will be enforced this year with more than usual care. It is intended to examine every man for plague by inspecting his tongue, skin, armpits, and groins, and the travellers will be landed in groups of forty or less. A medical officer will be furnished for every lot of 500 pilgrims and he will be responsible among other things for the disinfection of latrines with lime, for the general hygiene of the camp, and for the cleanliness of the food and water. Three hospitals are provided—one for general diseases; one for diarrhœa, which is an annual accompaniment of the pilgrims; and the third for epidemic or infectious disease. The dead will be submitted to necropsy and bacteriological examination. Those arriving earliest are expected to reach Tor about the middle of May and Dr. Armand Ruffer hopes to be there then himself. Ten disinfecting stoves for treating clothes and bedding are already on the spot and they supply a greater quantity of sterilising power than was ever before present.

Presentation to Mr. Milton.

Last week an evening entertainment was given to Mr. Milton by the native doctors, druggists, and nurses of Kasr-el-Aini Hospital, of which he has been the energetic and creative director for the past fourteen years. Speeches were delivered by five of the hosts in classical Arabic, describing some of the reforms instituted by their guest and master. Mr. Milton, in a feeling reply, spoke in English and in French, adding a few words in German and in Arabic. The articles presented to Mr. Milton on the occasion included a very large gold watch from the hospital officials, a silver service from old students of the hospital, and a china coffee service from the native nurses. The whole idea originated with the Egyptians themselves, the occasion being quite unique in the history of this country and proving a very gratifying token that good English work can be fully appreciated by the natives.

British Wounded in the Soudan.

The first convoy of wounded from the Soudan, consisting of 6 officers and 15 men, left Abadia, near Ginanetti, on May 1st; the second, with 6 officers and 29 men, left on May 2nd; the third, with 40 men, left on May 4th; and the fourth and last, with 30 men, will leave on May 7th. In three days after starting they expect to be at Assouan and they ought all to be in Cairo before May 18th. The British troops will remain in tents and huts at Damali and El Sillem, about 11 miles south of Berber, until a further forward movement be taken, which is not expected until September. The hygiene of the camp is excellent, the general health is good, but the prevailing disease for the moment is dysentery. The Roentgen ray apparatus has now reached Cairo from England and will be ready for the next fight. A sergeant-major of the medical staff is in charge of it and a medical officer who is also an expert with the rays is to arrive here shortly.

Cairo, May 4th.

Obituary.

ALFRED JOHN WALL, M.D. LOND., F.R.C.S. ENG.,

INDIAN MEDICAL SERVICE (RETIRED LIST).

ALFRED JOHN WALL was born in 1847, his father being a medical practitioner with a large practice in the West-end of London. He was educated at Epsom College, where he distinguished himself and received from Dr. Thornton, then head master, a very high unsolicited testimonial to his conduct and abilities when he left the College. In 1865 he entered at St. Mary's Hospital, where he was known as a hard worker, and took various prizes. In 1868 he obtained the scholarship for Anatomy there, which carried with it the title and duties of Assistant Demonstrator of Anatomy for the winter session. In 1870 he was appointed resident medical officer to St. Mary's Hospital, and in 1871 he became resident obstetric officer. In 1872 he became a Fellow of the Royal College of Surgeons of England and in 1873 he went up for the Indian Medical Service competitive examination when he took a high place. In the autumn of the same year he took the degree of M.D. at the University of London. In January, 1874, he went out to India and was almost immediately appointed resident medical officer at Bhangulpore. The following year, when the Snake Poison Commission was instituted, as there was at that time only one other man with his qualifications in the service, although he was so newly entered, he was offered a seat on it. This he accepted and the greater part of the practical work of the Commission fell upon him as the youngest member. He held the post for three years and then as his health was failing he sent in his resignation. He was twice asked to reconsider the matter, but upon adhering to this determination he received a letter of thanks from Government for the valuable work he had done and was offered his choice between the appointment as residency medical officer in Nepaul and deputy professor of anatomy in Calcutta. Considerations of health made him choose the former. Some time afterwards when travelling on furlough he contracted malarial fever, which became complicated with pneumonia and in consequence he came home invalided and never recovered sufficiently to return to India. In 1883 he published a book entitled, "Indian Snake Poisons." He next took up the subject of cholera and followed successive outbreaks of that disease over Europe. In Italy and Sicily he was especially distinguished for his services and the municipal council of one town presented him with an address and the freedom of the place in recognition. The poorer people, too, who shunned their own doctors, thinking that the epidemic had been wilfully produced by them, would rush out of their houses as Dr. Wall passed by and beseech him to go in and help them. In 1893, as a result of these travels and investigations,

he published a book on "Asiatic Cholera," which was favourably reviewed and received.

He had always been an indefatigable student of pathology and he now turned his attention still more closely to it, working at it for many months together in Buda-Pest, Berlin, and Paris. In the former place he did practical work in the laboratory of his friend Dr. Nékám; in the latter he also took the course in bacteriology in the Pasteur Institute. In December, 1897, he left England with the intention of going to the Riviera, there to put into form his pathological notes. But whilst staying in Paris *en route* he became so ill that he was advised to return to England in February, instead of continuing his journey, and went to Hastings. At length his condition became so much more serious that on April 21st he was brought up to London, but he gradually got worse and died on May 2nd, 1898.

A St. Mary's Hospital man and intimate friend of Dr. Wall from student days says of him: "In manner he was diffident, quiet, and retiring. He was extremely well informed in every subject of art, science, and literature—the best possible of companions. He talked German, French, and Italian fluently and was keenly interested in the politics, as well as the literature, of the countries in which he made his temporary home."

ANGUS MACKINTOSH, M.D., L.F.P.S. GLASG.

AFTER an illness of very brief duration Dr. Angus Mackintosh, medical officer of health of the Chesterfield Rural Sanitary District, died at his residence, Gladstone-road, Chesterfield, on May 7th, at the age of sixty-four years. Dr. Mackintosh was a native of Fincastle, Perthshire, and owed his fine physique and imposing personality as well as his love of rural sports to the healthiness of the climate in the charming vale of Athole. He received his medical education at the University of Glasgow, where he carried off from year to year many prizes earning as well the approbation of his teachers and the goodwill of his fellow students. He spent eight years of his professional life in the work of general practice at Callington, Cornwall, but the bent of his mind lay in the direction of his favourite science, preventive medicine, to the literature of which he was a voluminous contributor. He was appointed twenty-five years ago the first medical officer of health of the Chesterfield Combined Sanitary District and continued to discharge the duties of that important post until the day of his death. His successive annual reports, which were often favourably commented on in the columns of THE LANCET show a vast amount of useful sanitary work carried out during his tenure of office towards the sanitary amelioration of this populous district. They were admirable examples of keen observation, close argument, and beautiful diction and will be long remembered by those who read them since they were the outcome of painstaking investigation and original thought. He put his whole soul, mind, and strength into his work and always took his stand rather on the firm ground of fact than on the less certain basis of theory. He loved to examine the foundations on which opinions rest and held fast to the view that correctness of judgment and accuracy of thought are infinitely more valuable than all the speculative knowledge which we can obtain.

Possessed of a dignified presence, an authoritative bearing, and in a pre-eminent degree of the judicial temper, the sanitary authority have lost in Dr. Mackintosh an able officer in whom they reposed every confidence. By many of his colleagues in the public health service, by the members of the medical profession within his district, and by the public whose health he safeguarded for a quarter of a century he will be deeply regretted. The funeral took place on May 10th in the presence of a large assembly of friends, medical men from all parts of the county, and officials of the various public bodies with which Dr. Mackintosh was connected.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ludwig Schillbach, Extraordinary Professor of Surgery in the University of Jena, at the age of seventy-three years.—Dr. Humbert Molière, Physician to the Lyons Hospitals.—Dr. Philogonio Lopes Utinguassu, Assistant Professor of Physiology and Pathological Anatomy in the Medical School of Rio de Janeiro.—Dr. Amedeo Marianelli, Extraordinary Professor of Dermatology and Syphilography in the Medical School of Modena.—Dr. A. Krasovski, formerly Professor of Midwifery and Gynæcology in the Military School of St. Petersburg and Corresponding Member of the Paris Academy of Medicine.

CONGRESS OF INTERNAL MEDICINE AT WIESBADEN.

(FROM OUR BERLIN CORRESPONDENT.)

THE Congress of Internal Medicine was opened at Wiesbaden on April 13th and concluded its work on April 16th. The President was Dr. Schmidt of Frankfort, who in his inaugural address said that the question of medical education which had been chosen as the first subject of discussion was one of great interest because the constant sub-division of medicine and surgery into a number of special branches had made it almost impossible to take a general survey of the whole field of medical knowledge. Nowadays a medical man must be satisfied with keeping himself *au courant* in his speciality and there is no ground for expecting that in the forthcoming century a great genius will arise capable of recombining the disjoined parts of medical science. But even though such an exceptional individual should not be forthcoming, is there any reason for despairing of the future of medicine? This question would not be answered in the affirmative by anyone who had attentively considered the present position of medicine as an art and a science, especially the manner in which laboratory investigations had contributed to the development of methods of treatment. The inquiries necessary for original research had aroused a certain amount of opposition, and as the antivivisectionists are supported in their agitation by women who are fond of dogs and cats so in like manner the medical men ought to look for allies among the mothers whose children owe their recovery from diphtheria to the use of antitoxic serum and among the thousands of patients who have experienced in their own persons the benefits of antiseptics. All these and other improvements were only made possible by experiments on animals. The work of the Congress then commenced with a discussion on

Medical Education.

Professor VON ZIEMSSEN (Munich), who spoke first on this subject, made the following recommendations: The practical and technical education of young medical men should be improved; the duration of the curriculum should be increased; in addition to the lectures on general and special pathology and therapeutics there should be practical courses on the methods of diagnosis (microscopical, chemical, bacteriological, laryngological), on the methods of general therapeutics (dietetic, hydropathic, electric, balneological, &c.), and on the technique of treatment in the hospital wards; the faculties should provide the necessary stock of microscopes, models, and other appliances requisite for clinical study; and the out-patient departments should be made more use of for the purpose of instruction. A "practical year" in a hospital, as proposed in connexion with the contemplated reform of medical examinations and described in THE LANCET of Jan. 4th, 1896, page 74, is very desirable, but this should only be undertaken after the qualifying examinations have been passed.

Dr. VON JAKSCH (Prague) was of opinion that reform in medical education is quite compatible with the existing system of university teaching and that it is not necessary to detach the medical faculties and to institute special medical schools, as has been proposed by some radical reformers. Students ought to be required to attend the medical clinic ten hours every week for two years. Instruction of medical students in hygiene, mental diseases, dermatology, diseases of children, otology and laryngology, dietetic and mechanical treatment and hydro-therapeutics is quite indispensable. An augmentation of the *personnel* and the *matériel* of the clinics will be necessary in order that they may be able to meet the increased demands on them. Specialists ought to have to pass special examinations.

In the course of the discussion Professor JÜRGENSEN of Tübingen pointed out that the importance of internal medicine was not fully recognised by young medical men who were dazzled by the great successes of surgery, but in actual practice nine-tenths of the cases they had to treat were medical.

The utility of the practical year was denied by Professor QUINCKE of Kiel and Professor HOFMANN of Leipsic who were of opinion that it might be replaced by more extended instruction in the out-patients' departments.

The Therapeutic Use of Hot Dry Air.

Dr. MENDELSSOHN (Berlin) said that the treatment of chronic arthritis was almost exclusively a question of temperature and that the most efficacious method was the application of hot dry air, which allows a high temperature to be maintained for as long a time as may be required and does not produce any undesirable symptoms. Dr. Mendelssohn following the example of English physicians has made use of hot dry air and has proved that temperatures of from 120° to 140° C. (from 248° to 284° F.) could be borne by patients for several hours. The subjective sensations were not disagreeable and no unfavourable consequences were produced on either the pulse or the temperature. The immediate local effect on the joints was at once very obvious, especially in chronic rheumatism, gout, and other affections of the joints; sometimes after the first application of the hot air they became temporarily more moveable, but, of course, to obtain a substantial improvement the treatment must be applied for a longer time.

Treatment of Chlorosis by Hot Baths.

Dr. ROSIN (Berlin) said that articles published by Professor Baeltz of Tokio, Japan, had induced him to treat a number of chlorotic patients by baths at 40° C. (104° F.). According to Professor Baeltz the Japanese habitually bathe, not in cold water, but in water at 45° C. (113° F.). They are said to feel quite comfortable after these very hot baths and not to be liable to catch cold. These statements have been tested by experiments made in the medical clinic of Halle, and Dr. Rosin has found that the muscular pain of which chlorotic patients so often make complaint is very soon relieved by this mode of treatment. The baths are given three times a week just before bedtime. On the first occasion the patients remain in the baths for a quarter of an hour and afterwards for half an hour, during which time they perspire abundantly, and are subsequently douched and rubbed. More than three baths a week are unnecessary and the whole course of treatment lasts four weeks. After the baths a sensation of general comfort is experienced, the appearance and the appetite improve, and the muscular pains disappear. These hot baths produce an effect similar to that of the expensive carbonic acid and chalybeate mud baths and are, of course, more within the reach of people of moderate means. Dr. Rosin expressed the opinion that some forms of constitutional disease may be more advantageously treated by inducing perspiration than by internal medication.

Treatment of Diabetes.

Professor LEO (Bonn) introduced the subject with an account of experiments made on dogs for the purpose of investigating the origin of diabetes. He concluded from them that the presence of sugar in persons who are addicted to beer drinking was caused by a toxic product of the yeast cells. Persons in whose family diabetes is hereditary ought, therefore, to avoid the use of beer and those who are already diabetic ought, of course, to do likewise. In order to reduce the formation of sugar in the organism carbohydrates ought to be taken by the patients as sparingly as possible; in fact, they ought at the beginning of the treatment to be absolutely excluded from the dietary, but not for longer than from three to five weeks, during which time the food should principally consist of albumin, fat, and vegetables with nothing but tea or coffee to drink. After this time amylaceous food may be taken in very limited quantities. In somewhat severe cases a period of abstinence is necessary three times a year. Massage is useful for increasing metabolism and strengthening the muscles. Opium may be mentioned as an internal remedy which is efficacious in some instances. A new yeast product, termed zymase, had an obviously good effect in one case, but the observations were not yet finished. The mineral waters of Karlsbad, Neuenahr, &c., were sometimes very valuable, although they had no specific action against the disease.

Dr. GRUBE (Neuenahr) discussed the conditions which presented themselves when diabetes was complicated with albuminuria. Among 473 cases of diabetes examined albumin was found to be present in 191. There are five forms of diabetic albuminuria: (1) the albuminuria of the final stage of far advanced diabetes; (2) that produced by cardiac failure; (3) that due to senile alterations of the blood-vessels, which usually appears earlier in diabetics than in other persons; (4) functional albuminuria which may be caused by irritation of the kidneys by the sugar excretion; and (5) the albuminuria of chronic nephritis.

Chronic Diseases of the Heart.

Dr. SCHOTT (Nauheim), speaking on this subject, said that myocarditis is much more frequent than is generally believed; it is caused by arterio-sclerosis, syphilis, or febrile diseases. Fatty degeneration of the cardiac muscle is still more frequent, the muscular substance being affected by over-exertion of the mental or bodily powers and by abuse of tobacco and alcohol. The principal causes of cardiac trouble are advanced life, the climacteric period in women, and excesses of various kinds, especially masturbation during adolescence. Treatment must first aim at increasing the efficiency of the heart muscle. Digitalis still continues to be regarded as the standard remedy for internal administration. Oertel's "terrain cure" and Zander's gymnastic method also give good results. His (Dr. Schott's) own mechanical method has the advantage of being easily practised and of allowing exact graduation. Its contra-indications are aneurysm of the heart and the great vessels and advanced arterio-sclerosis especially where apoplexy is imminent. Dr. Schott showed a great number of skiagraphs by which it was proved that mechanical treatment caused stronger contraction of the heart and consequently a diminution in the size. On the other hand, in a case of advanced arterio-sclerosis and aneurysm of the aorta the heart was proved to have become still more dilated.

Arthritis Deformans.

Dr. BADT (Salzschlirf) drew attention to the frequency of this disease in women especially at the climacteric period. Of 53 cases observed by him 6 per cent. were men and 94 per cent. were women; in 80 per cent. of the latter the illness began at the age of from forty to fifty years. Dr. Badt was therefore of opinion that the administration of oophorin, which has proved useful in climacteric troubles, might be a valuable adjunct to other therapeutic measures such as baths, massage, &c.

The Urine in Pneumonia.

Dr. FRIEDEL PICK (Prague) stated that he had observed that the urine, which is strongly acid during the feverish stage of pneumonia, at once becomes neutral or alkaline after the crisis. This symptom, which lasts for about twenty-four hours and sometimes even for thirty-six hours, may be caused by the absorption of the sodium compounds contained in the pneumonic exudation. The normal reaction usually reappears after an interval of twenty-four hours.

Intestinal Auto-intoxication.

Dr. MÜLLER (Marburg) said that the term auto-intoxication denoted certain symptoms due to toxic products of metabolism in the individual affected. According to Bouchard's views uræmia, eclampsia, diabetic urine, gout, and the symptoms caused by diseases of the thyroid and the suprarenal glands are auto-intoxications, but intestinal auto-intoxications do not belong to this category as they are produced by saprophytes in the gastro-intestinal canal. Some alleged auto-intoxications must be regarded as cases of poisoning due to unwholesome food. The definite putrefaction products elaborated in the intestines—such as indol, phenol, and skatol—are only very slightly toxic, but there is no doubt that the contents of the intestines may pass into a state of toxic decomposition as is proved by the serious symptoms which may occur in some gastric and intestinal diseases, especially in children. The most favourable condition for such auto-infection is the obstruction to the progress of the fæces which is present in peritonitis and ileus. Dr. Müller said that in classifying an illness as an auto-intoxication it is necessary to be able to define the special toxin in each individual case, but this is as yet far from being accomplished, for the doctrine of auto-intoxication is founded on only a very few exact facts. With respect to treatment, it has been stated that destruction of the bacteria in the intestines is not possible. The effect of calomel does not depend on its antiseptic but on its purgative action.

Professor BRIEGER (Berlin) remarked that the theory of auto-intoxications is founded on the presence of toxins in the urine and the perspiration, but hitherto it has only been possible to isolate those toxins in a few instances. Brieger and Wassermann have succeeded in obtaining a toxalbumin from the urine of patients with erysipelas, whilst Roos

found a similar toxalbumin together with putrescin and cadaverin in the urine of patients with gastro-enteritis. Toxalbumin is present also in the urine of dyspeptic infants. The toxic products of the perspiration are very uncertain. With regard to treatment Professor Brieger recommended diaphoretic and purgative medicines together with washing out the stomach and rectum.

Iodothyrin.

Professor ROOS (Freiburg) stated that the iodothyrin obtained from the thyroid glands of sheep is an albuminous substance containing about 4 per cent. of iodine. Thyroid glands in a state of advanced colloid degeneration, although they contained much iodine, nevertheless yielded only very little iodothyrin. From this Professor Roos inferred that in these diseased glands only a relatively small portion of the iodine was contained in the substance corresponding to iodothyrin and he suggests that in goitre there is an abnormal distribution of iodine in the thyroid gland.

Intradural Injections.

Dr. JACOB (Berlin) said that puncture of the spinal canal, introduced by Professor Quincke in 1891, had been valuable for diagnostic purposes but that its therapeutic utility was less apparent. In particular the diminution of the cerebral pressure brought about by puncture had not been attended by any obvious benefit. Dr. Jacob has made experiments in animals for the purpose of investigating the effects of increase of pressure. He injected into the subarachnoid space of dogs about 70 c.c. of a 0·1 per cent. solution of common salt coloured with methylene blue and this fluid was found at the necropsy to have passed through the whole cerebro-spinal canal and made its way into the brain. But notwithstanding the immense increase of pressure in the cerebro-spinal fluid owing to the injections no symptoms of cerebral pressure showed themselves. Puncture of the cerebro-spinal canal is therefore useless as a means of treatment, for the symptoms of cerebral pressure are not dependent on the increase of fluid in the canal. In a second series of experiments Dr. Jacob made injections into the subarachnoid space for therapeutic purposes. In cases of meningitis the subarachnoid space was washed out with 0·1 per cent. solution of common salt or with carbolic acid solutions varying in strength from 0·5 to 1 per cent. An injection of 25 c.c. of a 4 per cent. solution of potassium iodide in dogs caused dangerous symptoms of poisoning, which, however, soon disappeared. This substance must therefore be employed in weak solutions.

Papers were also read by Dr. Engel (Berlin) on the Blood Cells in Pernicious Anæmia, by Dr. Bornstein on Saccharin, by Dr. Magnus-Levy on the Alkalinity of the Blood in Gout, by Dr. Edinger (Frankfort) on a Disease Resembling Tabes, by Professor Petruschky (Dantzig) on Streptotrichosis, by Professor Wyss (Zürich) on Acute Hæmorrhagic Myelitis, and by Dr. Pässler (Leipsic) on the Treatment of Disorders of the Circulation in Infectious Diseases. The next Congress will meet at Carlsbad.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners:—

Monday, May 16th:

Charles Henry Bullen, Mason University College, Birmingham; William Gough, B.Sc. Lond., Yorkshire College, Leeds; John Ikin Sangster, M.B., Ch.B. Adel., M.R.C.S. Eng., L.R.C.P. Lond., Adelaide University, Yorkshire College, Leeds, and London Hospital; Evelyn Davison Telford, Cambridge University; Albert Ernest Finney and William Paynter Noall, Owens College, Manchester; William Stewart Dickie, St. Mungo's College, Glasgow; and William John Young, University College, Liverpool.

Eight gentlemen were referred for six months.

Tuesday, May 17th:

Nathaniel Bishop Harman, M.R.C.S. Eng., L.R.C.P. Lond., B.A., M.B., B C. Cantab., Cambridge University and Middlesex Hospital; John Thomas Hewetson, M.R.C.S. Eng., L.R.C.P. Lond., M.B., C.M. Edin., Edinburgh University and King's College Hospital; Arthur Gentry Pitts, Charing-cross Hospital; Norman Frederic Ticehurst, B.A. Cantab., Cambridge University and Guy's Hospital; and Arthur Solomon Morley, St. George's Hospital.

Eleven gentlemen were referred for six months.

The following are the arrangements for the forthcoming final examination for the Fellowship, for which 40 gentlemen have entered their names.

Monday, May 23rd, Written Examination, 1.30 P.M. to 5.30 P.M., at Examination Hall; Tuesday, May 24th, Clincal Examination (written and *vivâ voce*), 2.30 P.M. to 5.30 P.M., at Examination Hall; Wednesday, May 25th, Operations, 1.30 P.M. to about 6 P.M., at Examination Hall; Thursday, May 26th, Surgical Anatomy, 2 P.M. to 4 P.M., at Examination Hall; Friday, May 28th, Pathology, 5 P.M. to 7.40 P.M., at Royal College of Surgeons; Saturday, May 28th, Pathology, 3 P.M. to 5.40 P.M., at Royal College of Surgeons. Candidates will be required to attend on May 23rd, 24th, 25th, and 26th, and on the 27th or 28th.

UNIVERSITY OF CAMBRIDGE.—At a congregation on May 12th the following medical and surgical degrees were conferred:—

Doctor of Medicine.—Tice Fisher Budden, Caius; Hugh Edward Wingfield, Caius; George Porter Mathew, Trinity Hall; and Harry Hollis, Sidney Sussex.

Bachelor of Medicine and of Surgery.—Francis Raynes Martin, Caius; and Charles Albert Trouncer, Jesus.

Bachelor of Surgery.—Henry Ernest May, Clare.

At the third examination for medical and surgical degrees, Easter Term, the following candidates passed in the subjects indicated:—

Part I. Surgery and Midwifery.—Barnes, B.A., Christ's; Boulton, B.A., Clare; Byles, King's; W. D. Chapman, B.A., Corpus Christi; H. N. Clarke, B.A., Trinity; Denyer, M.A., Queen's; Dore, B.A., and W. Eardley, M.A., St. John's; Fryer, B.A., Christ's; Garrood, B.A., St. John's; Glasier, B.A., Emmanuel; Glynn, B.A., Clare; W. D. Harmer, B.A., King's; Hart-Smith, B.A., and Hay, B.A., Gonville and Caius; Jordan, B.A., Sidney Sussex; Kemp, B.A., Clare; Letchworth, B.A., Emmanuel; A. F. McCallan, B.A., Christ's; H. F. Parker, B.A., Emmanuel; Pettinger, B.A., H. Selwyn; S. P. Pollard, B.A., Gonville and Caius; Powell, B.A., Emmanuel; S. B. Reid, M.A., St. John's; R. E. Sedgwick, B.A., Gonville and Caius; Sewell, B.A., Pembroke; C. C. Simson, M.A., and G. R. Slade, B.A., Trinity; Stacey, B.A., and F. W. Sumner, B.A., St. John's; Sutcliffe, B.A., Emmanuel; Talbot, B.A., King's; Tallent, B.A., and E. C. Taylor, B.A., St. John's; Thorp, B.A., Emmanuel; I. Ll. Tuckett, M.A., Trinity; Ware, B.A., Pembroke; W. K. Wills, B.A., St. John's; R. J. Wilson, B.A., Emmanuel; and A. G. Wilson, B.A., Gonville and Caius.

Part II.—Betteridge, B.A., Gonville and Caius; T. H. Brown, B.A., Pembroke; Byles, King's; Carter, B.A., Jesus; Corner, B.A., Sidney Sussex; H. G. Deller, B.A., Trinity; A. B. Green, M.A., Downing; Gregory, B.A., St. John's; Harrison, B.A., Magdalene; Heilborn, B.A., Gonville and Caius; Levick, B.A., Jesus; E. A. C. Matthews, B.A., Trinity; H. E. May, M.A., and F. A. Mills, B.A., Clare; Naish, B.A., Trinity; Prest, B.A., St. John's; Ransome, B.A., Gonville and Caius; Roderick, B.A., Emmanuel; J. E. Sandilands, B.A., Trinity; Sargent, B.A., St. John's; Hon. G. H. Scott, B.A., Trinity; and C. White, B.A., Christ's.

ROYAL COLLEGE OF SURGEONS IN IRELAND: DENTAL EXAMINATION.—The following candidates having passed the necessary examination have been admitted Licentiates in Dental Surgery of the College:—

J. J. Hayden, Dublin; F. H. G. Pakenham, Dublin; T. J. Rea, Belfast; and A. G. Taylor, Glasgow.

The following candidates passed the primary part of the examination:—

Miss H. A. Hall, Manchester; and J. I. Potter, Kilkenny.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—The following candidates having passed the examination for the Licence in Midwifery of the Royal College of Physicians of Ireland were admitted as Licentiates on Friday, May 13th:—

G. H. Brand, L.S.A., and A. W. Shea, L.S.A.

FOREIGN UNIVERSITY INTELLIGENCE. — *Basle:* Dr. E. Kaufmann of Breslau has been appointed to the chair of Pathological Anatomy, vacated by the resignation of Professor M. Roth.—*Constantinople:* Dr. Düring, Professor of Dermatology, has been appointed Sub-director of the Haidar Pasha Hospital and has been granted the rank of Pasha.—*Cracow:* Dr. Ladislas Reiss has been promoted to an extraordinary Professorship of Syphiligraphy. Dr. Rudolf Trzebicky has been appointed Extraordinary Professor of Surgery.—*Iurieff:* Dr. N. de Savelieff of Moscow has been appointed Extraordinary Professor of Propædeutics and Medical Pathology—*Padua:* Dr. V. T. Tettenero has been recognised as *privat-docent* of Midwifery and Gynæcology. Dr. Bertelli of Pisa has been recognised as *privat-docent* of Anatomy.—*Philadelphia (Jefferson Medical College):* Dr. Edward P. Davis has been appointed Professor of Midwifery and Dr. E. E. Montgomery Professor of Gynæcology.—*Prague (German University):* Dr. Alfred Fischel has been recognised as *privat-docent* of Anatomy and Embryology. (*Bohemian University*): Dr. Em. Formanek has been recognised as *privat-docent* in Medical Chemistry.—

Rome: Dr. Agenore Zeri has been recognised as *privat-docent* of Medical Pathology.—*St. Petersburg (Military Medical Academy):* Dr. Demetrius Kosorotoff of the Legal Faculty of the University of St. Petersburg has been appointed Extraordinary Professor of Forensic Medicine and Toxicology. Dr. Kedrovski has been recognised as *privat-docent* of Medical Bacteriology.—*Turin:* Dr. Lorenzo Scofone has been recognised as *privat-docent* of Materia Medica and Experimental Pharmacology.—*Vienna:* Dr. Neuburger has been recognised as *privat-docent* of the History of Medicine.

WHITSUNTIDE ON THE CONTINENT. — Cheap tickets available for eight days will be issued to Brussels during the week ending May 28th *viâ* Harwich and Antwerp by the Great Eastern Railway Company. Passengers leaving London in the evening reach Brussels next morning after a comfortable night's rest on board the steamer. For visiting The Hague, Amsterdam and other parts of Holland, the Rhine, North and South Germany, and Basle for Switzerland special facilities are offered *viâ* the Great Eastern Railway Company's Royal Mail Harwich-Hook of Holland route, through carriages being run to Amsterdam and Berlin; through carriages with restaurant cars are also run to Cologne and Basle. The General Steam Navigation Company's fast passenger steamers will leave Harwich on May 25th and 28th for Hamburg, returning May 29th and June 1st.

DIPHTHERIA IN LONDON.—The deaths registered from diphtheria in London last week only amounted to 20, an abnormally low figure as compared with 31, 39, and 27 in the preceding three weeks. Not only, however, was the total of last week below the number of deaths registered from the disease in London during many months past, but it was as much as 17 under the corrected decennial average for the corresponding week of the period 1888-97. Three deaths were those of persons belonging to the Poplar sanitary area. All the deaths were of persons under twenty years of age, though only two were of infants. The admissions to hospital showed no falling off, being 131, against 105, 110, and 133 in earlier weeks, whilst there remained 949 patients under isolation for diphtheria on Saturday last, as compared with 942 on the Saturday preceding, and 930 on the last day of April. The deaths registered from the disease in the Outer Ring also showed a diminution, 10 being the total, of which 3 occurred in Edmonton and 3 in West Ham registration districts.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this society was held on April 29th, Dr. Dundas Grant, President, being in the chair. Dr. Barclay Baron (Bristol) showed a case of Cyst of the Epiglottis in a middle-aged man. There were practically no symptoms, merely a tendency to "hawking" which was probably due to elongation of the uvula. On the lingual surface of the epiglottis there were two cysts, one about ½ in. across, covered with thick mucous membrane, with dilated vessels on its surface and another of about the size of a pea.—Mr. Wyatt Wingrave showed a woman, aged sixty-six years, from whose right vocal cord a fibroma had been removed six months previously with a Krause's snare. There had been no return. He also showed a similar case in a man, aged thirty-eight years, where a fibroma had been partially removed from the right vocal cord by Dr. Dundas Grant's laryngeal cutting forceps. The structure was an angio-fibroma and recurrence was taking place.—Dr. Brown Kelly (Glasgow) read a paper on Cysts of the Floor of the Nose. He described 3 cases of his own and referred to 9 others which have been recorded. In all of these the cyst appeared at the anterior end of the floor immediately behind the junction of the skin and mucous membrane. He had found large ducts in this region, which indicated the probable origin. The most marked sign was prominence of the ala nasi of the affected side. The cyst might be treated from the nose, but when large it should be dissected out from the gingivo-labial fold.—Mr. Wyatt Wingrave read the notes of 3 cases of Lupus of the Nose in which the new tuberculin had been employed by Mr. Lennox Browne and himself. The results did not appear to be encouraging.—The President cited a case of Lupus of the Cheek shown by Dr. Heron at the Clinical Society, where healing had resulted from the injection of new tuberculin.—Mr. Stoker showed a case of Rodent Ulcer of the Nose and a case of Lupus of the Face treated by concentrated sun's rays applied by means of a bi-convex glass lens of 4 in. focus. The results of a series of observations as to the penetrating effect of sun's rays on raw meat had led him to adopt this treatment, which so far had realised his hopes.—The President brought forward several cases of Chronic Dry Catarrh of the Middle Ear of the Sclerotic Type. These had resisted the usual methods of treatment and he had tried the effect of mechanical vibration applied to the dorsal spine. Under this "indirect massage" of the tympanitic structures (presumably of the stapedio-vestibular articulation) considerable improvement had taken place, as was shown by several of the cases presented.

THE LATE DR. HAMILTON KINGLAKE. — Dr. Hamilton Kinglake of Taunton, who died there on May 7th, was a son of the late Mr. William Kinglake of Taunton and the last surviving brother of the late Mr. Alexander William Kinglake, the historian of the Crimean War. Dr. Kinglake graduated as M.D. at Edinburgh University in 1837.

A DAY OF REST IN THE COUNTRY FOR THE METROPOLITAN NURSES.—On Friday, June 3rd next, an opportunity will be offered to the nurses of the metropolitan hospitals and nursing institutions to enjoy a day in the country at Hertingfordbury. Three short services will be given in the parish church with addresses by the Bishop of Thetford. The expense to those attending will not exceed 2*s.* 6*d*, inclusive of the journey from town. Those who may desire to be present should communicate as soon as convenient with the Rev. A. B. Locke, St. George's Hospital, S.W., or with the Rev. Canon Burnside, Rector, Hertingfordbury, Hertford.

CORPORATE AND MEDICAL REFORM COMMITTEE.—A meeting of the executive committee was held on May 14th, Dr. T. Granville Hockridge being in the chair. A letter was read from Dr. D. C. McVail (Crown Representative of Scotland on the General Medical Council), acknowledging the letter adopted at the previous meeting of this committee, thanking Dr. McVail for his action in opposition to the principle of registering and recognising midwives at the recent special meeting of the General Medical Council. On the memorial addressed by the committee to the Home Secretary opposing the registration of midwives a statement of the danger and impolicy of such registration prepared by Mr. R. B. Anderson to accompany the memorial, with a prefatory note by a select committee consisting of the chairman (Dr. T. Granville Hockridge), Dr. Boyd Joll, and Dr. Tom R. Taylor, was approved and adopted. The statement included a statement of the case for the registration of midwives communicated by Mr. F. Rowland Humphreys, honorary secretary of the Midwives Bill Committee, with comments thereon. Mr. Anderson stated that he was making arrangements for the publication of the memorial, prefatory note, and statements. On consideration of the fourth report of Mr. Victor Horsley to the registered practitioners of England and Wales the following resolution was unanimously adopted: "That the President be requested to convey to Mr. Victor Horsley, F.R.S., the thanks of this committee for his fourth report to them and other members of his constituency." Certain resolutions were also directed to be sent to Mr. Horsley. The letter of the chairman and honorary secretaries to the Council of the Royal College of Surgeons of England covering copy of Protest and Claim of Right of Members and Fellows to elect the Representative of the College on the General Medical Council was approved and adopted. (It was forwarded last week.) The following reply has been received:—

Royal College of Surgeons of England,
13th day of May, 1898.

GENTLEMEN,—I am directed to inform you that your letter of the 7th inst. and accompanying statement of Protest and Claim have been laid before the Council of the College.

I am, Gentlemen, your obedient servant,
SIBERT COWELL, Assistant Secretary.

T. Granville Hockridge, Esq.
Tom R. Taylor, Esq.
R. B. Anderson, Esq.

A resolution was unanimously adopted inviting Mr. George Jackson to permit himself to be nominated as a candidate for the approaching election to the College Council in support of the policy of the committee and therewith the following resolution was adopted:—

That in order to promote the best interests of the body corporate the Royal College of Surgeons of England, by advancing the right of Fellows and of Members to elect the Representative of the College on the General Medical Council and the claim of the Members to representation on the Council of the College in accordance with the vote of the meeting of Fellows in January, 1896, the President is requested to convey to Mr. Horsley this resolution of this sub-committee by way of

invitation to permit himself to be nominated for election to the College Council at the ensuing elections thereto and to coöperate in inviting the support of the Association of Fellows of the College in these several respects in accordance with its past policy and as the best mode of access to the body of Fellows.

MEDICAL MAGISTRATE.—The Lord Chancellor has appointed Mr. Walter A. Satchell, F.R.C.P. Edin., M.R.C.S., of Ealing, a justice of the peace for the county of Middlesex.

THE LATE MR. EMIL ARNOLD PRAEGER.—Mr. Praeger, whose death is announced as having taken place at Los Angeles, California, U.S.A., on March 6th, had been in practice in that city for about four years, during which time he had become so popular with his medical brethren that he was this year unanimously chosen president of the county medical society. He was a native of England and held the qualifications of L.F.P.S. Glasg. and L.S.A., both of which he took in 1883, afterwards spending a short time in Africa and also practising in England. Some twelve or fourteen years ago he commenced practice in British Columbia and became surgeon to the Vancouver Mining Company there, but on account of the illness of a daughter he sacrificed this position and went to Los Angeles. The *Southern Californian Practitioner* contains a very sympathetic notice of his life and last illness and adds that "he held various important offices in the society, was a regular attendant at all medical meetings, was elected a member of the Faculty of the Medical College, and last year the *Practitioner* was fortunate in securing him for its editorial staff." Mr. Praeger was forty-three years of age. He has left a widow and three children.

QUEEN'S COLLEGE, BELFAST: SESSION 1897-98.—At the class examinations in the Faculty of Medicine recently held in the above College the following prizes were awarded:—Zoology—Senior Division: Frederick Wm. Stewart. Junior Division: Robert James Bethune, Sydney Herbert George Blakeley, Henry Mulrea Johnston, and Thomas Carnwath and James Kennedy Small (equal). Chemistry—Senior: Andrew Adams Rutherford. Junior: James Kennedy Small and Henry Mulrea Johnston. Practical Chemistry—Senior: Thomas Bernard Vinycomb. Junior: Hugh Beaumont Smith and Wm. John Brereton Fergus. Systematic Anatomy—Senior: John Elder M'Ilwaine, John Campbell Rankin, and Hugh Barkley Steen. Junior: David M'Mordie, Albert Lytle Black, and Samuel Robert Hunter. Practical Anatomy—Senior: John Elder M'Ilwaine and John Hope Reford, B.A. (equal), and Thomas Stratford Logan. Second Year: Archibald George Heron and David M'Mordie (equal). First Year: Robert Alexander Stewart. Physiology and Histology—Senior: John Elder M'Ilwaine and Hugh Barkley Steen (equal), and John Campbell Rankin. Junior: Samuel Robert Hunter, Walter Phillips, and Frederick William Stewart. Practical Physiology and Histology—Hugh Barkley Steen, John Charles M'Carroll, Walter Phillips, and John Campbell Rankin. Medicine—William Robert Wilson (non-matriculated) and John Thomas Bradley. Surgery—Senior: Annie Helen Crawfurd and Robert Alister Little Graham, B.A. (equal), and John Edmund Clements. Junior: William Hunter Matthew, John Weir West, and William Robert Wilson (non-matriculated). Materia Medica—Charles James Ross, B.A., and Thomas Stratford Logan. Midwifery, Gynæcology, and Diseases of Children—John Edmund Clements, John Thomas Bradley, and William Robert Wilson (non-matriculated). Ophthalmology and Otology—W. Matthew Hunter, Robert Alister Little Graham, B.A., and John Weir West. Sanitary Science—William Matthew Hunter and John Weir West.

PRESENTATIONS TO MEDICAL MEN.—Mr. Herbert Burland, L.R.C.P. Lond., M.R.C.S. Eng., of Finedon, Wellingborough, on April 22nd was presented on his approaching marriage by his friends and residents in that town with an address and a dog-cart as marks of esteem.—At a large and representative meeting held in the parish hall, Sedgefield, on April 23rd, Mr. G. R. Sheraton, L.R.C.P. Edin., M.R.C.S. Eng., of that town, on his retirement from professional life was the recipient of a gold hunting watch, chain, and pendant, and at the same time Mrs. Sheraton was presented with a silver tea and coffee service as tokens of regard.—In appreciation of services gratuitously rendered to the under-mentioned ambulance classes presentations have recently been made to Mr. Thomas M. Martin, M.B. Edin., of Lochwinnoch, of a revolving study chair by the members of the Diamond Jubilee Howwood Ambulance classes, and to Mr. W. Mawer, L.S.A., of Tollesbury, Witham, of a silver-mounted walking stick.—On April 26th, at the town-hall, Wiveliscombe, Somerset, Mr. J. Wyatt Pratt, M.R.C.S. Eng., L.R.C.P. Edin., on the occasion of his silver wedding, was presented by the inhabitants of the town, as a mark of their respect and esteem, with a silver tea and coffee service with tray.—In connexion with the successful ambulance classes conducted at Tow Law, county Durham, during past winter, Mr. Wm. Tiplady, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., the instructor, has been presented by the female class with a china salad bowl with silver rim and service to match, while the male class has given him an eight-day marble timepiece with chimes, as tokens of gratitude for his services to the classes.—On May 9th, on the occasion of closing the Whittington Moor ambulance classes, which have been successfully conducted by Mr. Thomas McClure, M.D. Brux., L.R.C.P. Edin., F.R.C.S. Irel., he was the recipient of a marble timepiece bearing the following inscription: "Presented to Dr. McClure by the members of the Whittington Moor and Sheepbridge Ambulance Class, May 10, 1898."—At a meeting at the Wesleyan school-room, Harrogate, on May 9th, Mr. A. W. H. Walker, M.D. Brux., L.R.C.P. Lond., M.R.C.S. Eng., was presented with an electric medical battery by the members of the Wesley Guild Ambulance Class.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Vaccination Bill.

THE House of Commons has referred the Vaccination Bill to the Grand Committee on Law and to assist in the consideration of the Bill there have been added to the committee the following members, viz.: The Attorney General for England, Mr. Thomas Bayley, Sir Charles Cameron, Mr. Channing, Mr. Chaplin, Sir Charles Dalrymple, Sir Walter Foster, Mr. Hazell, Colonel Long, Mr. T. P. O'Connor, Sir William Priestley, General Russell, Mr. T. W. Russell, Mr. Steadman, and Mr. J. W. Wilson. The committee is not expected to reach the Bill until after the Whitsuntide recess.

HOUSE OF COMMONS.

THURSDAY, MAY 12TH.

Phosphorus Poisoning.

Mr. Pickersgill asked the Home Secretary whether, in accordance with his promise given on the 2nd inst., he had made further inquiry into the case of Cornelius Lean, lately employed at the match factory of Messrs. Bryant and May, who was poisoned by the yellow phosphorus used in the manufacture; whether he proposed to direct that proceedings shall be taken against the occupier of the factory and the factory medical officer respectively for neglecting to give the notices required by section 29 of the Factory Act, 1895; and whether it was intended to prosecute the factory medical officer, under the Registration of Births and Deaths Act, upon a charge of wilfully misstating the cause of death upon the medical certificate.—Sir M. White Ridley replied: The inquiries which have been made reveal, I regret to say, systematic neglect on the part of this firm to comply with the obligations as to reporting cases of phosphorus poisoning. The case appears to me to be a very serious one and I have given instructions for the prosecution of the occupiers. As regards the factory medical officer I cannot see sufficient ground for supposing that, as suggested by the hon. member, he made a wilful misstatement as to the cause of death in the case of Lean. In previous cases, however, of phosphorus poisoning he appears to have committed a breach of the Factory Acts in not notifying the fact to the chief inspector, but as he notified them to the employer and as it seems possible he was under a *bond-fide* belief that that was all that was required of him I have decided not to take proceedings against him.—Sir Charles Dilke asked whether any inquiry was going to be held into the question of the use of yellow phosphorus and whether the former committee could be revived for this purpose.—Sir M. White Ridley replied that he thought it desirable to have an inquiry, but he was not able to say what form it would take.

Vaccination Questions.

Mr. Brigg addressed to the President of the Local Government Board the following five questions, viz.: (1) if he was aware that the council of the Association of Public Vaccinators had declared that the time and trouble required under the proposed Vaccination Bill would be ten times that now paid for, thus increasing the probable cost to the ratepayers from £78,000 per annum to £780,000 per annum, and could he hold out any hope that this largely increased cost would be taken over by the Imperial Exchequer; (2) if he was willing to accede to the wish of the council of the Association of Public Vaccinators that a public vaccinator should no longer be engaged by the board of guardians, but be appointed direct by the Local Government Board, thus removing every vestige of popular control or influence; (3) respecting the Vaccination Bill, if the public vaccinator having received part of his fee on the birth of a child would receive the second moiety of his fee in cases where he instituted proceedings but failed to enforce vaccination; (4) if the refusal of a board of guardians to sanction the costs of prosecutions under the Vaccination Bill would subject them

to imprisonment for contempt of court; and (5) if, in cases of the refusal of parents to allow their children to be vaccinated on account of ill-health or what might appear to them some other good reason, would the power of instituting legal proceedings rest with the vaccinator without any other reference or appeal either to guardians or medical authority.—Mr. Chaplin replied: With regard to the first question I am not aware that the council of the association referred to have made any such estimate of the cost. In any case my view is altogether different from that stated in the question, and I have no belief in the increase suggested. The reply to the next two questions is in the negative. With regard to the next question I am afraid I have nothing to add to the answer which was given on Tuesday to the question of the hon. member for the Chesterfield Division—viz., that I have no right to assume that local authorities will refuse to pay any expenses legally payable by them, and I cannot undertake to reply to hypothetical questions. As to the next question it would not. I think, be correct to say that the powers of a vaccination officer, who, I presume, is the officer intended to be referred to, of instituting legal proceedings would rest with that officer without reference to any other authority. They will be subject to certain conditions. If the child were unfit to be vaccinated through ill-health or otherwise and the parent procured a certificate from a medical practitioner to that effect it would be a bar to proceedings under section 29 of the Act of 1867, so long as the certificate continued in force. Further, the section referred to provides that a parent will be guilty of an offence for not causing the child to be vaccinated only in the absence of a reasonable excuse being rendered by him to the satisfaction of the justices.

The Army Medical Service.

In reply to questions on this subject by Dr. Farquharson and Sir William Priestley Mr. Powell Williams said: The Royal Warrant relating to the Army Medical Service will be issued as soon as certain minor details which involve reference to India can be settled. It will provide for the creation of a Royal Army Medical Corps, the members of which up to the rank of colonel will bear military titles, the present compound title being abolished. Above the rank of colonel the members of the corps will bear the title of surgeon-general, with the precedence and privileges of major-generals of the army, such as they now enjoy.—Major Rasch asked whether it was in contemplation to confer the title of general upon veterinary surgeons as well.—Mr. Powell Williams: No. I do not think the matter has been taken into consideration.

Sickness on the "Britannia."

Lord Charles Beresford asked the First Lord of the Admiralty whether he would lay before the House a return showing the cases of sickness on the *Britannia* between Jan. 1st and May 1st and stating the opinion of the medical officers as to whether this outbreak of sickness was attributed in any degree to improper feeding.—Mr. Goschen replied: No public school publishes lists of schoolboy ailments and there is no reason why the *Britannia* should do so. Surely the noble lord does not wish to alarm anxious parents quite unnecessarily by an official list of such ailments described in technical medical language. But to allay any apprehension which the noble lord's question may have caused, I may state that though there have been a good many cases of mumps and measles, as there have been in many schools during the same period, I am assured that in other respects there has been no exceptional sickness in the *Britannia*. If the noble lord will state to me on what authority he puts forward the innuendo as to improper feeding I will give him an answer.—Lord Charles Beresford said that he had received several letters from the parents of boys on the *Britannia* complaining that a great number of them had had boils and other symptoms of improper treatment and he thought it right to clear up the matter.—Sir Charles Dilke said that he had received complaints in regard to the meat supplied.—Mr. Goschen said that the innuendo was that the medical officers had ascribed the sickness to improper feeding. There was no proof whatever of that suggestion. If cases were brought before him in reference to any defects of diet of course inquiry would be made. He had heard that there had been some inquiry in reference to the meat, but the medical officers reported that there had been no exceptional sickness and no sickness had been ascribed to improper feeding. He regretted that any public statement should unnecessarily alarm the parents of the boys.

Medical Service in Uganda.

Captain Norton asked the Under Secretary of State for Foreign Affairs whether it had been brought to his notice that a recent military expedition in Uganda was actually sent on active service without a medical officer to look after the sick and wounded, and that Captain Dunning, D.S.O. Royal Fusiliers, who was seriously wounded, lived for some days in great agony; further, that there was every reason to believe that his life would have been spared had he received even ordinary medical aid; and would he explain why medical volunteers for this service, who could easily have been obtained in this country, were not called for.—Mr. Curzon replied: The incident alluded to occurred in March, 1895, before the present Government came into office. The arrangements for the expedition in question were made by the officer commanding the troops in Uganda. There were at the time only three medical officers attached to the Uganda staff, none of whom unfortunately was available for the expedition, which could not for military reasons be postponed to admit of volunteers being procured from this country. The number of medical officers on the Uganda staff has recently been raised to 12.

FRIDAY, MAY 13TH.

Milk Prosecution.

Major Rasch asked the President of the Local Government Board whether his attention had been called to the case of a farmer selling milk treated with boracic acid and fined at the Marylebone police-court on Wednesday; and if he would state on what grounds the English producer was punished for selling that which the foreigner placed on the home market without any restriction or liability.—Mr. Chaplin replied: I have seen the report of the case referred to. The offence, as I understand, was of having given a false warranty in respect of milk. The provisions of the law as regards the sale of milk produced in this country and treated with boracic acid apply equally to the sale of imported milk so treated.

Cases of Phosphorus Poisoning.

Mr. Pickersgill asked the Home Secretary if he would inquire into the case of a young woman named Tye, living at 47, Beaufoy-road, Plaistow, who twelve months ago while working at the match factory of Messrs. Bryant and May was attacked by phosphorus poisoning and has since been attended by Mr. Cornelius Garman, the medical officer of the firm, or by his son Mr. Bernard Garman; and, if the notices required by the Factory Act had not been given in this case, would he take steps to enforce the law.—Mr. Pickersgill also asked the right hon. gentleman whether he would inquire into the case of Ellen Cotter, living at 10, Bramley-cottages, St. Leonard's-road, Bromley, E., who in August last, while working at the match factory of Messrs. Bryant and May, was attacked by phosphorus poisoning and had since been attended by Mr. Cornelius Garman, the medical officer of Messrs. Bryant and May, and his son Mr. Bernard Garman; and, if the notices required by law had not been given in this case, would he take steps to prosecute the parties in default.—Sir M. White Ridley replied: These cases are among the cases which I mentioned in my answer yesterday and in which I have ordered a prosecution.

The Vaccination Question.

Mr. Goddard asked the President of the Local Government Board if he would authorise magistrates who had convicted defaulters under the Vaccination laws to give a reasonable allowance of time in which to pay their fines before committing them to gaol or issuing distress warrants on their goods.—Mr. Chaplin said that he was advised that the magistrates had power now to allow time for the payment of the penalty or to allow payment by instalments or to allow securities to be taken, but he (Mr. Chaplin) had no power whatever to give any direction or authority to the magistrates in connexion with their convictions.—Mr. Brigg asked the President of the Local Government Board if he was aware that the feeling of a portion of the people in this country was such that in a printed statement, signed by four metropolitan public vaccinators, it was declared that domiciliary vaccination would render the public vaccinator liable to personal insult, and that they suggested other means whereby witnesses might be present when vaccination was offered; and would he take steps that the suggestion offered, or others for the same purpose, should be adopted as a precaution against such insults.—Mr. Chaplin replied that he was aware of the statement referred to, but he thought it would be quite unnecessary to provide by the Bill that a public vaccinator should be accompanied by a witness on the occasion of his visits.

The Nursing Staff for the "Britannia."

Mr. Ascroft asked the First Lord of the Admiralty whether he was aware that on Jan. 14th a copy of the *Navy and Army Illustrated* was sent to every parent of a cadet on the *Britannia* containing a photograph of the nursing staff at the Britannia Hospital; whether he was aware that the females in such photographs attired in nurses' uniforms were the domestic servants and not qualified nurses; whether any, and if so, what, and on what date, qualified nurses were appointed to attend the cadets of the *Britannia* when sent to the hospital; whether he was aware that on the *Conway* and at most of the public schools a qualified medical matron was engaged to look after the sick patients and due notice was given of such sickness to the parents; and whether he would make arrangements that a similar notice should in future be given when any cadets were invalided at the *Britannia* Hospital.—Mr. Austen Chamberlain replied on behalf of the First Lord as follows: The hon. member has sent me a copy of the paper referred to. It contains not only photographs of the nursing staff of the *Britannia*, but also other photographs illustrative of life on the ship. Though, without time for inquiry, I am unable to say by whom the paper was circulated, I feel confident that it was not circulated officially at the public expense as the question would seem to suggest. The photograph represents the ordinary hospital staff, including a trained sister and a trained female nurse, the former appointed in 1894, the latter added in 1896. Both these ladies had long training in civil hospitals and were specially selected on account of their fitness for the positions. The impression that there were no female nurses probably arose from the fact that this is the ordinary nursing staff for the ordinary sick quarters, whilst in a separate house, which is opened when required for infectious cases, there are trained members of the naval sick berth staff. Great care is exercised in their selection to secure the best men. Notice of any cadet being sent to sick quarters is always given to the parents. Perhaps the House will allow me to add, in reference to questions addressed to the First Lord yesterday, that the following telegram was sent to the captain of the *Britannia* this morning:—"Is there any foundation for complaints as to quality of food?" To this inquiry we have received the following reply:—"No. Absolutely without foundation. Captain, *Britannia*."

MONDAY, MAY 16TH.

Food Analysis.

Mr. A. K. Loyd asked the President of the Local Government Board whether, having regard to the success of the inspector employed by the Royal Lancashire Agricultural Society in 1896 in distinguishing impure from genuine butter by simple inspection, he would consider the desirability of placing the services of a few similarly trained specialists at the disposal of local authorities desirous of such assistance before submitting samples to the public analysts; whether samples for analysis selected by the diligence and self-interest of private purchasers show a higher percentage of adulteration than samples submitted more or less at random, by local authorities; and whether private purchasers had since 1896 shown signs of becoming more alive to their rights and powers under the Sale of Food and Drugs Acts and the Margarine Act, 1887.—Mr. Chaplin replied: I am aware of the proceedings of the inspector referred to, but the Local Government Board have neither the duty nor the power to place specialists at the disposal of the local authorities as suggested. The number of samples submitted for analysis by private purchasers in 1897 exclusive of those submitted by the inspector referred to was about the same as in 1896. They show a higher percentage of detected adulterations than samples submitted by the local authorities.

Remarkable State of Things at Southwark.

Sir Charles Cameron asked the Home Secretary whether his attention had been called to the statement that the remains of between 1000 and 2000 bodies had been found in the crypt of St. George-the-Martyr, Southwark, the coffins in which they had been placed having been burst open by dishonest persons

who had managed to break into the crypt and had stolen the lead; whether he had seen a report by Mr. Wanklyn and Mr. W. Cooper, analytical chemists, to the effect that the atmosphere of the church was contaminated by the passage of air from the crypt to such an extent as to render it dangerously impure; whether he was aware that the vestry refused to incur the expense of removing the remains and were in favour of waiting until the noxious fumes exhausted themselves; and whether the Home Office proposed to take any steps in the matter.—Sir M. White Ridley replied: My attention has been called to this statement. The inspector of burial grounds will thoroughly investigate the matter this week and his report will receive immediate attention.

BOOKS, ETC., RECEIVED.

ALLEN, W. H. AND CO., Henrietta-street, London, W.C.
Indian Snake Poisons: their Nature and Effects. By A. J. Wall, M.D. Lond. 1898.

APPLETON, D., AND CO., New York.
Brief Essays on Orthopædic Surgery. By Newton M. Shaffer, M.D. 1898.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
A Manual of Surgery. By W. Rose, M.B., B.S. Lond., F.R.C.S., and Albert Carless, M.S. Lond., F.R.C.S. 1898. Price 21s. net.
Applied Bacteriology. By T. H. Pearmain and C. G. Moor, M.A. Cantab. Second Edition. 1898. Price 12s. 6d. net.

BAILLIÈRE, J. B., ET FILS, Paris.
La Grippe. Par L. Galleard. 1898.

BAUERMEISTER, F., Glasgow.
Verhandlungen der vierzehnten Versammlung der Gesellschaft für Kinderheilkunde. Herausgegeben von Dr. E. Pfeiffer. 1898.
Das Sideroskop und Anwendung. Von E. Asmus. 1898.
Die Arbeit der Verdauungsdrüsen. Von Professor J. P. Pawlow und Dr. A. Walther. 1898.
Die Infectiös-eiterigen Erkrankungen des Gehirns und Rückenmarks. Von Wm. Macewen, M.D., und von Dr. P. Rudloff. 1898.
Lehrbuch der Histologie des Menschen. Von A. A. Bohm und M. von Davidoff. II. Auflage. 1898.

BRAUMULLER, W., Wien und Leipzig.
Archiv für Dermatologie und Syphilis. 43. und 44. Bände. Von Professor F. J. Pick. I. und II. Theile. 1898.

CARRÉ, GEORGES, ET C. NAUD, Paris.
Les Cancers Épithéliaux: Histologie, Histogénèse, Étiologie, Applications thérapeutiques. Par Fabre-Domergue. 1898.

CASSELL AND CO., London.
Tropical Diseases. A Manual of the Diseases of Warm Climates. By Patrick Manson, M.D., LL.D. Aberd. Illustrated. 1898. Price 10s. 6d.

CHURCHILL, J. & A., Great Marlborough-street, London.
Chavasse's Advice to a Mother. By Geo. Carpenter, M.D. Lond. 1898. Price 2s. 6d.
Chavasse's Advice to a Wife. Revised by F. Barnes, M.D., F.R.C.S. 1898. Price 2s. 6d.
The Blood: How to Examine and Diagnose its Diseases. By Alfred C. Coles, M.D. Illustrated. 1898. Price 10s. 6d.

F. A. DAVIS COMPANY, Philadelphia.
Annual and Analytical Cyclopædia of Practical Medicine. By C. E. de M. Sajous, M.D., and Others. Illustrated. Vol. I. 1898.

GRIFFIN, CHARLES, AND CO., Exeter-street, Strand, London.
Forensic Medicine and Toxicology. By D. Mann, M.D., F.R.C.P. 1898. Price 21s.

HIGGINBOTHAM AND CO., Round Road, Madras.
Outlines of Medical Jurisprudence for India. By J. D. B. Gribble, M.R.C.S., and P. Hehir, M.D., B.Sc. Edin., D.P.H. Camb. Fourth Edition, edited by Surgeon-Major P. Hehir, M.D. 1898.

IMPRENTA DE MANUEL ALUFRE, Valencia.
Valencia, como Estacion Invernal. Par Vincente Guillen y Marco. 1898.

KIMPTON, H., High Holborn, London; and HIRSCHFELD BROS., Bream's-buildings, Fetter-lane, London.
Operative Gynæcology. By Howard A. Kelly, A.B., M.D. Vol. I. 1898. Price 31s. 6d.

LEWIS, H. K., Gower-street, London.
A Treatise on Aphasia and other Speech Defects. By H. C. Bastian, M.A., M.D. Lond., F.R.S. Illustrated. 1898. Price 15s.
Asiatic Cholera: its History, Pathology, and Modern Treatment. By A. J. Wall, M.D. Lond. 1893.

LIVINGSTONE, E. & S., Edinburgh.
The Botanist's Vade-Mecum. Compiled by John Wishart. 1898. Price 2s. net.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
On Failure of Brain Power (Encephalasthenia): its Nature and Treatment. By Julius Althaus, M.D., M.R.C.P., M.R.I. Fifth Edition. 1898. Price 5s. net.
Elementary Practical Zoology. By Frank E. Beddard, M.A. Oxon., F.R.S. 1898. Price 2s. 6d.

MASSON ET CIE, Paris.
L'Allaitement mixte et l'Allaitement artificiel. Par H. de Rothschild. 1898.
L'Oreille: IV., Symptomatologie, et V., Pathologie. Par Pierre Bonnier.

MEDICAL PUBLISHING COMPANY, Clinical Journal Office, Bartholomew-close, London, E.C.
On the Treatment of Uterine Myomata (Fibroids). By J. Bland Sutton. Price 3s. 6d.

NEW SYDENHAM SOCIETY, London.
An Atlas of Illustrations of Pathology, compiled for the New Sydenham Society. Fasciculus XI., Diseases of the Nerves. Plates 50 to 65. 1898.

SCIENTIFIC PRESS, Southampton-street, Strand, London.
The Burdett Series, No. 5. Notes on Pharmacy and Dispensing for Nurses. By C. J. S. Thompson. 1898.

SIMPKIN, MARSHALL, HAMILTON, AND CO., Stationers' Hall-court, London.
The Epic of Sounds. An Interpretation of Wagner's Nibelungen Ring. By Freda Wineworth. Second Edition. 1898. Price 3s. 6d.

STOCK, ELLIOT, Paternoster-row, London.
Scientific Method in Biology. By Dr. Elizabeth Blackwell. 1898.

UNWIN, T. F., Paternoster-buildings, London, E.C.
Masters of Medicine. William Stokes. His Life and Work (1804–1878). By his son, William Stokes. 1898. Price 3s. 6d.

WATTS AND CO., Johnson's-court, Fleet-street, London.
Responsible or Irresponsible? Criminal or Mentally Diseased? A Plea for the Unjustly Convicted, and on the Cause of Crime. By H. Smith (Jena). 1898. Price 1s.

WRIGHT, J., AND CO., Bristol.
Diseases of the Upper Respiratory Tract. The Nose, Pharynx, and Larynx. By P. W. Williams, M.D. Lond. Third Edition. Illustrated. 1898. Price 8s. 6d.

French Self-taught, with Phonetic Pronunciation: by C. A. Thimm F.R.G.S. (E. Marlborough and Co., Old Bailey, London); price 1s. 6d.—Tubal Gestation, with Special Reference to its Early Diagnosis and Treatment: by C. J. Cullingworth, M.D., D.C.L. (Hon.) Durh., F.R.C.P. (The Medical Publishing Company, Clinical Journal Office, Bartholomew-close, London, E.C.); 1898; price 2s.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALTHORP, C. F. M., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Bradford Royal Infirmary, vice John Appleyard, resigned.

ASKINS, J. F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to Messrs. Tangye's Cornwall Works, Smethwick, Birmingham.

BELDING, D. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Mitford and Launditch Rural District Council, vice M. G. Dundas, resigned.

BOISSIER, A. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed an Honorary Medical Officer to the Horton Infirmary, Banbury.

BOWES, C. K., M.D. Oxon., B.Ch., has been appointed Medical Officer for the St. Anne's Home at Herne Bay.

BROWN, R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Hackney Union.

BURGESS, A. H., M.B., Ch.B. Vict., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant Medical Officer for the Crumpsall Workhouse of the Township of Manchester.

CARSTAIRS, J. L., M.B., C.M. Glasg., has been appointed a Physician to the Glasgow Central Dispensary, vice A. Sloan, resigned.

CAYLEY, F. P., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant for the Infirmary of the Whitechapel Union.

CHETWOOD-AIKEN, K. C., M.B., C.M. Aberd., has been appointed Ophthalmic Surgeon to the Royal Cornwall Infirmary, vice G. F. Helm.

COOPER, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Staveley Sanitary District of the Kendal Union.

CRAIG, J. W., M.D. Glasg., M.R.C.S., has been re-appointed Medical Officer of Health by the Bingley District Council.

DE GRUCHY, C. W., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Caerleon Urban District Council.

DINGLE, C. V., M.B., B.S. Durh., has been appointed Medical Officer for the Middlesborough Corporation, vice J. A. Malcomson.

EDWARDS, H. J., L.R.C.S., L.R.C.P. Edin., D.P.H. Lond., has been appointed an Honorary Medical Officer to the Horton Infirmary, Banbury.

EHRMANN, A., M.R.C.S., L.R.C.P., has been appointed a Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

GRAHAM, S., L.R.C.P. Lond., has been appointed Resident Medical Superintendent for the District Lunatic Asylum, County Antrim.

HARDWICK, GEO., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer at the Ida Hospital, Leeds.

HILLMAN, G. B., L.S.A., has been re-appointed Medical Officer of Health by the Whitwood Urban District Council.

KEATS, W. J. C., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Infirmary, and Gordon-road Workhouse, of the Parish of St. Giles, Camberwell.

MACGREGOR, G. R, M.D. Aberd., has been re-appointed Medical Officer of Health (Bingley Outer) by the Bingley District Council.

MARKLEY, H., M.R.C.S., L.R.C.P., has been appointed a House Surgeon at the Ida Hospital, Leeds.

NEWELL, ALFRED GEORGE, M.B., M.C. Glasg., D.P.H. Cantab., L.M. Dubl., has been appointed Assistant Medical Officer at the Three Counties' Asylum, near Hitchin.

OVEREND, W., M.D., B.Ch., has been appointed a Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

PIERSON, C., M.R.C.S., L.R.C.P., has been appointed a House Physician at the Ida Hospital, Leeds.

SHILLITO, W. A., M.D. Brux., M.R.C.S., has been appointed a Medical Officer by the Bingley District Council.

SIMPSON, G. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Lastingham Sanitary District of the Pickering Union.

SMITH LLOYD, G., M.D. Edin., L.R.C.S., has been appointed a Physician to the Monmouth Hospital and Dispensary, vice G. Willis, resigned.

TALBOT, F., M.R.C.S., L.R.C.P., has been appointed a House Surgeon at the Ida Hospital, Leeds.

THOMSON, WM. T., M.B., C.M. Edin., has been appointed an Honorary Medical Officer for the Liverpool Ladies' Charity and Lying-in Hospital.

TURNER, A. F., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Borough of Tewkesbury.

VEALE, H., L.S.A., has been appointed a House Physician at the Ida Hospital, Leeds.

VLIELAND, C. J., M.D. Durh., M.R.C.S., has been appointed Medical Officer of Health by the St. Thomas (Exeter) Urban District Council.

WILLIS, GEO., M.D. Glasg., L.R.C.S. Edin., has been appointed an Honorary Consulting Physician to the Monmouth Hospital and Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRENTFORD UNION.—Dispenser for the Infirmary, Workhouse, and Schools at Isleworth. Salary £100 per annum, with dinner and tea daily. Applications to the Clerk, Union Offices, Isleworth, Middlesex.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80, with board and lodging.

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary £130 per annum, with rooms in the infirmary free, also coals and gas.

CARDIFF INFIRMARY.—Assistant House Surgeon and Assistant House Physician, for six months. Board, washing and apartments provided.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress.

COUNTY ASYLUM, Whittingham, Lancs.—Locum Tenens for about five or six months. Two guineas a week.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—In-door Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided and an honorarium of £15 15s. will be granted on the completion of six months' approved service.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Senior House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

EGYPTIAN GOVERNMENT.—The School of Medicine and the Kasr-el-Ainy Hospital, Cairo. Medical Officers. Applications to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, The Examination Hall, Victoria Embankment, London.

GENERAL LYING-IN HOSPITAL, York-road, Lambeth.—House Physician for four months. Salary at the rate of £50 per annum, with board and residence.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Physician or Surgeon for the Skin Department of the Hospital.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Two House Surgeons to Out-patients (non-resident) to attend in the Out-patients' Department for six months. Salary £26 5s.

HOSPITAL FOR WOMEN, Soho-square, London.—Registrar for twelve months. Honorarium 25 guineas.

JOINT COUNTIES ASYLUM, Carmarthen.—Second Assistant Medical Officer, unmarried. Salary £100, increasing, if suitable, to £120, by increments of £10 at the end of the first and £10 at the end of the second year, with board, lodging, washing, and attendance.

LONDON THROAT HOSPITAL, Great Portland-street, W.—House Surgeon (non-resident) for six months. Salary £25.

MIDDLESEX COUNTY ASYLUM, Upper Tooting, S.W.—Assistant Medical Officer, unmarried. Salary commencing at £160 (rising £20 per annum to £200) with furnished apartments, board, &c.

NORTHERN INFIRMARY, Inverness.—House Surgeon and Dispenser. Salary £70, with board, &c.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary £60 for that period, with rooms furnished.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent for six months. Salary at the rate of £50 per annum, subject to the completion of six months' satisfactory service, and board and residence. Applications to the Clerk to the Guardians, 289, Harrow-road, London, W.

PARISH OF SMALL ISLES.—Resident Medical Officer. Salary £100 per annum. Applications to Inspector of Poor, Island of Rigg, Oban, N.B.

ROYAL BERKS HOSPITAL, Reading.—House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer for six months. Board, lodging, and washing provided, and an honorarium of 10 guineas given conditionally.

ST. MARY, Islington.—Second Resident Assistant Medical Officer, and to act as a Dispenser at the Workhouse and Infirmary, St. John's-road, Upper Holloway, and temporary Medical Officer for the Highgate-hill temporary Workhouse. Salary £80 per annum, and rations, apartments, and washing, subject to statutory deductions. Applications to the Clerk, Guardians' Offices, St. John's-road, Upper Holloway, N.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Huston-road, London.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance. Applications to the Hon. Sec., 23, Gordon-street, Gordon-square, W.C.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

TOWER HAMLETS DISPENSARY, White Horse-street, London, E.—Resident Medical Officer. Salary £120 per annum, with furnished rooms, coals, gas, and attendance.

UNITED LAW CLERKS' SOCIETY, London.—Medical Officer. Applications to the Secretary, 3, Old Serjeants' Inn, Chancery-lane, W.C.

UNIVERSITY COLLEGE, Sheffield.—Lecturer in Physiology.

UNIVERSITY OF GLASGOW.—Examinership in Physics for three years. Annual fee of £30.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE), Leeds.—Demonstrator of Physiology. Salary £150.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital. Gratuity £20.

WEST RIDING ASYLUM, Wakefield.—Assistant Medical Officer as locum tenens for ten weeks. Salary £3 3s. per week, with apartments and board.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon, and to act as Surgical Registrar for one year. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

CLARKE.—On May 14th, at Forgate-street, Worcester, the wife of Fielding Clarke, M.R.C.S. Eng. and R.C.P. Lond., &c., of a son.

COLEMAN.—On May 15th, at Sutton Bridge, Lincolnshire, the wife of J. G. B. Coleman, M.R.C.S., L.R.C.P., of a daughter.

CUSHNY.—At Ann Arbor, Michigan, on May 1st, the wife of Arthur R. Cushny, M.D., Professor of Materia Medica and Pharmacology in the University of Michigan, of a daughter.

FLEMING.—On May 17th, at 37, Hyde Park-gate, the wife of Samuel Fleming, M.B., D.P.H., Barrister-at-law, of a daughter.

GRIFFITHS.—On May 13th, at Trumpington-street, Cambridge, the wife of Joseph Griffiths, M.D. Edin., F.R.C.S. Eng., D.P.H. Camb., of a daughter.

HALL.—On May 14th, at The Priesthills, Hinckley, Leicestershire, the wife of James A. T. Hall, L.R.C.P., L.R.C.S. Edin., of a son.

NAPIER-JONES.—On May 13th, at Alnbank, Plaistow, the wife of P. Napier-Jones, M.R.C.S., L.R.C.P., of a daughter.

NOBLE.—On May 8th, at The Moorings, Grove-road, Walthamstow, the wife of William G. Noble, L.S.A., of a daughter (Ida Kathleen).

PARKINSON.—On May 12th, at Wimpole-street, W., the wife of J. P. Parkinson, M.D., M.R.C.P., of a son.

TOTHILL.—On May 11th, at Staines, the wife of Frederick C. Tothill, M.B., of a son.

MARRIAGES.

SHARP—RAMSBOTHAM.—On May 11th, at St. George's Church, Leeds, Arthur John Sharp, M.D., of Bagdale, Whitby, to Mary, eldest daughter of S. H. Ramsbotham, M.D., Park-place, Leeds.

STANWELL—EVANS.—On May 12th, at St. Martin's, Stamford, by the Rev. Charles Stanwell, M.A., vicar of Ipsden, uncle of the bridegroom, assisted by the Rev. A. Jones, M.A., vicar of the parish, St. John Stanwell, M.B. Ed., M.R.C.S., fifth son of the late William Stanwell, M.R.C.S., of Rochdale, to Alice, third daughter of Daniel J. Evans, of Stamford.

DEATHS.

FLEMING.—On May 13th, at Ash Tree Villa, Walton, Aylesbury, Robert Martin Fleming, L.R.C.S., L.R.C.P. Edin., aged 35 years.

GRANGE.—On May 12th, at Tring, Herts, Frank Grange, M.D. Lond., D.P.H. Cambridge, of Southampton, aged 32.

OATES.—On May 15th, after an illness, John Harrison Oates, M.R.C.S. Eng., L.R.C.P. Edin., Manor Place, Dewsbury.

SMITH.—On May 13th, at Clifton, Opie Bewley Smith, late Surgeon 7th Dragoon Guards, of The Laurels, Nunnington, Hereford, aged 70.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 19th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
May 13	29·63	N.W.	0·15	107	58	39	42	46	Cloudy
,, 14	29·63	W.	0·09	103	63	40	46	48	Cloudy
,, 15	29·80	E.	0·07	70	55	47	50	52	Raining
,, 16	30·09	N.E.	...	105	59	45	45	48	Cloudy
,, 17	30·17	W.	...	90	59	44	46	49	Overcast
,, 18	30·19	S.E.	...	103	59	44	47	52	Cloudy
,, 19	29·89	N.E.	...	65	49	41	46	47	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (25th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2 30 P.M.).

THURSDAY (26th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (28th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (24th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. J. Lynn Thomas: Two large Vesical Calculi and Nine Calculi removed from the Urethra.

THURSDAY (26th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Edgware-road).—8.30 P.M. Clinical Evening.

FRIDAY (27th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Annual General Meeting. Election of Officers for Session, 1898-99 Papers:—Mr. H. Marsh: Case of Primary Sarcoma of the Synovial Membrane of the Knee-joint.—Dr. C. R. Box and Mr. C. S. Wallace: Case of Acute Dilatation of the Stomach.—Dr. H. R. Smith: Seven Cases of Cirrhosis of the Liver in Children.—Dr. G. F. Still: Erythema Hæmatogenes (Hæma Rash) in Children.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (23rd).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Whistler: Syphilis as it Affects the Naso-Pharyngeal Tract.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. Lennox Browne: Diseases of the Lingual Tonsil, and their Treatment.

TUESDAY (24th).—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lupus.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ferrier: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: Neuralgia and Headache.

WEDNESDAY (25th).—LONDON POST-GRADUATE COURSE. — Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Sources of Water.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Mansell Moullin: Gynæcological Cases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Kidd: Cases of Pneumothorax.

THURSDAY (26th). — LONDON POST-GRADUATE COURSE. — Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. S. Taylor: Drugs in Chlorosis.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. S. Boyd: Demonstration of Surgical Cases. (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Heat.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr. D. Grant: Mastoid Diseases and Operations.

FRIDAY (27th). — LONDON POST-GRADUATE COURSE.—King's College 4 to 5 P.M. Dr. Wilkinson: Tuberculosis and Leprosy.

SATURDAY (28th).—ROYAL INSTITUTION.—3 P.M. Mr. J. A. Thomson: The Biology of Spring.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, eithe from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

MEDICAL MARRIAGES.

IT would seem that the ladies who honour the medical profession by making it their own are by no means exempt from the ordinary frailties which beset the human race irrespectively of sex. Love is evidently still able to penetrate the interstices of their scientific panoply and, as usual in like cases, the result is matrimony. At the Madrid Congress the approaching marriage of Dr. Kempner and Miss Susanna Rubinstein, who is an assistant in the Institute for Infectious Diseases at Berlin, was announced; and, according to the French medical press, a similar union is about to take place between Surgeon-Major Castelli of Val-de-Grâce and Madame Chellier, whose distinguished medical career in Algeria has been more than once alluded to in these pages (THE LANCET, Sept. 18th (p. 734) and Nov. 20th (p. 1340), 1897). Dr. Castelli left the Republican Guards in order to join the Madagascar Expedition, where his services earned him the Cross of the Legion of Honour. His bride, who is the first native of Algeria to obtain

e diploma of Doctor in Medicine, is known throughout the wilds Kabylia as the "tebiba" or female physician. It is in a eat measure due to her perfect knowledge of the language that e has been enabled to gain the entire confidence of the uncivilised habitants. A French journalist, commenting on this auspicious arriage, says: "If medical ladies do not easily acquire large actices it is, at all events, very pleasant to find them for the most rt happily married. At the present moment we can call to mind e names of four practitioners who have selected their wives from e ranks of the medical profession—to wit, Drs. Déjerine, Jacques rillon, Sollier, and Pillet."

AN IMPROPER CIRCULAR.

To the Editors of THE LANCET.

s,—May I ask your opinion of the enclosed circular which has addressed broadcast to my patients and also other medical men's nts in this district. The enclosed copy was handed to me by a nt of mine who had never seen the writer, to say nothing of his ng never attended her. I await your next issue (containing your ion) with interest. I am, Sirs, yours faithfully,

y 13th, 1898. MEDICUS.

[ENCLOSURE.]

DEAR SIR OR MADAM,—It affords me much pleasure to inform ou that owing to pressure of work I have been compelled to place fully qualified medical gentleman to reside at Ll——.

I have secured the services of Dr. S——, who holds the highest redentials, and I feel justified in believing that implicit confidence n him will not be misplaced.

Dr. S—— will reside at Mr. L——'s, station master, A—— House, l——.

Either Dr. S—— or I will attend at Mr. R——'s, Post-office, C——, ily, at 3 P.M.

I beg the honour to remain, yours respectfully,

—— ——, M.R.C.S., L.R.C.P.

We think the circular an improper one to be sent by any medical n to persons who are not on his own books or his own undoubted ients. The dissemination of such circulars truly makes of the dical profession a trade, and a trade not over particular as to nners.—ED. L.

THE HABITUAL DRUNKARDS ACT.

To the Editors of THE LANCET.

s,—The new Habitual Drunkards Act seems only to provide for stention of those who do some criminal act, but there are very r habitual drunkards, men and women, whom we ought to have r to put away for their own and others' good, just as we do other ses. Cannot something be done to supply this omission?

I am, Sirs, yours faithfully,

rley-street, W., May 15th, 1898. HEYWOOD SMITH.

THE LITERATURE OF TROPICAL DISEASE.

To the Editors of THE LANCET.

s,—Will some of your readers who have served in the West Indies n India refer me to the best English works on diseases of tropical ates? I have Scheube in German, and Laveran, De Brun, and in French, and only Maclean's Diseases of Tropical Climates in sh. As our army is likely in the near future to get a taste of signing in the tropics I should much like to read the best English s on the subject. Especially would I like to be referred to some or works on military hygiene suitable for a combatant officer quainted with tropical service.

I am, Sirs, yours faithfully,

y, N.Y., April 23rd, 1898. WILLIAM WOTKYNS SEYMOUR.

"THE JOHN PAGE HENTSCH APPEAL."

To the Editors of THE LANCET.

s,—I beg to acknowledge the sum of 3 guineas from Sir T. Smith, ford-place. The total amount received is £34 2s. 6d. In closing st I beg to convey the thanks of the widow to those who have rded donations and to you for the use of your valuable space.

I am, Sirs, yours faithfully,

Brixton-road, S.W., May 17th, 1898. G. DAVID KNIGHT.

TO WEARERS OF THE PINCE-NEZ.

To the Editors of THE LANCET.

s,—It may be always worth while to take note of even a minor ent to the eye, more especially when this may as easily be a serious s it is preventable. Within my own experience I have more than met with cases in which more or less damage has resulted to the ll or external canthus by the dragging up against it of the bar which cting backwards from the frame of the ordinary pince-nez serves ep them folded. Of course one is aware that this accident must re likely to occur when a cord is worn as usual and also that it t happen with some forms of pince-nez; but it seems to me a pity the more common form of glasses worn should not be rendered able of inflicting such an injury by this bar being placed in front e folder instead of at the back, where, I take it, it would be quite ficient. The simplicity of the mode in which the injury may and of its remedy may justify this note.

I am, Sirs, yours faithfully,

y 18th, 1898. M.D. LOND.

PUERPERAL ECLAMPSIA.

To the Editors of THE LANCET.

SIRS,—I shall be obliged to any of your readers for references to puerperal eclampsia occurring at an early period in pregnancy and at a late period after delivery. I am, Sirs, yours faithfully,

May 18th, 1898. R. C.

THE NOTORIOUS QUACK TOWNSEND.

"PROFESSOR" W. H. TOWNSEND is well known in the west of England. He apparently finds that the demands of his "practice" are too much for him to carry on alone and he has therefore had the insolence to write to a firm of medical agents the following letter. We need not say that the agents refused to have anything to do with him.

[COPY.]

King Alfred Temperance Hotel, Taunton,

April 21st, 1898.

DEAR SIRS,—Can you place me in communication with a Lady Doctor who is disengaged and who is anxious to be employed in a large practice? Kindly let me know by return. I enclose two or three articles which you may enclose in any letter you may write for me to a Lady Doctor. Her age must be 23, 24, or 25, and please state her experience, &c., if you write me for any Lady.

Yours truly,

(Prof.) W. H. TOWNSEND.

You may place me in communication with a Gentleman Surgeon, M.R.C.S., as well. I have not quite made up my mind who to engage yet.

"Professor" Townsend enclosed a circular with sundry excellent maxims at the head, of which we recommend the following one to those who consult him: "Who knows not and knows not that he knows not is a fool—shun him." We do not suppose that the "Professor" will get either a "Lady Doctor" or a "Gentleman Surgeon."

Subscriber (Brighton).—1. We think that such pamphlets when freely circulated to the public should not bear the name and medical titles of the medical officer. We note, however, that in this particular instance the address is properly absent. 2. The committee should, of course, consult their medical man. 3. If he objects to the publicity they should not publish his name.

Telegraphs.—Our correspondent can get information concerning the colonial medical appointments by making inquiry at the Colonial Office. There are always many applicants for the pleasanter berths, but the pay is not good. Concerning the telegraph ships we advise him to write to Messrs. Siemens Bros. and Company, Limited, of Woolwich, Kent.

M.R.C.S., L.R.C.P., and several others.—We saw the curious error, of course. It was in the majority of the papers, great and small. Considering what are the characteristics of Cheyne-Stokes breathing we think the blunder resulted in a fortunate expression.

B. A. M. gives no permanent address. The system of which he writes is a quack system which cannot be too highly condemned as dangerous and ineffective. He should consult his medical man.

L.R.C.P. has himself named the best treatises. We have nothing to add to his list, but we are doubtful whether it would be wise to embark on such an exhaustive course of reading all at once.

An Old Subscriber is strongly recommended not to give the testimonial in question unless he receives a guarantee that it will not be used as a public advertisement of the article.

R. F. W.—Jamieson's "Diseases of the Skin" is quite suitable. Malcolm Morris's "Diseases of the Skin" is also a very good little book.

R. J.—We do not think the information is forthcoming, but application might be made to the Registrar-General.

Verax.—We have nothing to add to our former answer.

During the week marked copies of the following newspapers have been received: *Dewsbury Reporter, Sheffield Telegraph, Newcastle Leader, New Ross Reporter, Southampton Times, Weston-super-Mare Gazette, Leicester Post, Ayrshire Post, Oban Times, Times of India, Pioneer Mail, Shipping Gazette, Hastings Times, Worthing Gazette, Lowestoft Standard, Westmeath Examiner, New Age, Builder, Manchester Courier, Liverpool Daily Post, Glasgow Herald, Citizen, Architect, Scotsman, Bristol Mercury, Sussex Daily News, Tonbridge Telegraph, Eastern Daily Press, Salisbury Journal, Southampton Observer, Yorkshire Post, Eastern Morning News, Norfolk Chronicle, Birmingham Gazette, Derby Express, Leicester Express, South Wales Daily News, Leeds Mercury, Brighton Gazette, Sanitary Record, Mining Journal, Local Government Chronicle, City Press, Reading Mercury, Hertfordshire Mercury, Local Government Journal, Derbyshire Times, Surrey Advertiser, Grimsby News, Bedfordshire Advertiser, Clifton Chronicle, Banffshire Advertiser, European Mail, Burton Chronicle, Kelso Mail, Tyrone Constitution, Malvern News, Essex Newsman, Thanet Guardian, Alnwick Gazette, Devizes Gazette, West Middlesex Herald, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. J. W. Arrowsmith, Bristol; Aurum, Lond.; Messrs. Arnold and Sons, Lond.; Messrs. Allen and Hanburys, Lond.; Mr. J. F. Atkins, Birmingham; Mr. J. M. Atkinson, Hong Kong.

B.—Dr. J. M. Barbour, Lond.; Dr. E. Bottentuit, Paris; Messrs. Bates, Hendy, and Co., Lond.; T. B. Browne, Ltd., Lond.; Messrs. Bates, Hendy and Co., Reading; Mr. F. Burnside, Hertingfordbury; Dr. L. T. Fraser Bryett, Lond.; British Balneological and Climatological Society, Lond., Secretary of; Mr. L. A. Bidwell, Lond.; Mr. John R. de C. Boscawen, Truro; British Medical Association, Lond., Secretary of; *Broad Arrow*, Lond., Editor of; B., Stroud-green; Mr. G. Brown, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; B. N. M.; Burton-on-Trent Infirmary, Secretary of.

C.—Mr. W. F. Clay, Edinburgh; Dr. W. F. Colclough, Oporto; Dr. O. J. Currie, Maritzburg; County Asylum, Whittingham, Superintendent of; Messrs. E. Cook and Co., Lond.; Dr. W. H. Corfield, Lond.; Mr. D. Campbell, Glasgow; Chelsea Hospital for Women, Lond., Secretary of; Coroners' Society, Lond., Secretary of; Mr. J. Carter, Lond.; Mr. T. Cook, Lond.

D.—Dr. P. J. Daly, Cork; Messrs. W. Dawson and Sons, Lond.; D. E. C., Lond.; Dumfries and Galloway Royal Infirmary, Secretary of; Messrs. Duncan, Flockhardt, and Co., Edinburgh.

E.—Mr. J. B. Ellison, Sheffield; Messrs. Evans, Gadd, and Co., Exeter; European Express Trains Co., Lond., Manager of.

F.—Mr. W. Fingland, Liverpool; Ferru-Cocoa Manufacturing Co., Carmarthen; Dr. C. B. Fitzgerald, Folkestone; Dr. H. Finley, Wimborne; Dr. Furniss, Lond.; Dr. W. Forbes-Leslie, Brussels; Folkestone Medical Society, Hon. Secretary of.

G.—Dr. L. G. Guthrie, Lond.; Dr. Gould, Philadelphia; Messrs. Gale and Co., Lond.; Globe Fishing Co., Grimsby; Messrs. Gordon and Gotch, Lond.

H.—Mr. H. C. Howard, Lond.; Mr. J. Heywood, Manchester; Mr. E. T. Hollings, Newport, Mon.; Hospital Trained Nurses' Association, Lady Superintendent of; H. E. C.; Dr. S. Hyde, Buxton; Homo, Lond.; Mr. L. Hill, Lond.; Dr. J. Holmes, Whitefield; Messrs. Hedgcock and Co., Lond.; Sir F. Seymour Haden, Alresford; Mr. A. J. Hall, Lond.; Dr. G. E. Herman, Lond.; Mr. C. H. Huish, Lond.

J.—Mr. R. A. Jackson, Kirbymoorside; Mr. A. Johnston, Lond.; J. F. S.

K.—Dr. W. R. Kingdon, Ticehurst; Mr. B. Kühn, Lond.; Kingston-upon-Hull Corporation, Town Clerk of; Mr. A. F. Stanley Kent, Lond.; Mr. A. Kendrick, Taunton.

L.—Dr. W. J. Le Grand, South Normanton; *The Laryngoscope*, European Editor of: Dr. Fletcher Little, Lond.; Mr. H. K. Lewis, Lond.

M.—Mr. J. McMurtrie, Glasgow; Medical Society of Victoria, Melbourne, Hon. Secretary of; Maltine Manufacturing Co., Lond.; Dr. R. S. Marsden, Birkenhead; Mr. A. B. Murton, Lowestoft; Dr. G. Mackern, Buenos Ayres.

N.—Newark-on-Trent Hospital, Secretary of; Messrs. Neyroud and Son, Lond.; Northern Infirmary, Inverness, Secretary of; National Hospital for the Paralysed and Epileptic, Lond., Secretary of; Mr. A. Neve, Lond.; Nottingham General Hospital, Secretary of.

O.—Dr. H. Oppenheimer, Lond.; Dr. G. Ogilvie, Lond.

P.—Mr. J. Pond, Norwich; Messrs. Parke, Davis, and Co., Lond.; Dr. Furniss Potter, Lond.; Parish of Small Isles, Bigg, Inspector of; Mr. Y. J. Pentland, Edinburgh.

R.—Mr. E. Rayne, Hayward's Heath; Royal Medical Benevolent College, Lond., Secretary of; Royal College of Surgeons in Ireland, Registrar of; Royal College of Physicians of Ireland, Registrar of; Dr. John Rose, Chesterfield; Dr. J. H. Ray, Manchester; Messrs. Reynell and Son, Lond.; Rochford Union, Clerk of; Messrs. Reynolds and Branson, Leeds.

S.—Dr. D. W. Samways, Mentone; Servus Co., Lond.; Surgeon, Lond.; Messrs. Street and Co., Lond.; Messrs. Smith, Elder, and Co., Lond.; Mr. F. E. Scrase, Lond.; Dr. Saundby, Birmingham; Mr. J. Steele, Kidsgrove; Mr. T. Smith, Lond.; Messrs. J. P. Segg and Co., Lond.; Messrs. W. H. Smith and Son, Manchester; Messrs. Squire and Sons, Lond.; St. Mary Islington, Parish Clerk of; Mr. W. Percy Stocks, Salford; Dr. Seaton, Lond.; Mr. H. Sworder, Luton; Mr. W. D. Spanton, Hanley; Dr. T. E. Sandall, Alford; Sanitary Institute, Lond., Mr. C. H. Sers, Lond.; Mr. J. E. Stott, Liverpool; Messrs. Street Bros., Lond.; Mr. C. H. Shaw, Brighton.

T.—Mr. C. H. Tattersall, Salford; Tower Hamlets Dispensary, Secretary of; Thresh Disinfector Co., Lond.; Dr. J. P. Thomson, Blackpool.

V.—Messrs. J. and J. Vice, Nottingham; Vinolia Co., Lond.; Mr. J. W. Vickers, Lond.

W.—Mr. A. A. Webber, Lond.; Mrs. C. A. E. White, Richmond; Messrs. J. Weiss and Son, Lond.; West Bromwich District Hospital, Secretary of; Wills, Ltd., Lond.; Mr. A. T. Wyard, Chatham; Mr. F. Whincup, Shrewsbury; Mr. E. F. Watts, Rotherham; Women's Trade Union League, Lond., Secretary of; West Riding Asylum, Wakefield, Clerk of.

Y.—Yost Typewriter Co., Lond.; Yorkshire College, Leeds, Secretary of.

Z.—Zeno, Brooklyn, N.Y.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. S. E. Atkins, Pinhoe; Mr. B. H. Andrew, Haddenham; Ariel, Lond.; A. H. B.; A. G. T.; A. H. W. A.; A. C; A. H. P.

B.—Mr. A. Baker, Aysgarth; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. Bayard, Sons, and Bayard, Lond.; Messrs. A. Bishop and Sons, Lond.; Mr. W. L. Byham, Sunbury; Burnley Victoria Hospital, Secretary of; Dr. B. Beck, Ravenstonedale; Mr. Brettell, Lond.; B. J. L.

C.—Dr. W. S. Carroll, Pontypridd; Dr. T. K. Clarke, Huddersfield; Mr. F. Collins, Ware; Mr. W. T. Colman, Taunton; City and County of Bristol, Clerk of; Mr. A. C. Champati, Krishnagar, India; Mr. L. N. Chondhuri, Balaghat; Chesterfield Hospital, Secretary of; Messrs. T. Christy and Co., Lond.; Castle, Lond.; Dr. Cotton, Darsham; Mr. J. B. Cameron, Lond.; Mr. F. W. Clarke, Manchester; Mr. R. H. Cupper, Lond.; Dr. J. Clarke, Lond.

D.—Dr. A. V. Davies, Shaw; Mr. R. Davis, Lond.; Messrs. Downie, Aiton, and Aiton, Glasgow; Dr., Lond.; D. W. W.; Messrs. Deacon and Co., Lond.

E.—Esmond Cycle Saddle Co., Lond.; E. H. G.; Easter-road (34), Edinburgh; E. M. C.

F.—Messrs. Ferris and Co., Bristol; Messrs. Fletcher, Fletcher, and Co., Lond.; F. H. B.

G.—Gloucester General Infirmary, Secretary of; Gem, Lond.; G. H.; G. B. F., Lond.

H.—Dr. F. W. B. Hutchison, Finchingfield; Hull Royal Infirmary, Secretary of; Mr. W. A. Hardiker, Priors Marston; Dr. J. B. Hartley, Darlington; Mr. J. A. T. Hall, Hinckley; H. C. L.; H. T. S.; Hills, Watford; H. W.

L.—Inverness, Lond.; Ilott, Lond.; Messrs. Isaacs and Co., Lond.

J.—Mr. A. Johnston, Aberdeen; Messrs. Johnson, Brown, and Culshawe, Prescot; J. W. L.; Mr. F. F. Jones, Llanfyllin; Mr. P. Napier Jones, Lond.; J. McC.; J. M. M.; J. D.; J. P.; J. J. R.

L.—Mr. J. P. Llewellyn, Lond.; London College of Pharmacy, Secretary of; Locum, New Buckenham; Mr. B. W. Lamb, Albrighton; L. W.

M.—Dr. W. G. Mortimer, Barnstaple; M. Z., Lond.; Dr. F. J. McKettrick, Lond.; Mountjoy Brewery, Dublin; Medical Society of London, Treasurer of: Dr. L. Mallam, Armidale, N.S.W.; Mr. R. H. Mills-Roberts, Llanberis; Dr. F. K. March, Bradford; Mr. S. B. Mason, Pontypool; Mental Nurses' Coöperation, Lond., Lady Superintendent of; S. F. McL.; Dr. R. McDowell, Belfast.

N.—National Provident Institution, Lond., Secretary of; North Wales English Mission Fund, Wrexham, Secretary of.

O.—Oldham Infirmary, Secretary of.

P.—Mr. F. H. Partridge, King's Lynn; Mrs. Pechey, Sidcup; Pluck, Lond.; The Hon. Mrs. Parker, Redhill; P. C.; Mr. J. W. Pratt, Wivelscombe; Professor, Charlton; Mrs. Perrott, Honiton.

R.—Mr. C. Randolph, Milverton; R. M. R.; Rest, Ilfracombe; Mr. J. W. Rodgers, Bundoran.

S.—Mr. B. Schloesser, Hove; Mr. G. S. Sowter, Brigg; Mr. R. Sim, Cheltenham; Sec., Lond.; Sussex County Hospital, Brighton, Secretary of; Scarborough Hospital, Secretary of; Smedley's Hydropathic Co., Matlock, Scope, Lond.; Swansea General Hospital, Secretary of; Dr. B. R. Sawnby, Rawalpindi, India; Miss H. Sandeman, Ware; S. G. W., Lond.; S. H.; S.; Sunderland, &c., Rye Infirmary, Secretary of; Surgeon, Manchester.

T.—Mr. F. Taylor, Leyton; Dr. R. H. Threadgale, Lond.; T. A.; T. B. F. E.; Mr. W. Thomas, Trimsaran; T. B., Lond.; T. S.; T. S. W.

V.—Victoria Carriage Works, Lond.

W.—Mr. E. H. Worth, St. Day; Messrs. E. F. White and Son, Lond.; Dr. H. C. Wilson, Tullynakill; Weston-super-Mare Hospital, Secretary of; Mrs. E. White, Richmond; Mrs. J. Wyard, Lond.; Wolverhampton General Hospital, Secretary of.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

The Ingleby Lectures
ON
EXTRA-UTERINE PREGNANCY.

ivered at Mason College, Birmingham, on May 11th, 18th, and 25th, 1898,

By JOHN W. TAYLOR, F.R.C.S. Eng.,
IDENT OF THE MIDLAND MEDICAL SOCIETY; SURGEON TO THE IRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN; CONSULTING SURGEON TO THE WOLVERHAMPTON HOSPITAL FOR WOMEN, ETC.

LECTURE I.

Delivered on May 11th.

TBAL PREGNANCY AND ITS EARLIER COMPLICATIONS.

I.—Introductory and Historical.

R. DEAN AND GENTLEMEN,—On looking over the whole ain of practical medicine there is perhaps no one disease h during recent years has so notably emerged from urity—about which more has been learnt and in the ment of which more has been achieved—than that which ve taken as the subject of the Ingleby Lectures for

Some twenty years ago the advance of which I have en received its first impetus from the initial work of one y predecessors in this lectureship—Mr. Lawson Tait—from the remarkable book of Dr. Parry, which was led on the records of 500 cases and still remains a d of patient investigation and labour. Although several tions had been undertaken for the removal of an extra-ne fœtus at or beyond the normal period of gestation at least one case of early extra-uterine gestation had successfully relieved by vaginal section,[1] no operative had been made at this time to control the hæmorrhage o rupture of the sac and to save the victim of fatal peritoneal bleeding; and Dr. Parry when dealing with condition wrote in words which have been frequently d, but may even still bear repetition: "A bleeding l through which the red stream of life is rushing can be ligated. A gangrenous limb which is ying its possessor by sending its poisonous emana- to the remotest regions of his body can be ampu- A cancerous breast which is sapping the vitality victim hour by hour can be removed with the prospect porary relief. An aneurysm that places life in constant dy can often be cured by proximal or distal ligation. umultuous motion of a heart organically diseased may leted till nature restores the balance, after which the may enjoy a long and even a useful life. Even is now counts its many cures, but here is an accident may happen to any wife in the most useful period of xistence, which good authorities have said is never and for which, even in this age when science and art of such high attainments, no remedy, either medical or al, has been tried with a single success. From the of the eleventh century, when Albucasis described st known case of extra-uterine pregnancy, men have ess watched the life ebb rapidly from the pale victim accident, as the torrent of blood is poured into the inal cavity, but have never raised a hand to help her. this is an anomaly and it has no parallel in the whole of human injuries. The fact seems incredible, one life is saved by active interference it may be hantly pointed to as the first and only instance of d on record. In the whole domain of surgery—for not look to other than surgical measures under the stances—there is now left no field like this. ..... ly remedy that can be proposed to rescue a woman these unfortunate circumstances is gastrotomy—to e abdomen, tie the bleeding vessels, or to remove the ire."

definite appeal or challenge to surgery for the rational ent of tubal rupture, written in 1875, and repeated ore or less force by many of the older gynæcologists et lacked the courage to act upon their convictions), was finally taken up by Mr. Tait, who deliberately operated for tubal rupture in 1883. His practice was soon followed by other surgeons, both at home and abroad, and the era of surgical treatment for intra-peritoneal hæmorrhage due to tubal rupture was definitely started. How fertile this has been, how many lives have been saved by this advance in surgical treatment, it is almost impossible to estimate, but we know that no important operation of modern surgery has been more successful than this, and the work which has been done has led, and is still leading, to a better knowledge of the disease, its consequences and complications, so that every few years since this date have brought increase of light, increase of resource and increase of promise for the future. The lesions found and specimens removed as a result of operation during the earlier period of gestation soon established the fact that all cases of extra-uterine pregnancy (as Mr. Tait had already contended) were originally tubal or interstitial and therefore that the varieties which had been described by former observers could all be traced to a tubal origin. Later, one of these varieties, the subperitoneo-pelvic or subperitoneo-abdominal form of "broad ligament pregnancy," was very fully investigated and described by Dr. Berry Hart and Mr. Carter, and their monograph remains our standard of reference for the general method in which the peritoneum may be displaced by the growth of this variety and for the actual conditions found in two examples. Later still Mr. Bland Sutton drew our attention to the condition known as "tubal mole" and "tubal abortion" in which the Fallopian tube affected by the misplaced pregnancy is found to contain an apoplectic ovum instead of a growing fœtus. Following up these investigations I showed before the British Gynæcological Society in 1894 that the abdominal ostium of the tube in these cases commonly remained open and that intra-peritoneal hæmatocele whenever it was found could usually be traced to the blood-drip from the fimbriated end of a tube in which a mole of pregnancy had formed, the special peculiarities assumed by such hæmatoceles being considered and explained. These observations and conclusions were confirmed by those of Dr. Cullingworth, and the existence of intra-peritoneal hæmatocele—a definite tumour due to intra-peritoneal hæmorrhage—(which had been apparently denied by some authors) has not only been again established, but its special relation to tubal mole and to bleeding from the unruptured tube is now accepted by the best of modern writers.

There are still other points in connexion with the subject of extra-uterine pregnancy that demand some further investigation and fuller explanation. One of the most important of these is the exact history and condition of the variety known as abdominal or ventral. That this is a direct secondary development of tubal pregnancy was held by myself in the report of a case which I brought before the Obstetrical Society in 1891 and again before the British Gynæcological Society in 1892. It was exhaustively proved also in Dr. Croom's case by the post-mortem examinations and reports of Dr. Clarence Webster, but the cases were of somewhat different type and have failed to leave sufficient impress on the current literature and teaching of the day. In the course of these lectures I hope to be able not only to show that this abdominal or ventral pregnancy is not, as Mr. Tait and Mr. Bland Sutton have held, a mere secondary result of the broad ligament form, but that it is a variety having only very rarely any connexion with broad ligament pregnancy, a variety with subsidiary modifications, under one or other of which it is possible to group all the cases of this kind that have been hitherto recorded. I shall also endeavour to reopen certain questions connected with my subject which, although more or less dogmatically settled by past observers, appear to my mind to be insufficiently explained and to need for their consideration an open mind and a wider knowledge. To this part of my subject belongs the question of causation.

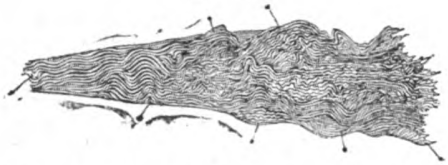
II.—Causation.

Every pregnancy is the result of the impregnation of the ovum of the female by the spermatozoon of the male and the normal place for the development of the impregnated ovum is the cavity of the uterus, while the channel through which the ovum must pass from the ovary in order to gain the uterine cavity is the Fallopian tube. The tube may be regarded as specially fitted to be this channel for the reception and transit of the ovum. The delicate plications of its mucous membrane, seen best when floated under water,

[1] homas, Feb. 7th, 1875; New York Medical Journal, June, 1875 3900.

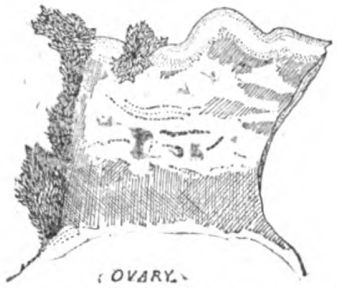
as in the accompanying illustration (Fig. 1), form the lightest and most delicate of resting-places, while the innumerable cilia of its epithelium, waving always towards the uterus, tend to sweep the ovum onwards and outwards. These plications with their waving cilia are not

FIG. 1.



confined to the tube itself, but are continued over the border at the fimbriated extremity into the peritoneal cavity and usually stretch in unbroken line from the tube to the ovary itself. Sometimes this "ovarian fimbria" is remarkably full and broad (as in Fig. 2), while accessory

FIG. 2.



fimbriæ, both around the abdominal ostium and on the sides of the broad ligament, complete an apparatus for the direction of the ovum which must cause a marked and ceaseless current from the ovary to the tube. Rarely an accessory ostium is found as in the illustration. In this way the ovum when shed is swept into the abdominal ostium of the Fallopian tube; but when the ovum has entered the tube it may be considered as doubtful whether its progress is continuous and uninterrupted until it enters the uterine cavity. The adult Fallopian tube is convoluted and at every bend or turn is bound down by fibrous bands beneath the serous covering (Fig. 3). Each of these forms a ridge or elevation

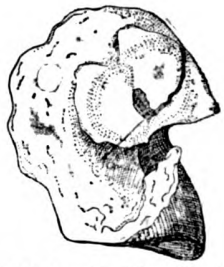
FIG. 3.



within the tube which must be somewhat difficult to pass and the progress of the ovum is probably retarded at each bend of the tube by the presence of these bands. Whereabouts in its passage does the ovum meet the spermatozoon and become impregnated? Dr. Ingleby, in whose honour these lectures were instituted, suggested in 1834 that there was no fixed place where impregnation occurred, but that anywhere during its descent, whether in tube or uterus, it was possible for the conception to take place. More modern writers, on the other hand, have usually assumed that normal impregnation occurs only in the uterus. Mr. Tait writes: "The uterus alone is the seat of normal conception," and "the function of the ciliated lining of the Fallopian tube is to prevent spermatozoa from entering them"; while Mr. Bland Sutton states: "It is reasonable to believe that fertilisation normally happens in the uterus, but when it occurs in the tubes it is accidental and tubal gestation is the consequence." The only ground for this belief appears to be the fact that the normal attachment and development of the impregnated ovum is within the cavity of the uterus.

It was formerly held that the direction of ciliary movement in the uterus was from the cervix to the fundus, while that in the Fallopian tubes was from the fimbriæ to the uterus; therefore that the passage of the spermatozoon was helped by ciliary movement towards the fundus of the uterus, while the passage of the ovum was similarly assisted from the fimbriated end of the tube toward the fundus. On this hypothesis it was reasonable to suppose that the fundus was the normal meeting place of the spermatozoon and the ovum and that here normal inpregnation alone took place. But during recent years the direction of ciliary movement within the uterus has been ascertained to be quite otherwise, both in animals and women, an examination of the freshly extirpated uterus by Hofmeier proving that the direction of this movement is from the fundus to the cervix and therefore that its direction throughout from the fimbriated end of the Fallopian tube to the neck of the uterus is wholly in a downward and outward direction. This being the case, the function of ciliary movement cannot be (as Mr. Tait supposes) to prevent the entrance of spermatozoa or none could enter the uterus. On the contrary, it has been directly proved that the active movements of the spermatozoa are quite sufficient to carry them against the current of ciliary movement and human spermatozoa have been actually discovered in the Fallopian tubes after extirpation of the appendages (Dührssen). Many years ago (in 1838) Bischoff and Barry discovered spermatozoa on the surface of the ovaries of bitches some time after copulation.[2] Mr. Tait, referring to these and similar researches on the lower animals, writes as follows: "Spermatozoa have been found high up in the cornua of the bipartite uteri and these cornua have been erroneously supposed to be Fallopian tubes whilst they are nothing of the kind. The Fallopian tubes do not exist save in the higher orders of animals, who have assumed the upright position." This criticism unfortunately appears to be founded on error. The Fallopian tubes do exist in the lower animals and are very perfect structures in the dog and sheep and heifer, as I have proved by personal dissection. That of the dog (or bitch) may be seen in the accompanying illustration (Fig. 4).

FIG. 4.



Horn of uterus of bitch (recently delivered). Ovarian chamber laid open; Fallopian tube coursing over ovarian chamber; bristle passed into fimbriated end of tube.

It proceeds from one side of the cornu of the bipartite uterus (which is otherwise completely closed) and after a winding course over the ovarian chamber—a membranous sac enclosing the ovary—it opens by a well-marked fimbriated extremity within the ovarian chamber itself. Consequently, any spermatozoa found on the surface of the ovary must have passed, not only through the cornu of the uterus, but through the whole length of the Fallopian tube also.

Dr. Strassmann, who has quite recently collected considerable evidence on the subject of conception, writes as follows: "Fructification, the union of the ovum with the spermatozoon, takes place in the Fallopian tube probably at the fimbriated end and immediately after the exit of the ovum from the follicle (Bischoff-His). Accordingly, we may draw the conclusion that each pregnancy begins as an extra-uterine one and that an extra-uterine pregnancy is a consequence of retarded movement of the fructified ovum." This

[2] Parry, p. 45.

probably goes too far. The uterine ostium of the Fallopian tube when contracted cannot favour the ingress of spermatozoa to the tube and the entrance (or not) of spermatozoa must depend largely on the dilatation (or contraction) of the ostium. Sometimes the passage from the uterus to the abdomen must be very free and especially so when the cervix is dilated. In six cases Döderlein experimentally injected coloured solutions into the dilated uterus before its removal by vaginal hysterectomy. In all but one of the cases the solution passed into the peritoneal cavity.[3] On the other hand, the frequent use of intra-uterine injections without abdominal disturbance resulting appears to show that this open and previous state of the tubes is not a common or invariable condition. That the normal tube admits the entrance of spermatozoa, but is not the special "receptaculum seminis," seems proved by the researches of Professor Dührssen, who in his Vaginal Cœliotomies for Retroflexion in Married Women has frequently pressed a cover-glass against the abdominal ostium and examined for spermatozoa. In most of his investigations he met with a negative result, but in some spermatozoa were recognised although degenerated and motionless.[4] The truth evidently lies between the two extremes. We may hold with reason that here is no evidence whatever for the belief that the seat of normal impregnation is limited to the cavity of the uterus, while the facts which are known concerning the invasion of the tubes by spermatozoa unmistakably point to the conclusion that normal fructification of the ovum may occur at any stage of its passage from the ovary to the uterus. But if normal impregnation often occurs within the Fallopian tube the latter has an important function which at present is altogether disregarded. If the tube has to convey the fructified ovum as well as the unimpregnated ovule into the cavity of the uterus other forces than the ciliary movement may be necessary and any mechanical impediment to the delivery of the ovum from the tube into the uterus may be a cause of misplaced pregnancy. The fructified ovum is subject to definite growth (in the second week it is from 3 to 6 mm. in diameter) and though it probably soon passes from the tube into the uterus it is evident that any want of development in the tube, any permanent contraction, any swelling of the mucous membrane, any abnormal length of the tube, any extra weight or impaired mobility of the ovum at its entrance to the tube, any failure of muscular power, or any interference with the peristaltic action of the tube, if this be needed for propulsion of the ovum, may increase the tendency towards a tubal instead of a uterine "settling" of the ovum. It has been objected by Mr. Bland Sutton that tubal pregnancy cannot be explained by obstruction to the transit of ova because the "oosperm" (fructified ovum) is more often retained in the wide ampullary section of the tube than in its uterine segment, and if delay or stoppage during transit of the fructified ovum always depended on the inadequate size of an otherwise normal tube the criticism would have considerable or even fatal force. This can only be one among many causes for delay and it is probably a rare cause. Still it is interesting to note that in a special class of cases, the cases of early rupture in which the tube, as we shall see, is ill-developed or somewhat atrophied, it is precisely at this point, or just outside the uterine segment of the tube, that arrest most frequently takes place and the pregnancy develops. On the other hand, at the outer extremity of the tube, near the expanded ostium, where not infrequently a tubal pregnancy is found, it is evident that a totally different cause or set of causes may account for retarded progress or arrest of the impregnated ovum and consecutive attachment. Here the in-going tubal current, which, whether due altogether to the movement of the cilia or not, has been proved experimentally to exist, may lack the power to sweep the oosperm into the lumen of the tube; the ovum itself, if prematurely fertilised, may soon increase in size and weight and the fimbriated extremity of the open tube may fail to surround or grasp it sufficiently for any muscular (peristaltic) action to be applied to it. That such an action of the tube is possible seems proved by the history of some of the cases of so-called "tubal abortion" which occur in this situation. In these cases after attachment of the fructified ovum and some development and after the size of the ovum has been increased by sub-chorionic bleeding the tube may contract on its contents, separate the attachments, and extrude or "vomit" the mole of pregnancy out of the tube into the pelvis. If the tube possesses this reverse action when the conditions are altogether unfavourable for any movement in the ovum it is surely reasonable to suppose that when the conditions are favourable, when the ovum is smaller and there is no attachment, natural peristalsis occurs in the normal direction from the tube towards the uterus. The activity (or otherwise) of this, depending, as it must, not only on the part of the tube involved but also on the nerve influence and on the development of the muscular coat, cannot fail to have its bearing on the progress of the ovum. In other cases, perhaps in the majority of cases, the arrest of the fructified ovum is probably determined by swelling of the mucosa. It is in the middle and outer portions of the tube and not towards the uterine segment that the wonderful plications of its mucous membrane are most luxuriantly developed and any source of swelling affecting these would naturally attain the most obstructive power in the central portion of the tube. Such a positive source of obstruction is described in detail by Dr. Webster as produced by the occasional formation of a special swelling and growth in the deeper layers of the tubal mucosa, a swelling which somewhat closely simulates that of the uterine decidua. With perhaps questionable wisdom Dr. Webster speaks of this as the tubal decidua—questionable, for no one has been able to detect in the pregnant tube anything macroscopically approaching to the decidual membrane of the uterus, but there can be no doubt that his sections and specimens, as well as those of some German writers, show changes in the mucosa of the tube, which, whether strictly analogous to those taking place in the uterus at the formation of the decidua or not, do form definite localised swellings which may mechanically arrest the progress of the ovum during its journey down the Fallopian tube.

Mr. Tait and some other writers have held that a pre-existing desquamative salpingitis is the cause of ectopic gestation and that most cases of extra-uterine pregnancy have a previous history of inflammatory mischief of the uterine appendages. I have not found this in my own experience. In 37 cases no certain evidence could be elicited of any pre-existing inflammation and the patients were remarkably free from any suspicion of gonorrhœa or syphilis. Mr. Bland Sutton writes: "In many instances I have failed even after the most careful microscopic examination to find any evidence of old salpingitis or loss of epithelium"; and again, "The evidence now indicates that a healthy Fallopian tube is more likely to become gravid than one that has been inflamed." Mr. Tait's opinion is avowedly grounded on the theory that the impregnated ovum requires a raw, denuded, or wound-surface for its "settling" and that this is normally provided in the uterus through the process of menstruation in which the epithelial coat is shed. Extended consideration and investigation have not tended to confirm our belief in this theory. On the contrary, the more it is considered the greater are the objections which can be urged against it. As Clarence Webster and Strassmann have pointed out, menstruation is by no means a necessary precursor of pregnancy. Pregnancy may take place in a girl who has never menstruated, in a woman who is suckling and has not menstruated since her "lying-in," in women who have amenorrhœa from other causes, as from chronic phthisis and anæmia. Very occasionally, too, we meet with fertile women who have only very rarely menstruated and in whom no history of a period is found corresponding to the onset of pregnancy. The very facts, or supposed facts, behind the theory are now disputed. It is very questionable whether the epithelium is removed to any extent by the menstruation and the more recent observations appear to show that no true wound-surface is provided by this process for the engrafting of the ovum.

The ante-menstrual period, when the monthly swelling and congestion of the uterine mucous membrane attains its maximum, is now with more reason regarded as affording the best conditions for the "settling" of the ovum; in fact, each monthly swelling of the mucous membrane of the uterus may be regarded as the tentative preparation for a possible pregnancy. If the "down-wandering" ovum is fertilised the swelling increases and a uterine decidua is formed. This catches and embeds the wandering ovum. No menstruation occurs. The woman is pregnant. If, on the other hand, the ovum be not fertilised the tentative swelling is carried no further, menstruation begins, and the swelling of the uterine mucous membrane dwindles away by and during the process of menstruation. For the time being the chance of pregnancy is lost. This view is strongly supported by the evidence derived

[3] Centralblatt für Gynäkologie, 25.
[4] Archiv für Gynäkologie, Band 54, Heft 2, p. 297.

from the current practice of nearly all large gynæcological clinics. If a patient has menstruated within two or three weeks the sound, if necessary, is passed without hesitation, and this without a single known instance of early miscarriage resulting, while if the menstrual period be almost or altogether due passage of the sound is by no means free from danger in this respect. Instead, then, of menstruation fitting the uterus for the reception of the ovum it is more probably a sign that the fitting period has passed. The period, I repeat, of the ante-menstrual swelling, when the sides of the uterus are in apposition, is that most favourable for the "settling" of the ovum. If this reasoning be true as regards the uterus it tends to greatly increase the importance of the researches of those who have detected decidua-like swellings of the tubal mucosa. Whether this tissue has any specific action is probably very questionable, but the swollen mucous membrane may undoubtedly sometimes arrest the impregnated ovum and so determine the site of its development. Very rarely a tubal polypus has been found on the uterine side of a tubal pregnancy. One case of this kind has been recently described in detail by Professor Dührssen (Fig. 5). The little polypus appears to have

FIG. 5.



From Dührssen.

formed a perfect ball valve to the uterine end of the tube, the passage of the tube from the uterus to the ovary being free from difficulty, while that from the ovary to the uterus was absolutely stopped by the polypus. On the ovarian side of the polypus the pregnancy had developed.

Again, a tubal pregnancy has been found on the ovarian or outer side of a myoma, the passage into the proper uterine cavity being evidently blocked by the myoma. Dr. Cullingworth has quite recently shown a very valuable specimen of this kind at a meeting of the Obstetrical Society of London. These cases, although too rare perhaps to warrant any general deductions from them, tend undoubtedly to strengthen the argument of mechanical obstruction as an important factor in causation. Sometimes fixation or stretching of the tube is found in connexion with a tubal pregnancy and then may reasonably be regarded as having been a source of delay or obstruction to the passage of the impregnated ovum. In three of my cases tubal pregnancy was found associated with ovarian cystomata—one of them a dermoid of considerable size—and in all of these the tube had been fixed or distorted by the growth of the cyst or by accompanying adhesions. To briefly recapitulate. Normal impregnation of the ovum is not limited to the uterus but may occur anywhere in the Fallopian tube or immediately on the exit of the ovum from the ovary. Normal attachment and development is limited to the uterus only. Abnormal arrest of the impregnated ovum—whether mechanical or special—in its progress towards the uterus is the determining factor of a misplaced pregnancy. An extra-uterine pregnancy, therefore, is the consequence of the permanent arrest of a fructified ovum in its passage from the ovary to the uterus. Theoretically this arrest may occur: (1) in the ovary; (2) in the abdominal cavity between the ovary and tube; (3) within the tube; and (4) between the tube and the uterus.

The first is theoretical only. It is possible, but absolute proof of such a pregnancy seems still to be incomplete. There are, as we shall see, conditions of intra-ligamentary position of the ovum, and also of encapsulated hæmatocele around the ovum, in both of which the ovary may form part of the outer wall of the sac containing the pregnancy. Later this becomes stretched and thin, owing to inside pressure from the growing pregnancy and sections of the sac and outer wall discovering the presence of ovarian tissue may wrongly lead to the conclusion that the pregnancy is ovarian. The conditions described need careful elimination before any pregnancy can be held to be strictly ovarian in origin. The second—"arrest in the abdominal cavity between the ovary and the tube"—is probably always immediately fatal to the unprotected ovum and consequently may be eliminated from discussion. The fourth point of arrest—between the tube and uterus—may quite as correctly be regarded as arrest in the uterine portion of the Fallopian tube, so that for all intents and purposes we have to do at the outset with one kind, the third kind, only—arrest within the tube, or tubal pregnancy. All other varieties are later developments of tubal pregnancy and are caused by secondary invasion from the Fallopian tube of some other tissue or organ. These are conveniently divided into three groups or divisions: (1) the tubo-abdominal (abdominal or ventral) pregnancy, in which there is secondary invasion of the abdomen; (2) the tubo-ligamentary (mesometric or broad-ligament) pregnancy, in which there is secondary invasion of the broad ligament and sub-peritoneal tissues; and (3) the tubo-uterine, or interstitial, pregnancy, in which there is secondary invasion of the uterus. These will be considered in detail after the earlier stages of tubal pregnancy have been dealt with.

Time will not allow me to deal as I should like with the earliest life-history of the growing tubal pregnancy. I must pass over much of this with the merest notice that its growth is attended by very marked increase in the vascularity of the tube and mesosalpinx and that a decidua, so far as we know, invariably forms in the uterus.

III.—The Earlier Disturbances of Tubal Pregnancy: (1) Early Rupture of the Tube; (2) Tubal Mole; and (3) Later Rupture of the Tube.

Most tubal pregnancies are abortive. Some become so at a very early stage, the pregnancy resulting in early rupture of the tube. Others grow for a few weeks and then are injured by hæmorrhage from their own vessels, a tubal mole forming within the unruptured tube. Others again attain a much greater degree of development and then cause rupture of the tube, perishing in the process either directly from the hæmorrhage and dislocation or indirectly from the death of the patient or from the hand of the surgeon who removes the pregnancy. These cases will be considered under the heading of later rupture of the tube. It is only the minority of cases in which these dangers are averted by some more or less accidental method of growth and of extrusion from the tube and in which the pregnancy goes to term within the organism of the mother.

1. *Early rupture of the tube* from a pregnancy of from two to five or six weeks' standing is a special phenomenon of extra-uterine pregnancy which has not as yet received the recognition and consideration it deserves. As a disease or accident it stands quite alone. There is no warning of danger, there are often no physical signs, there is no symptom before that of sudden and copious bleeding, and any history of pregnancy is either altogether wanting or is represented only by an account of menstruation delayed for one week or even less. A good example of this class of case may be taken from Mr. Tait's book (p. 18): "On November 2nd, 1889, at 1.30 P.M., Mrs. — was seized with pain in the abdomen, followed by vomiting and faintness. Dr. Guthrie Rankin was called in; the pain was relieved by an opiate, but collapse occurred and death ensued at 9 o'clock the same evening. She was the mother of three children, suckling the youngest, aged seven months, of good constitution, with no history of previous illness. At the post-mortem examination the abdomen was found full of clots estimated at from 70 to 80 oz. The left Fallopian tube presented an ovoid swelling which had been ruptured and was full of blood-clots; on examination this swelling proved to be a tubal pregnancy of certainly not more than five weeks. The rupture which caused death was not larger than a pea." In this case death ensued after an illness of only 7½ hours' duration, the fatal result being exceptionally sudden. The more usual duration is from 12 to 48 hours. Two cases from my own practice will illustrate this portion of my subject.

Mrs. A, aged thirty-three years, having one child six years of age, had been menstruating regularly for upwards of a year until Dec. 23rd, 1891, that being the date of the last normal period. On Jan. 20th there was a very slight hæmorrhagic discharge, but menstruation did not follow. On Jan. 28th she was troubled with abdominal pain and in the evening she was sick, and the pulse, which had been about 80, rose to 120. She passed a fair night, but was again sick in the morning and the pulse rose rapidly to 140. I saw her in consultation with Dr. A. V. Bernays at 11 A.M. She was then faint and pallid, but fully conscious, with a quick pulse and distended abdomen. A soft doughy mass was to be felt filling the pouch of Douglas behind the uterus. I

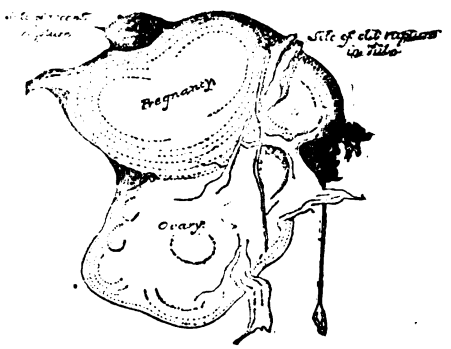
diagnosed the condition as due to ruptured tubal pregnancy and advised operation. When this was done two hours later the patient's condition had become exceeding grave. As I opened the abdomen the blood gushed out like the fluid in ascites and it was evident that the distension of the abdomen had been mainly due to the collection of blood within it. The rupture was found in the left Fallopian tube, which was the seat of an early pregnancy near, but not quite close to, the uterus. The tube was small and atrophic. This with its corresponding ovary was removed. The patient made a good recovery.

Mrs. B, aged thirty years, having had one child, nine years previously, and one miscarriage five years before, had been menstruating regularly since the date of the miscarriage until some two months before I saw her. The last period had been delayed for one week but on its appearance was normal in its course. This again had been followed by amenorrhœa of five weeks' standing. On the evening of July 13th, 1895, she had some slight abdominal pain, for which she herself attended the consulting rooms of Dr. H. Shillito. I met him in consultation on the 15th and found general abdominal distension, with vomiting and faintness, marked pallor of the face and lips, and a running pulse (150). On examination a doubtful boggy fulness was felt in the pouch of Douglas. The diagnosis was made of tubal rupture. Abdominal section about midnight on the 15th disclosed an early pregnancy of the left tube with linear rupture near the uterus. The appendages were removed. The patient recovered.

In both of these cases the patients were almost moribund at the time of operation. In the last case the illness was then of 48 hours' standing, in the other of about 16 hours' only. In neither case was there any evidence of previous bleeding or any symptom before the sudden illness which I have reported.

In these cases of early rupture it is important to notice that but little or no change takes place in the affected tube except at the exact seat of pregnancy and rupture. This may be found at any part in the course of the tube except at the fimbriated extremity, but its favourite situation is near to the uterus on the tubal side of the uterine ostium. There is no closure of the abdominal end of the tube and no swelling of the tube except at the site of pregnancy. On the contrary, the condition found on operation appears to show that the tube is often ill-developed and small, the muscular coat defective and the uterine ostium contracted. The remains of the tube enclosing the pregnancy are thin and papery and there is no evidence whatever of the slightest attempt at any compensatory growth surrounding the affected area. I have operated on four cases of this class and in all of these the conditions were essentially as here described. In one case the atrophic state of the tube was very marked and can be still recognised on simple inspection of the specimen. The Fallopian tube in this instance presents the very unusual features of double rupture, having been twice the seat of an extra-uterine pregnancy. The first tubal pregnancy occurred in 1889. This resulted in rupture with limited hæmorrhage at the sixth week. Peritonitis followed and a hæmatocele formed which was slowly absorbed after six or seven weeks' rest in bed, the whole

FIG. 6.



of the illness being passed under my own personal observation. Two years later (in 1891) another pregnancy took place in the same tube, the history of which has already been recorded. On examination of the specimen then removed (Fig. 6) the original rupture of 1889 may be clearly seen surrounded by the remains of old adhesions, while the more recent rupture is marked by protruding blood-clot and membrane near the uterine end of the tube. This end of the tube is notably small and thin and the slender sheath of muscle tissue in it is almost microscopic. At the site of the pregnancy, just beyond this, no muscular coat can be seen at all and the black clot of the ruptured pregnancy is everywhere visible beneath the thin peritoneal investment which marks all that remains of the dilated tube in this situation. The atrophic state of the tube, so well displayed in this specimen, is probably the important factor both in the causation of the disease and in its termination by early rupture. The Fallopian tube has not had the muscular strength necessary to extrude the fructified ovum into the cavity of the uterus, arrest near the uterine end of the tube has been followed by fixation and growth of the ovum, and for want of any substance in the enveloping tube its necessary expansion has been almost immediately followed by rupture.

Although rarely present, perhaps, in so marked a degree as in this specimen, it is highly probable that some amount of non-development or atrophy of the tube is responsible for nearly all the cases of early rupture. The condition may arise as the sequel of a previous pregnancy, some excess of involution affecting both uterus and tubes. In the rare case I have described it may have followed the previous tubal pregnancy or it may have existed before this date (I have not the tube of the opposite side with which to compare it). There can be no doubt that the condition is a real one and that its recognition and consideration will do much at present—and still more, I believe, in the future—to explain the phenomena attending a most important group of ectopic pregnancies. Other specimens and histories extremely similar to those I have described may be found in our more important museums and these abundantly show the frequent association of early rupture and diffuse hæmorrhage with pregnancy of the uterine end of an atrophic or ill-developed tube, the course of which is unmarked by any alteration or adhesions except at the site of pregnancy and the fimbriated end of which is open. As examples I may cite Specimen No. 4695 of the Museum of the Royal College of Surgeons of England, presented by Dr. Walter Lowe, "From a woman, aged thirty-three, who, when not aware of being pregnant, was seized with severe abdominal pain and collapse during defecation. She died within nine hours." No. 2517[62] from Guy's Hospital Museum shows the rupture of an extra-uterine fœtation of the sixth week. The pregnancy is close to the uterus, the coverings are very thin, and the fimbriated end of the tube is unaltered. No. 2517[65] is a similar specimen of early rupture. The coverings are very thin. The tube is otherwise unaltered. The rupture is near the uterus. Death occurred in ten hours. Specimen No. 90 in Mason College Museum is a very good example. The tube is more like a folded piece of paper than an organ containing muscle structure. No. 79 is probably an example in which both of the Fallopian tubes were atrophic. The histories of these specimens are, however, not preserved. Another good specimen is No. 2484 in St. Thomas's Hospital Museum. In this specimen the atrophy of the tubes on both sides is very evident, while the left tube near its uterine end is the seat of an early pregnancy which has ruptured into the abdominal cavity. The patient died from "fatal peritonitis."

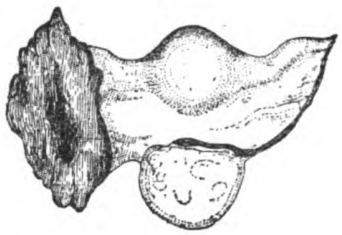
Sometimes the condition is found at the very first pregnancy and then the want of development of the tube is probably congenital. Mrs. C, aged thirty years, had been married for seven months. Menstruation had been perfectly regular, the last period occurring four weeks before the date of consultation. Some irregular hæmorrhage had taken place from the vagina for eight days. When seen by me the patient was blanched from hæmorrhage, the abdomen was distended, and on examination the uterus was felt to be surrounded by a soft mass (of blood-clot) filling the pouch of Douglas. I opened the abdomen the same evening and found it full of fluid blood and blood-clot. The left Fallopian tube was ruptured close to its uterine end and was removed. The covering of the pregnancy was everywhere thin and semi-transparent and appeared to consist of peritoneal coat only. The patient died during the third week from some slow septic (?) process attended with but little or no rise of temperature and exceedingly difficult to understand. The operation was performed in a small house in the country and the conditions may have been unsuitable and insanitary.

A specimen with a very similar history is to be seen in the Museum of the Middlesex Hospital (No. 2050). In this case

the rupture is near the fimbriated end of the tube, but the tube is small and ill-developed. The rupture is stated to have occurred at the first pregnancy and only one menstrual period had been passed. It is interesting to notice that a paper by Professor Dührssen (in a recent number of the *Archiv für Gynäkologie* which was published after this section had been written) confirms to a very large extent the view I have advanced regarding the association of tubal pregnancy with atrophy of the tube. So far as I have been able to follow him Professor Dührssen has not noticed any special relation between atrophy and earliest rupture of the tube, such as I have described, but his general conclusions are precisely similar and are supported by the evidence of microscopical sections as well as by that derived from ordinary specimens.

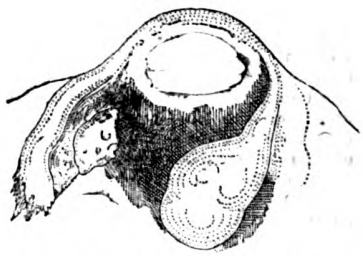
2. *The "tubal mole."*—In a large number of cases pregnancy within the Fallopian tube results in the formation of a "tubal mole" at a very early stage of gestation. Hæmorrhage occurs (as Mr. Bland Sutton has explained) into the "subchorionic chamber" from the circulation of the embryo. In other words, blood is poured out into the space between the amnion and chorion, the embryo is injured or destroyed, and a mole of pregnancy results in the same way as it does when a similar accident occurs within the uterus. In a very few cases (one is reported by Mr. Sutton) the mole is extruded from the Fallopian tube into the abdominal cavity, forming a true "tubal abortion." In by far the greater number of cases, however, the "mole" remains strongly attached at one part to the inner surface of the tube. This point of attachment marks the site of what would afterwards have been the placenta if the pregnancy had continued to develop, and some of the specimens of tubal mole afford good opportunities for examination into its usual extent and consistency. The union of tube and ovum is remarkably firm in this situation, but the extent of the union is limited. The mole clings to the tube like a pedunculated polypus, all the circumference of the ovum except at the point of attachment being absolutely free. Until the placental site is differentiated from the rest of the chorion and attachment is made the fructified ovum is probably freely moveable; as soon as the attachment is formed it steadily increases in strength and if the pregnancy goes on it is very probable that *no subsequent change will altogether separate the relations of ovum and tube.* This is not only of importance in the later stages of extra-uterine gestation, as we shall see hereafter, but even at this stage the attachment of the "mole" is a source of serious trouble. For although the pregnancy becomes abortive it does not then become innocuous or quiescent. On the contrary, the blighted ovum remains hanging from the inner surface of the tube. It is a source of continuous irritation and hyperæmia in the maternal tissues to which it clings, and is the cause of repeated and dangerous bleedings from the Fallopian tube into the abdominal cavity. It is true that an attempt is made towards closure of the abdominal ostium of the tube. In acute gonorrhœal salpingitis, as is well known, this closure is usually complete, but in the sub-inflammatory processes occasioned by "tubal mole" the salpingitis is much less marked and the closure is incomplete. The tube becomes thickened and more vascular, and at the fimbriated end the ring where peritoneum ceases and mucous membrane begins is subject to a slow contraction which tends to partially confine the blood which is effused within the

FIG. 7.



lumen of the tube. The consequent enlargement and dilatation of the tube on the uterine side of this ring of contraction withdraws some of the fimbriæ back within the tube, but the process rarely proceeds further than this in "tubal mole." The abdominal ostium still remains patent though contracted and is still marked by a small rosette of fimbriæ on its abdominal aspect. The external or peritoneal aspect of the tube is marked by a globular swelling corresponding to the situation of the "mole." This in the removed specimen (Fig. 7) is very characteristic. Apart from this the changes which occur in the tube—in size, shape, position, and mobility—are very much the same as in other cases of tubal enlargement. As a rule, and especially when the pregnancy is situated near the fimbriated end, the enlarged and heavier portion of the tube containing the "mole" falls directly behind the uterus, rotating somewhat as it does so, and therefore dragging over it and its corresponding ovary the free portion of the broad ligament to which it is attached (mesosalpinx). This takes place very early in the course of the complaint, before any bleeding occurs or inflammatory adhesions form. Almost immediately afterwards, however, as we have already seen, bleeding begins both into the tube and from the abdominal ostium; inflammation follows and the tube becomes increasingly distended and adherent. The tumour, which was originally small, strictly posterior in position, moderately mobile and well defined, slowly extends to one side or the other, and instead of the small, well-defined tumour, limited to the site of pregnancy, we have a complex mass consisting of tube, ovary, broad ligament, and blood-clot, which tends to fill one side of the pelvis and finally displaces the uterus to the opposite side, pushing the opposite tube and ovary close up against the pelvic wall. The uterus itself is enlarged, a decidua has formed within it, and its consequent increase in bulk tends to accentuate the displacement. An attempt is made in the following sequence of illustrations to roughly depict the changes liable to occur in the tumour occasioned by a "tubal mole." In all the uterus and its appendages are sketched as seen from behind. In the first (Fig. 8) we see

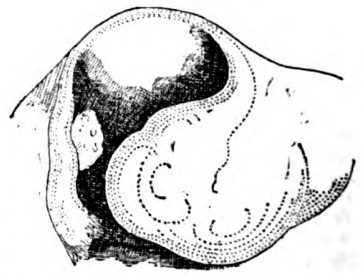
FIG. 8.



the little tumour of the tubal pregnancy before any hæmorrhage has taken place. It is moveable, hanging freely in the tube, and tends to fall or settle (by its own weight) directly behind the uterus. At this stage it either has no effect at all on the position of the uterus or tends to drag it backwards and also to displace it slightly towards the same side. In some cases the backward displacement of the uterus is very marked, amounting to decided retroflexion. In others (as in the illustration) the retroflexion of the uterus is less marked. It is quite exceptional, however, for the uterus to be anteflexed as it is so often in the early stage of normal pregnancy. The tumour of the pregnancy takes the most dependent position and the fimbriated end of the tube is tilted up toward the ovary anterior to this and therefore out of sight.

In the next figure (Fig. 9) we see the tube generally distended with blood. The space beneath the mesosalpinx is

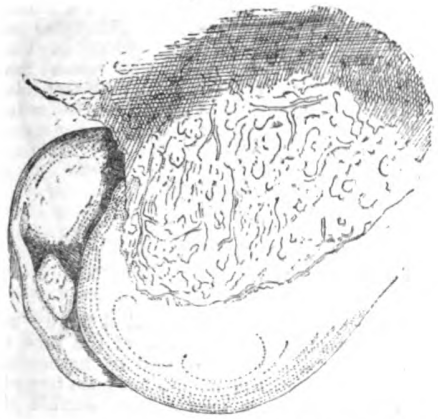
FIG 9.



also filled with blood-clot and blood is escaping into the pouch of Douglas. The complex tumour formed by the

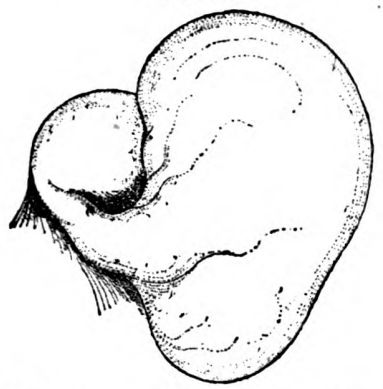
pregnancy—consisting now of the "mole" of pregnancy, distended tube, adherent ovary, and hæmatocele covered more or less by the mesosalpinx—has become fixed by adhesions; it is extending outwards and upwards. It is beginning to fill the right side of the pelvis and as it does so it pushes the uterus and opposite appendages decidedly to the left. In the next illustration (Fig. 10), which has been less easy to

FIG. 10.



draw and therefore may be less easy to understand, we see that the uterus has been pushed quite over to the left by the growing mass, so that it must now be close against the pelvic wall and rectum. Considerable hæmorrhage has taken place beyond and above the limits of the tube and the tumour formed by this has been roofed in by adhering omentum. The tumour almost fills the pelvis and is extending up into the abdomen above Poupart's ligament. If it continues to grow the uterus will be almost buried beneath it. This tumour (of pregnancy and blood-clot) is usually on the same side of the body as the tube containing the pregnancy. But it is not always so. I have known one case[5] (No. 22) in which, although the general configuration of the tumour was very much as I have been describing, the bulk of the tumour was on the opposite side of the body to that of the tube containing the pregnancy. In this illustration (Fig. 11)—

FIG. 11.



the last of the sequence—taken from the case I have mentioned, we see the left Fallopian tube crossing the back of the uterus from left to right, lengthened by the growth of the pregnancy and finally terminating in a large right-sided hæmatocele which occupies the right iliac fossa as well as the pouch of Douglas. In other words, we have a left tubal pregnancy causing a right iliac hæmatocele. The uterus in this case suffers rather less lateral displacement than in the previous case, but it is strongly displaced forwards, being pressed against the pubes by the tumour behind it. Sometimes, again, the tumour is originally lateral in position and remains so throughout, the pouch of Douglas being comparatively empty. The tumour is then closely applied to the upper part of the body of the uterus, moves with it, and may easily be taken for some enlargement of the fundus itself.

Intra-peritoneal hæmatocele, which has been already incidentally referred to and partially described, is a pathological product concerning which much has been learnt during recent years. In women it is almost always caused by tubal pregnancy, sometimes by rupture of the tube and sometimes by bleeding from the fimbriated end of the tube without rupture. The latter is the more common cause of intra-peritoneal hæmatocele, and this bleeding from the unruptured tube is usually set up by the presence of a "hæmorrhagic mole" within it. Cases of "tubal mole" with intra-peritoneal bleeding from the open abdominal ostium probably outnumber the cases of tubal pregnancy with rupture of the tube; the hæmorrhage though almost continuous or frequently repeated is moderate in amount, and a well-defined hæmatocele is the invariable sequel. On the other hand, cases of ruptured tubal pregnancy only sometimes give rise to a definite hæmatocele. In fully half the number of cases the resulting hæmorrhage is "diffuse"; no time or opportunity is afforded for the formation of a definite blood-tumour, but the hæmorrhage continues until stopped by operation or death. In the remaining cases where a hæmatocele follows the latter is often very unstable and subject to sudden and violent alterations from fresh bleeding, so that the tumour may be said to occupy a position midway between intra-peritoneal hæmatocele and diffuse hæmorrhage.

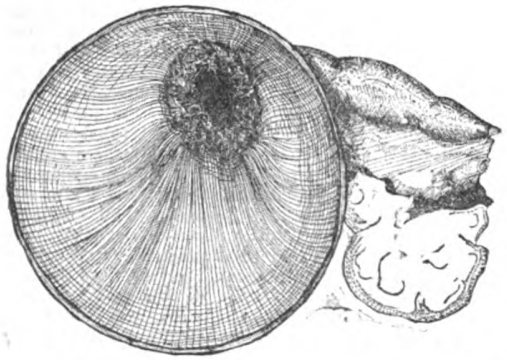
Occasional exceptions to the rule thus formulated are known. For instance, I have met with a case of "tubal mole" (Case 14) in which the hæmorrhage from the unruptured tube, although it resulted in an intra-peritoneal hæmatocele, was, after recurrence and rupture of the hæmatocele, fully as copious and dangerous as that which I have usually found after later rupture of the tube; and, again, I have known at least one case of rupture of the tube (Case 36) resulting in a definite and localised hæmatocele in which the bleeding was very moderate and the tumour resulting from it quite small in size. These exceptional cases, however, do not interfere with the general truth of the statement that rupture of the tube is specially liable to be followed by diffuse bleeding, while hæmorrhage from an unruptured tube containing a "mole" of pregnancy is essentially the most common cause of intra-peritoneal hæmatocele. My own statistics on this point are as follows: Out of 21 cases of intra-peritoneal hæmatocele due to tubal pregnancy (in which the condition of the tube was carefully noted) I find that 14 were due to hæmorrhage from the unruptured tube, while 7 were associated with rupture of the tube. Dr. Cullingworth's figures are still more striking. He states: "Of 25 cases of pelvic hæmatocele in which an opportunity occurred of verifying by actual inspection the source of the bleeding 23 were instances of hæmorrhage from the open abdominal ostium of a pregnant Fallopian tube and only 1 was due to rupture."

The formation of the hæmatocele is a process full of interest. Much of this has been already described when treating of the tumour formed by the "tubal mole." But when the bleeding has reached beyond the limits of the tube and ovary and uterus, when it invades the abdomen from the pelvis, how is it limited and what is the process by which a more or less amorphous mass of blood-clot becomes welded or shaped into a definite tumour? It must be remembered that the living abdomen is always full. Consequently when any blood is effused into the pelvis it is in contact with the pelvic viscera—at first with the tube, the ovary, and the turned-in fold of the broad ligament; later, omentum and intestine come into contact with the growing blood-clot, local peritonitis is set up by the hæmorrhage, the pelvic and abdominal viscera become adherent to the surface of the blood-clot, and the latter is bounded everywhere by "peripheral adhesions" to surrounding organs. The intra-peritoneal hæmatocele is temporarily formed. But another process is going on beside this. The outer layer of the blood-clot consolidates into a more or less perfect sac, and in addition to the adhesions the blood becomes encapsulated by a limiting layer or outer coat derived from its own substance or tissue. Sometimes the hæmorrhage within this capsule ceases altogether. In process of time the adherent viscera become detached and we may find a perfect sac remaining closely fitting round the abdominal mouth of the Fallopian tube, blood being found within it. This, which I have described elsewhere, is known as encapsulated

[5] A list of 37 cases (36 recoveries and 1 death) will be given with Lecture III.

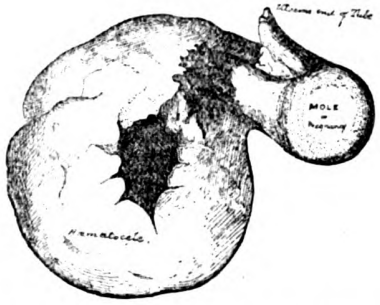
hæmatocele, and examples of this condition are well seen in the specimens removed from Cases 7 and 8. (Fig. 12.) In the specimen from No. 7 the sac of the hæmatocele is altogether independent of the ovary and tube, though

FIG. 12.



the mouth of it was closely applied around the fimbriated end of the tube. (Fig. 13.) In the specimen from No. 8 the ovary is incorporated with the wall of the hæmatocele, while a "mole" of pregnancy is visibly distending the

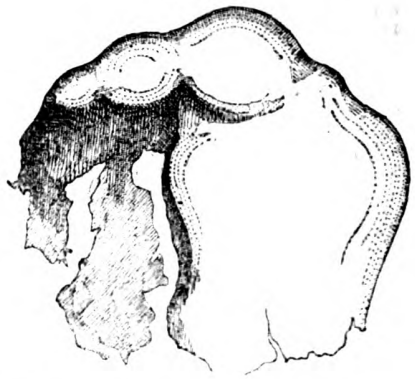
FIG. 13.



unruptured tube. In the figure the tube has been withdrawn from the inside of the sac in order to show that it is uninjured and intact, but before the separation of the tube from the sac the latter in this case formed a marked tubo-ovarian tumour which evidently might have given rise to the (unfounded) suspicion of an ovarian pregnancy. But it is only rarely that the hæmorrhage ceases on the immediate formation of the hæmatocele. In nearly all cases of tubal pregnancy with hæmatocele the bleeding is recurrent. The source of the bleeding is the tube and this is necessarily now in the centre of the hæmatocele. The outer covering of the latter is stretched and distended; somewhere it "gives" to the strain, fresh blood and blood-clot are forced through the rent or bulge through the weakened capsule into the abdomen, fresh local peritonitis occurs, fresh adhesions form, the rent is patched up, and the hæmatocele (greatly increased in size) again goes on.

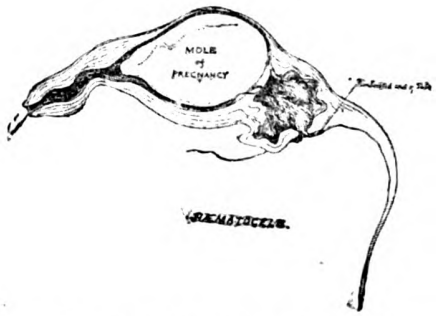
In operating on a hæmatocele which has been formed in this way by several recurrent bleedings from the fimbriated end of an unruptured tube, what sort of a specimen do we remove? The recent blood and blood-clot at the site of the last abdominal bleeding—the weakest part of the hæmatocele—are involuntarily broken down by the hand on touching the tumour; this and the central part or contents of the hæmatocele are washed or scooped away, parts of the outer wall are broken off and left adhering to intestine or omentum, and when the Fallopian tube together with the remainder of the sac is ligatured and removed we find the outer shell of the hæmatocele forming a curious ragged extension of the tube, and if we view the tattered remnants of the capsule from within we may usually observe some fimbriæ of the tube at one point on the inner wall. This marks the aperture of entrance from the tube into the hæmatocele. The following sketches of specimens removed from Cases 14, 12, and 9 show this very plainly (Fig. 14). In Fig. 14 we see a specimen which looks at first sight like a tubal pregnancy which has ruptured into the broad ligment so extensive are the remnants of the capsule continuous with the tube. On careful section, however, we see

FIG. 14.



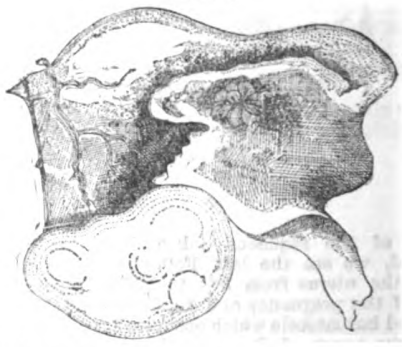
that it is unruptured (Fig. 15), that a large "mole' of pregnancy occupies the middle portion of the tube, that the outer end of the tube has been dilated by hæmorrhage, and that the greater part of the tumour has been formed by the capsule of the hæmatocele, on the inner surface of which

FIG. 15.



the fimbriæ of the outer end of the tube abruptly terminate. Similarly in Figs. 16 and 17, although the remains of the hæmatocele capsule are much less extensive, we may recognise in each the unruptured tube (complete from uterine end to fimbriæ), the "mole" distending one portion of the

FIG. 16.



tube and the rosette of fimbriæ opening on the inner wall of the hæmatocele capsule.

The following case, to which the specimen depicted in the last illustration belongs, may be taken as fairly typical of the history associated with such "tubal moles" and blood tumours as I have been describing.

Mrs. D., aged thirty-nine years, had been married for seventeen years. She had had five children, the youngest of whom was eleven years of age. Her last normal

menstrual period was on June 3rd, 1892. She had had irregular internal hæmorrhage since July 10th. There was no clear history of the passage of any definite membrane but it was quite possible that shreds of membrane had passed with the discharge. She had been perfectly well until quite recently and even now complained of nothing but the menstrual irregularity and continued loss. This history was taken on her first visit to the hospital on Aug. 26th. On examination I found that the uterus was retroflexed and that

FIG. 17.



a small mass having all the characters of a tubal tumour was to be felt behind and to the right of the retroflexed uterus. The diagnosis was made of early extra-uterine pregnancy, but I had no vacant bed and the patient was allowed to return to her home. On Sept. 2nd she began to suffer severe abdominal pain and this date probably marks the beginning of intra-peritoneal hæmorrhage. On Sept. 13th she was admitted into hospital having been confined to her bed for several days with recurrent abdominal pain and sickness. On admission she was seen to be decidedly anæmic, her abdomen was generally distended and very tender, she lay in bed with her legs drawn up, her countenance denoted anxiety and suffering, and on examination, instead of the definite tubal tumour originally felt the whole of the pouch of Douglas was recognised as filled by a mass the upper limit of which it was impossible to define on account of the abdominal distension and tenderness. To the diagnosis of tubal pregnancy the further diagnosis was added of "intra-peritoneal hæmorrhage." On Sept. 15th I operated, removing the specimen which has already been briefly described. There was some dark fluid blood free in the pelvis, the result of a recent rupture of the hæmatocele. The main tumour filling the pouch of Douglas consisted of this hæmatocele which had formed around the fimbriated end of the right Fallopian tube. Within the tube a "mole" of pregnancy was found. The patient made a good recovery and was discharged on Oct. 8th.

Sometimes the whole of the pouch of Douglas is occupied by the hæmatocele. When this is the case there is, as a rule, no prominent tumour in the abdomen, but an irregular thickening stretching across the lower part of the abdomen above the pubes which marks the upper limit of the blood effusion. The prominence and distension of the hæmatocele caused either directly by the hæmorrhage or secondarily by inflammatory effusion below its upper limit is entirely expended on the pouch of Douglas. This enlarges in every direction and encroaches on the vagina and rectum until the typical tumour is formed which is characteristic of full distension of the pouch when its upper connexion with the general peritoneal cavity is temporarily occluded. Some writers describe this as the common or usual result of intra-peritoneal bleeding. In my own experience it is quite exceptional. Whenever it does occur the difference of tension between the distended pouch of Douglas and the upper abdomen proclaims the fact that the lowest part of the peritoneum is entirely shut off by adhesions from the rest of the cavity and because of this (as we shall see) the condition can be treated as a purely local affection.

3. *Later rupture of the pregnant tube.*—This may take place at any time from the first month onward, but is most common from the second to the fourth month. If the pregnancy is situated in the middle or outer portion of the tube, and especially if in its growth it opens up to some extent the two layers of the mesosalpinx, the pregnancy may continue to develop for some weeks before rupture or extrusion occurs. When rupture does take place, although the accident may be fatal (and usually is so without operation), the hæmorrhage is probably never so directly and immediately fatal ("fatal without warning"), as in the cases of very early rupture when the pregnancy is situated at the uterine end of the tube. It is even possible for hæmorrhage to be altogether absent. The reason for this variable amount of hæmorrhage is to be mainly sought for in the involvement or escape of the placental attachment. The tube, subject to slowly increasing pressure from within, becomes stretched and thin. As it enlarges and opens up the layers of the mesosalpinx space is gained in which a pregnancy may develop for some weeks without material difficulty. This space is further protected by the bony pelvis on the side where the pregnancy is situated and on the opposite side the displaced uterus forms a strong support or boundary. But the time comes, and usually about the third month, when this space is altogether insufficient for the growing tumour. Then either the peritoneum must be still further displaced and the pregnancy must burrow downwards into the cellular tissue beneath it (this belongs to tubo-ligamentary pregnancy and will be considered later) or the covering of the pregnancy gets thinner and thinner and the pregnancy moves upwards until in some places there is probably nothing but the one layer of peritoneum between it and the abdominal cavity. Then with further growth not only is rupture inevitable but some extrusion of the pregnancy into the abdomen—either partial or complete—is a necessary consequence also. For the present this alone will engage our attention. If the placenta be exposed, separated, or torn the bleeding will be severe; if, on the contrary, the placenta is not involved by the rupture any hæmorrhage will come from the separated tube alone, and this may be moderate, infinitesimal, or wanting. Even if placental the bleeding is only rarely directly and immediately fatal. "As the blood-pressure falls the hæmorrhage ceases—at all events for a time—and a more or less well-marked attack of local peritonitis immediately follows. This peritonitis is neither so violent and dangerous nor so protective (by the formation of firm adhesions) as is the peritonitis set up by suppurative inflammation, but it is sufficient to form a kind of roof or cap of adhering omentum and intestine which covers and confines the hæmorrhage and blood-clot. In this way a distinct but unstable intra-peritoneal hæmatocele is formed. I call it unstable because it is always subject to change. Fresh hæmorrhages occur sooner or later, owing to the increasing detachment and protrusion of the placenta which so frequently follows the rupture, or the pregnancy may continue to grow. In either case the hæmatocele increases in size, its upper limit becomes convex and tense from the augmented contents, and every few days or every day some fresh strain is placed on the boundary of the hæmatocele. This, which was never marked by any solidity or strength, finally gives way and a fresh invasion of the general peritoneal cavity takes place. Under these circumstances diffuse hæmorrhage into the peritoneum may occur and be as marked as in the case of acute bleeding from early rupture, but is more frequently followed by another arrest and further repair. Whether this happens or not, however, it is not now so much the rupture of the tube which is the seat of danger as the separation of the placenta and the rupture of the hæmatocele."

From this description, which (in the main) I quote from an article on "Intra-peritoneal Hæmatocele," written in 1895, it will be evident that the hæmatocele caused by later rupture of the tube—when fully formed—is essentially similar, save in extent and severity, to that which I have already described as occasioned by "tubal mole." There are, however, some points of difference which almost necessitate the separate consideration which I have given to the hæmatocele of "tubal mole" and to that of later tubal pregnancy with rupture. The hæmorrhage in "tubal mole" is of quite a different character from that which occurs in late rupture of the tube. In "tubal mole" it is a more or less continuous blood-drip from the fimbriated end of the tube, varied perhaps by an occasional little gush of freer bleeding at irregular intervals. In later rupture of the tube the hæmorrhage is sudden and relatively copious, arising, as we have seen, either directly from the tear in the tube or from separation of the placenta or from both combined. In "tubal mole," owing to the slower formation of the blood tumour, the outer layer of blood

has time to consolidate and some measure of true encapsulation, however imperfect, is usually met with. In later rupture of the tube, on the contrary, any encapsulation is quite exceptional, and the hæmatocele is limited only by the inflammatory adhesions caused by the peritonitis which follows the hæmorrhage. Finally, the whole condition in later rupture of the tube is more "acute." The hæmatocele is larger at its onset and rapidly increases in size. It may often be visibly watched enlarging and distending as fresh bleeding takes place beneath the thin limiting adhesions and it is then accompanied by signs and symptoms proportionate to the severity of the condition.

Mrs. E, aged thirty-one years, married eleven years, had had one child ten years ago (in 1885). From this time she had menstruated regularly until Oct. 12th, 1894, this being the date of the last normal period. Irregular hæmorrhage followed and continued from October to Jan. 27th, 1895 (the date of operation). During the latter part of this time she was the subject of increasing abdominal pain, mainly referred to the right side and accompanied by distension, vomiting, faintness and constipation. Some jaundice and albuminuria were also present; the temperature was slightly raised, fluctuating from 99° to 101·3° F. In spite of the general abdominal distension a large mass was to be felt on the right side of the abdomen, reaching from the groin to the umbilicus and having in this situation a convex free border and a more or less globular elevation. The abdomen was very tender to the touch. The mass had been felt by the patient and observed by her medical attendant as rapidly increasing in size from a small lump above the groin to its present dimensions, during the week or ten days before my visit. On vaginal examination a large firm tumour was felt in the pouch of Douglas behind the uterus, and this appeared to be continuous with the abdominal tumour. The diagnosis having been made of intra-peritoneal hæmatocele due to a ruptured tubal pregnancy, the abdomen was immediately opened. This contained a little coloured serum but was free from any diffuse hæmorrhage. The mass on the right side, black in colour, was confined by thin adhesions and the convex border was formed by small intestine, transverse colon, and omentum matted together over the surface of the hæmatocele. An opening was made below this and the child (a fœtus of some two months' growth) together with the placenta were removed from the centre of the blood and blood-clot in which they were lying. The placenta had already become almost entirely detached from the tube by hæmorrhage and the slightest traction was sufficient to complete the separation. The tubal sac which had contained the placenta and was the seat of an extensive rupture was found to be slightly adherent beneath the blood-clot. It was separated from its posterior adhesions, unrolled from the floor of the pelvis, ligatured, and removed. The patient made a good recovery.

Mrs. F, aged thirty-eight years, menstruated regularly from the birth of her last child (twelve years previously) until November, 1887. In December, 1887, and in January, 1888, she had occasional loss of blood but no regular period and from November she suffered from gradually increasing pain in the right side. Early in February she noticed a "lump" in this situation which rapidly enlarged with corresponding increase of pain, and during the latter part of this month she had been unable to sleep on account of pain. She also suffered from dysuria and frequency of micturition. When seen (on March 4th, 1888), a tender, tense, elastic or semi-fluctuant tumour was found on the right side of the abdomen, extending from the pelvis to within a short distance of the umbilicus. The uterus was fixed and pushed to the left by the tumour, and the medical man in attendance reported that the tumour was "rapidly enlarging." I opened the abdomen on March 7th. The tumour, black in colour, was formed by a mass of blood and blood-clot filling the pelvis and the right inguinal region, and closed in or separated from the general peritoneal cavity above by adherent omentum. On loosening this a fœtus of four months' growth was found in the middle of the blood-clot, while the placenta was still attached to the interior of the left Fallopian tube, in which the pregnancy had started. The tube had become widely opened out at its fimbriated extremity and this was the only rupture found, but there was some marginal separation of the placenta and this separation was most likely the source of the hæmorrhage. The tube and the fœtus were removed in the usual way and the patient made a good recovery. During the removal of the pregnancy the amniotic sac was torn and only a portion of it can now be seen. (Fig. 18.) Before operation it was in all probability intact

FIG. 18



and completely covered the fœtus. If I restore this amniotic sac, replacing the outline of it around the fœtus and cord, and if, for purposes of argument or explanation, it be conceded that the bleeding might have ceased and the portion of the placenta separated from the tube have recovered good attachment and blood-supply, we shall reproduce the exact conditions under which a child may continue to grow within the abdomen of the mother. In other words, the tubal pregnancy may be recognised in this specimen as transitional; the tubal pregnancy is already becoming "abdominal" or ventral, and had the hæmorrhage at extrusion been less severe or wanting it is quite possible that such a pregnancy might have gone to term, the child developing within the abdomen of the mother.

A CASE OF GENU RECURVATUM.

BY A. MARMADUKE SHEILD, M.B., B.C. CANTAB, F.R.C.S. ENG.,

ASSISTANT SURGEON TO, AND LECTURER ON PRACTICAL SURGERY AT, ST. GEORGE'S HOSPITAL.

AN infant, aged about eight weeks, came under my care in April, 1898, with the extraordinary deformity depicted in the accompanying illustration (Fig. 1). The legs were hyper-extended on the thighs at an obtuse angle and a

FIG. 1.



Position of the limbs in a case of genu recurvatum.

transverse furrow extended across the front of the joint as though the popliteal flexure was in front. The toes pointed towards the abdomen. Considerable resistance was offered to any attempt to straighten the limbs, which were otherwise

well developed. The hip-joints seemed to be normal, though as the infant had, of course, not walked it was difficult to estimate whether the acetabulum was well-formed. The child was born by a head presentation. The condition of the limbs was noticed at birth. It was a fifth child and all the others were well formed.

The limbs were straightened and somewhat flexed under chloroform. The child took the anæsthetic badly and doubts were expressed as to the possibility of congenital cardiac imperfection. Posterior splints were applied. About 10 days after the child, who looked puny and weak, refused nourishment, became feverish and died. The cause of death was not clear and examination of one knee-joint only was performed. The right was selected as being the more markedly deformed. Some extravasations of blood were seen in the soft parts round the joint. On dissection the following remarkable conditions were found. The arrangement of the soft parts in the popliteal space was normal, excepting that the hamstring muscles seemed stretched over the prominent condyles of the femur. The posterior ligament was intact, but somewhat elongated and greatly stretched. The tendon of the quadriceps terminated as usual in the ligamentum patellæ, which had its usual attachment. The position of the bones brought the under surface of the patella to the front of the femur above the inter-condyloid notch and here a very important appearance was noted. The under surface of the patella was not articular and the tough fibrous aponeurosis was intimately adherent to the front of the femur above the inter-condyloid notch so that it could only be dissected away with difficulty. There seemed to be no undue contraction of the quadriceps. The crucial ligaments were normal in position, but they resisted flexion and seemed to be too short. The capsule and lateral ligaments were tough and contracted and the bones could not be brought into position until these structures were freely divided. The position of the bones was very interesting. The articular surface of the tibia lay on the front articular surface of the femur in the position ordinarily occupied by the patella, and the condyles of the femur, covered by the stretched posterior ligaments, projected markedly backwards into the popliteal space. The process

FIG. 2.



Genu recurvatum. The patella can be seen as a nodule in the substance of the quadriceps extensor. The attachment of the latter to the femur are shown and also the stretched posterior ligament. The tibula articulates with the front of the articular surface of the femur.

straightening had therefore not really affected the dition of the articular positions, but was due to a bending the tibia at its epiphyseal junction. The accompany- ; illustration (Fig. 2), executed by Mr. Mummery, ll shows this dislocation of the tibia forwards and position of the patella above the inter-condyloid notch. Owing to the position of the patella above the inter-condyloid notch it could not be felt during life and was taken to be absent. There was no marked peculiarity in the joint-surfaces of the tibia and femur, except that the articular surface of the latter seemed to extend further forwards than usual.

This deformity is a rare one and due to uterine malposition, the legs, instead of being flexed on the thighs, are extended, with the feet pressing against the neck or portions of the face. Injury to the mother during gestation has been observed in some of the cases recorded and Mr. Shattock has suggested that intra-uterine tetany of the fœtus may be a possible cause. One of the few cases of dissection of this condition is recorded at length by Mr. Shattock.[1] This writer gives a bibliographical list and refers to two cases under the care of Mr. Bernard Pitts. The history of injury to the mother is marked in one of these. In the dissection of a full-term fœtus conducted by Mr. Shattock the patella was found above the inter-condyloid notch, as in my case, and the same contracted condition was noticed in the capsule and lateral ligaments. The under surface of the patella was articular, not separated from the joint, as in this case, and the lower end of the femur viewed from the front shows two facets upon which the articular surface of the tibia rested. The child was born by a head presentation, and Mr. Shattock considers Mr. Adams to have been in error in stating that these cases were breech presentations. The pressure of the sole of the foot against the face had caused absence of the chin in the case described by Mr. Shattock. In other cases examined by the same pathologist essentially the same features were found. The hip-joints admitted of only limited extension. The knees were over-extended and it was only after directing the whole of the capsule in front of the lateral ligaments that the joint could be flexed.

Mr. Edmund Owen has published a typical case of genu recurvatum.[2] The child was aged three years and nine months and the mother had suffered from typhus fever before the confinement and during delirium had imagined herself to be a fish. The child sat, with the back of each foot resting upon the collar-bone. There was a transverse furrow in front of the knees, above which the patella could be made out. The patient was treated by a transverse incision of the quadriceps and the result was excellent. It is not quite clear from the account whether the fibrous capsule of the joint was also divided, but I should think that this is probable. Whether good flexion of the limbs alternately resulted in this case I am not able to state.

On March 18th of this year I saw a private case of this affection in a boy, aged eight years. His trunk and upper extremities were well developed and he was very intelligent. There was deformity and osseous thickening about the elbows and the metacarpo-phalangeal joints of the thumbs. The inner condyle of the humerus seemed markedly enlarged and the deformity about the thumbs seemed to affect the head of the metacarpal bone. Movements and function of the upper extremities were excellent. There was marked genu recurvatum on both sides, with extreme genu valgum, the inner condyle being markedly enlarged on both sides. The boy could walk remarkably well considering all things, but principally upon his heels. There was great lordosis. The right hip joint was displaced and the head of the femur slipped in and out in a characteristic manner. On the left side apparently no displacement existed. The limbs could be straightened by manipulation but not flexed. There were signs that daily massage and flexion would result in improvement. This patient had been seen since infancy by surgeons specially practising orthopædic surgery, but they had advised no active treatment.

It seems, then, that so far as our knowledge of this curious and rare deformity goes, it amounts to this. The cause is intra-uterine malposition, perhaps excited by an injury during pregnancy. The shortened ligaments in obedience to the law of arrest of growth from non-performance of function do not develop and hence the apparently contracted condition of the capsule. Other deformities may co-exist, as dislocation of the hip, or absence of the chin from pressure, or cardiac imperfections.

Considering the serious impediment to motion early treatment should be adopted. This consists in gradual flexion and splinting of the limbs. Should the tissues resist these

[1] Transactions of the Pathological Society of London, vol. xlii.
[2] Transactions of the Medica Society of London, vol. xiv.

minor measures I would advise waiting until the child be a year or two old and then dividing the resisting capsule and ligaments by an open operation under strict asepsis. The muscles round the joint seem to have little to do with the deformity and it is to the fibrous capsule and lateral ligaments that the surgeon should especially direct his efforts.

Next it may be mentioned that genu recurvatum may first show itself in the adult as the result of paralysis of the quadriceps extensor cruris, from nervous disorders, as ataxia. Mr. Shattock, quoting Albert, attributes this to the want of fixation of the knee associated with paralysis of the muscle. The body falls forward, and the line of gravity is carried in front of the knee-joint. The joint is thus brought into a condition of extreme extension, and in time the over-stretched ligaments yield and the leg becomes hyper-extended. Mr. Shattock also refers to a specimen in St. Thomas's Hospital Museum. The case was figured in Cooper and Travers's Surgical Essays. The leg was displaced forwards at right angles to the thigh, the bottom of the foot meeting the eye as the patient advanced. This condition occurred from destruction of the joint by disease.

That this deformity can occur as the result of accident is shown by a case reported by Mr. James E. Adams.[3] The patient, a man, aged forty-eight years, slipped down and fractured his patella transversely and apparently tore the posterior ligament of the knee at the same time. He got fibrous union of the patella, but whenever he tried to walk the condyles of the femur projected backwards and the limb became hyperextended to much the position found in congenital cases.

A case where the knee actually became bent forward at a right angle after a wound into the joint is reported by Mr. William Adams as occurring in the practice of Dr. Grant.[4] The injury occurred in a boy, aged eleven years, and by the time he was eighteen years of age ankylosis of the leg at a right angle anteriorly had occurred. The boy was a great rider and his exertions in this respect were supposed to have forced the tibia forwards.

In cases where the displacement forwards is the result of disease or accident, amputation or excision would usually be needful.

Cavendish-place, W.

A FORM OF

EXTERNAL RHINITIS DUE TO THE KLEBS-LÖFFLER BACILLUS APPEARING IN CHILDREN CONVALESCENT FROM SCARLET FEVER.[1]

BY C. TODD, M.D. CANTAB.

(FROM THE LONDON FEVER HOSPITAL.)

With Remarks by Professor A. A. KANTHACK, *Cambridge University.*

CHILDREN in hospital during their convalescence from scarlet fever are peculiarly liable to a certain form of external rhinitis.

Clinical history.—The first sign of anything abnormal is a slight redness of the posterior margin of one or both nostrils, usually beginning at the inner or outer angle and at the muco-cutaneous junction. The redness becomes more intense and ultimately a moist granular-looking raw surface results; this surface bleeds easily and is often covered by a crust which may almost, or completely, block up the nostril. This is more commonly the case in younger children who scratch their nostrils and so cause bleeding. There is never any formation of membrane and the process does not appear to extend backwards into the nasal cavity, but in many cases it spreads down to the upper lip in the form of an eczematous area apparently caused by the infective discharge. This discharge is usually slight and not uncommonly absent. The nostrils remain in this granular condition for a variable time—from one to four or five weeks—and then gradually resume their normal condition. During the course of this rhinitis there is a tendency to the formation of pustules on parts of the body exposed to contact with the discharge. In many cases the face has a "spotty" appearance due to the presence of several minute pustules, and at times larger pustules are seen, more especially on the hands, and apparently originating in some scratch or other slight lesion or at the edges of the nails. The rhinitis does not appear to have any effect upon the general health and is unaccompanied by any rise of temperature. There is no albuminuria or marked glandular swelling coincident with the rhinitis; but as the children are convalescent from scarlet fever the submaxillary glands in many cases are enlarged and it is difficult to say how much may be due to the rhinitis. In no case have any paralytic symptoms been observed in the 51 cases recorded, though these have been carefully looked for. This form of rhinitis appears to be contagious and spreads, though not rapidly, among young children when introduced into a convalescent ward where the children are playing together and so coming into close contact.

During the past eighteen months (from June, 1896, to December, 1898) 51 cases of this rhinitis have occurred in the wards of the London Fever Hospital. This number is not sufficiently large to allow of reliable deductions, but observations appear to show that children about the ages of three and four years are most commonly affected, above four years of age the liability appears to diminish with age, no case having occurred after the age of twelve years. The fact, however, that 51 cases occurred amongst 365 children—almost 14 per cent.—shows that it is by no means of rare occurrence. Five cases were observed during the first week after admission and in these cases the infective micro-organisms were probably in the nostrils on admission to the hospital—indeed, in several of these 5 cases the nostrils were noticed to be sore on admission. During the second and third weeks only 2 and 3 cases respectively occurred, but during the fourth and subsequent weeks there were many more. At this period the children would be up and dressed so that the rhinitis would have greater facilities for transmission.

The following cases show the situations in which the secondary pustules were commonly met with:—

CASE 1.—Pustule over metacarpo-phalangeal joint of the index finger of the left hand.

CASE 2.—Small pustule on the outer margin of the left great toe.

CASE 3.—(*a*) Pustule on the outer side of the left foot over the fifth metacarpo-phalangeal joint; and (*b*) pustule on the inner side of the left great toe.

CASE 4.—Several small pustules resembling varicella pustules on the face.

CASE 5.—Pustule on the left hand over the pisiform bone.

CASE 6.—Large pustule on the sole of the right foot. The child said that he had stepped on a small piece of tin some days before with bare feet.

Bacteriological investigation—(a) Nose.—Bacteriological examination showed the presence of the same bacillus in each of the 51 cases. Cultivations were taken from the margins of the affected nostril and grown upon Löffler's serum. Considerable difficulty was experienced at first in separating the bacillus from the large number of staphylococci present, as the bacillus when recently obtained from the nose does not appear to grow upon agar-agar or gelatin, or grows so slowly as to be completely overgrown by the staphylococcus, so that the ordinary process of plating on these media was useless. In order to obtain pure cultivations a dilute suspension of the mixed cultivation was made in broth and the water of condensation of several Löffler's serum tubes was inoculated with this suspension and then run over the surface of the serum. By repeating this process it was found comparatively easy in most cases to obtain pure cultivations. Subsequently another method was used, especially in cases where the bacillus was present in relatively small numbers; alkaline broth was inoculated with staphylococcus pyogenes albus (the organism most commonly present with the bacilli) and incubated at 37° C. for a week and then filtered through a Pasteur-Chamberland filter. This process was repeated a second time and tubes were filled with this "staphylococcus exhausted" broth in the usual manner. These tubes, when inoculated with a mixed cultivation from Löffler's serum, usually give an abundant growth of the bacillus, the growth of the staphylococcus being greatly inhibited. The bacillus

[3] Transactions of the Pathological Society of London, vol. xxv., p. 207.
[4] Ibid., vol. xiv., p. 208.

[1] This paper formed part of a Thesis for the M.D. Degree, read at Cambridge in January, 1898.

is then easily separated on serum as before. Purified in this manner the bacillus was found to be morphologically indistinguishable from the Klebs-Löffler bacillus of diphtheria. Pure cultivations were made on solidified blood serum, Löffler's serum, gelatin, agar-agar, and potato and in alkaline peptone broth and alkaline litmus broth. These were grown side by side with cultivations on the same media of an undoubted Klebs-Löffler bacillus obtained from the fauces of a case of severe diphtheria which had been followed by typical paralysis. On all the above media the growth of the bacillus was indistinguishable from that of the true Klebs-Löffler bacillus and under the microscope they presented the same characteristics when grown on the different media. The growth in old gelatin cultures with the formation of secondary foci of new growth was particularly characteristic. In alkaline glucose broth the bacillus forms acid in the same manner as the diphtheria bacillus and in about the same time; this was used as the preliminary test in differentiating the bacillus from Hofmann's bacillus, which was found in many of the noses examined.

Dr. Washbourn very kindly performed the following experiments at Guy's Hospital with a view to determining the virulence of the bacillus.

CASE 1.—Guinea pig inoculated with 1 c.c. of a 48 hours broth culture of the bacillus died in from 30 to 40 hours. A second guinea pig inoculated with 1 c.c. of a 48 hours culture died in from 36 to 48 hours.

CASE 2.—1 c.c. of a 48 hours broth culture: died in from 36 to 48 hours.

CASE 3.—1 c.c. of a 48 hours culture: died in 60 hours.

CASE 4.—1 c.c. of a 48 hours culture: died in 36 hours.

CASE 5.—1 c.c. of a 48 hours culture: died in 36 hours.

CASE 6.—1 c c. of a 48 hours culture: died in 36 hours.

CASE 7.—1 c.c. of a 24 hours culture: died in 9 days.

CASE 8.—0·2 c.c. of a 24 hours culture: lived.

CASE 9.—0·1 c.c. of a 24 hours culture: lived.

One control animal, inoculated with 1 c.c. of a 48 hours broth cultivation of Hofmann's bacillus (non-acid forming), which was found in a nose not affected by rhinitis, did not die. Thus of six guinea pigs, each inoculated with 1 c.c. of a 48 hours broth cultivation of the bacillus, all died in about 36 hours, and one animal inoculated with 1 c.c. of a 24 hours cultivation died in 9 days. Post-mortem examination showed the characteristic lesions—great œdema at the site of inoculation and hæmorrhagic suprarenals and cultivations from the seat of inoculation showed the same bacillus. With a view to further confirmation two guinea pigs were also inoculated each with 1 c.c. of a 48 hours broth cultivation previously mixed with 1 c.c. of diphtheria antitoxin (Institut Sérothérapique, Brussels) containing about 200 units. In each case the animals had merely a local transient œdema which disappeared in a couple of days. Of two control animals inoculated at the same time each with 1 c.c. of a 48 hours culture without antitoxin one died and the other had severe œdema persistent for fourteen days, but did not die. In cultivations from the fauces of the children affected with this rhinitis I have failed in all cases except 3 to find the bacillus.

These 3 cases have been excluded from these statistics for the following reasons: Two were sisters, the mother and a brother of whom were suffering from definite diphtheria at the time, and the third child had also been exposed to the infection of diphtheria and had had his pharynx examined for adenoids a day or two before the bacilli were found in the fauces. The fact that the bacillus is not found in the fauces when present in large numbers in the nostrils appears most remarkable, considering that the fauces must be almost constantly exposed to infection. In cultivations from the affected nostrils large numbers of staphylococci are found with the bacillus; these are most commonly staphylococcus pyogenes albus, pyogenes aureus and cereus flavus. Streptococci are conspicuous by their absence. In the 51 cases streptococci were found in 2 only. It is true that plate cultivations were not systematically made with a view to separating the streptococcus; but cultivations on Löffler's serum were microscopically examined so that the streptococcus would certainly not have been overlooked if present in any considerable numbers. In this respect the cultivations from the affected nostrils contrast very markedly with those from the fauces of the same cases, as the latter almost invariably show the presence of the streptococcus in considerable numbers. During the eighteen months over which these observations have extended a bacteriological examination of the fauces of every patient has been made before admission to the scarlet fever wards and during this period only one case of post-scarlatinal diphtheria has occurred in the hospital. This one case was promptly isolated, so that the children affected with rhinitis had not been exposed to any extent to infection from cases of diphtheria whilst in the hospital. On the other hand, though there have been 51 cases of rhinitis accompanied by a bacillus indistinguishable from the true diphtheria bacillus, only the one case of diphtheria mentioned above has occurred.

(*b*) *Secondary pustules.*—If examined at an early stage the secondary pustules contain the same bacillus as is found in the nostrils, generally accompanied by staphylococci. If the examination be made some time later the bacilli may have disappeared and staphylococci only are found. Stained specimens of the pus taken from one of these pustules at an early stage show large numbers of the bacilli in the bodies of the leucocytes. The pustules appear to be due to the infection of small wounds or abrasions with the infective material; they are exactly similar to the pustules seen sometimes in cases of true faucial diphtheria, which further resemble them in the fact that they contain large numbers of the bacilli. The pustules met with on the fingers in these cases of rhinitis, which commonly begin at the edges of the nails, are sometimes very troublesome, the pus escapes, and a more or less raw surface is left. This surface is not as a rule particularly tender, but is often very sluggish in healing. There is never any formation of membrane on these surfaces. Very similar pustules are occasionally met with in nurses nursing in diphtheria wards; these pustules contain the diphtheria bacillus and are not accompanied by any formation of membrane, but are usually accompanied by pain with more or less lymphangitis, which is not the case with the pustules met with in cases of rhinitis. I have examined a considerable number of children convalescent from scarlet fever with a view of determining if the bacillus ever occurs in the nostrils without the characteristic lesion. In one case it was found in the apparently healthy nose of a child who was in the same ward as children suffering from rhinitis; and also in the case of a boy whose nose was apparently healthy, but who had a large pustule containing the bacilli on the sole of his foot, and who was also in a ward with children suffering from rhinitis. In these two cases the bacillus was acid-forming, but its virulence was not tested by experiments on animals. In 36 of the children examined Hofmann's bacillus was found in the nose, occasionally together with the diphtheria-like bacillus in cases of rhinitis, but generally in cases with a profuse clear nasal discharge and without any soreness of the nostrils. This bacillus, however, is widely distributed and is commonly found in the clear nasal discharges of otherwise healthy school children.

Recapitulation and Remarks.—1. Children convalescent from scarlet fever in hospital are very liable to a certain form of external rhinitis, often accompanied by the formation of secondary pustules on various parts of the body. 2. This rhinitis though not membranous is associated with the presence of the Klebs-Löffler bacillus in the nostrils, this organism being absent from the fauces. 3. It is contagious as such, but has not been observed to give rise to faucial or laryngeal diphtheria. 4. It is unaccompanied by rise of temperature, albuminuria, or marked glandular enlargement. 5. It appears to be limited to children under thirteen years of age and has been most frequently observed at the ages of three and four years. The fact that the bacillus, though present in the nostrils in large numbers and causing a local lesion, does not give rise to any constitutional symptoms or to faucial or laryngeal diphtheria, suggests that its virulence is modified to a remarkable extent. It is virulent to guinea pigs when inoculated subcutaneously, but this is no criterion of its virulence to the human being, as was shown by Dr. Klein in the case of diphtheria bacilli taken from the fauces of patients suffering from diphtheria. Why the bacillus limits itself to the nostrils and does not invade the tonsils is very hard to see, as the tonsils must be liable to repeated infection both from the nasal passages direct and through the mouth. It appears not improbable that under certain conditions this feebly virulent bacillus may acquire a higher degree of virulence and this point possesses a peculiar interest in view of the large number of cases of diphtheria met with after scarlet fever. I am greatly indebted to Dr. Sidney Phillips and to Dr. Washbourn, in whose wards the above observations have been made, and also to Dr. Washbourn for

his kindness in determining the pathogenic effects of the bacillus.

Remarks by Professor KANTHACK.—As Dr. Todd read the above paper during an Act for the M.D. degree I allow myself the privilege of adding a few critical remarks which in substance were offered at the time and which are intended to fill some gaps in a valuable piece of work. It is important in connexion with Dr. Todd's paper to allude to the observations of Dr. Cautley,[2] who examined the nasal secretion of persons suffering from acute febrile nasal and naso-pharyngeal catarrh and found the bacillus coryzæ segmentosus, an organism which morphologically and on artificial cultivation is certainly allied to the diphtheria bacillus. Unfortunately Dr. Cautley did not perform animal experiments or attempt any chemical tests. Certainly his organism was not a "Hofmann's bacillus," nor was it a typical diphtheria bacillus. Next, mention must be made of the numerous cases of fibrinous rhinitis in which diphtheria bacilli or organisms indistinguishable from diphtheria bacilli have been found. It must suffice to allude to the published works of Abbott,[3] Freeman,[4] Czemetschka,[5] Concetti,[6] Stamm,[7] Meyer,[8] Gerber and Podack,[9] and Pluder.[10] Rhinitis fibrinosa is a chronic affection which, as a rule, remains local and does not give rise to a clinically recognised diphtheria, but the bacillus occurring in this lesion is now generally acknowledged to be the Klebs-Löffler bacillus. Further, bacilli resembling diphtheria bacilli, but not Hofmann's bacilli, are found with great frequency in many forms of ulceration of the skin, gangrene, stomatitis, cancrum oris, and noma. Together with Mr. J. W. W. Stephens I have examined systematically a number of such cases and have separated in all cases of cancrum oris and noma an organism so closely resembling Löffler's bacillus that although in most cases it was not virulent I have not hesitated to place it provisionally with the diphtheria bacillus. Recently Freymuth and Petruschky[11] have reported that in cases of noma they have obtained the diphtheria bacillus. I hope soon to find the necessary leisure to publish my own researches, but wish here to point out that in many forms of chronic and impetiginous ulceration of the skin it is easy to find bacilli resembling the diphtheria bacillus, in all respects excepting virulence, so closely that I see no reason to separate them as pseudo-forms, all the more since they all differ strikingly from Hofmann's bacillus and since competent observers now begin to recognise that acid formation, metachromatism, Neisser's staining reaction, appearances on gelatin and agar-agar, and virulence are no more certain criteria for the diphtheria bacillus than appearances on gelatin, indol reaction and virulence are certain criteria for the cholera vibrio. I have maintained for some time that bacilli actually and not merely distantly resembling the diphtheria bacillus are found frequently in the throat and elsewhere in chronic ulceration, impetigo, cancrum oris, &c., and that in many cases by continued growth these bacilli may be so altered as to resemble the diphtheria bacillus still more closely and even to acquire pathogenic properties. The diphtheria bacillus is in my opinion widely distributed, frequently in modified forms, it is true, but still in such forms which, except by artificial and imaginary criteria, such as would not be recognised in the case of other micro-organisms, cannot be separated from the Klebs-Löffler bacillus, which even under the best conditions is a highly polymorphic organism. I therefore consider the work of Dr. Todd of all the greater importance, since it is a further contribution to the view which is gradually gaining ground that the diphtheria bacillus is found in many lesions which are not "diphtheria,"[12] and that the various tests, generally enumerated, do not suffice to distinguish the various modifications from the "text-book variety" of the Klebs-Löffler bacillus. It is unnecessary to draw attention to the bearing which such a view has upon the etiology and pathology of diphtheria.

[2] Further Report by Dr. Cautley on the Etiology of Influenza Cold. Twenty-fourth Annual Report of the Local Government Board, 1894-95, Supplement containing the report of the medical officer for 1894-95, p. 455.

[3] Medical News, May 13th, 1893.

[4] Medical Record, New York, vol. i., p. 618.

[5] Prager Medicinische Wochenschrift, 1894, Nos. 38 and 39.

[6] Archivio Italiano di Laringologia, xii., 1892, fasc 2.

[7] Archiv für Kinderheilkunde, Band xiv., 1892, p. 157.

[8] Archiv für Laryngologie und Rhinologie, Band iv., 1896, p. 249.

[9] Deutsches Archiv für Klinische Medicin, 1895, No. 54, p. 262.

[10] Deutsche Medicinische Wochenschrift, 1896, Nos. 44 and 46.

[11] Ibid., 1898, p. 232.

[12] See also Schütz: Berliner Klinische Wochenschrift, 1898, p. 297, &c.

RECURRENT CARCINOMA OF THE FEMALE BREAST ENTIRELY DISAPPEARING UNDER THE PERSISTENT USE OF THYROID EXTRACT CONTINUED FOR EIGHTEEN MONTHS.

BY FREDERICK PAGE, M.D. EDIN., M.R.C.S. ENG., SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE, &c.;

AND

WILLIAM H. BISHOP, M.B., B.S. DURH.

IN December, 1895, Mr. Page was asked by a former house surgeon of his, Dr. Bishop of Wylam, to see with him a woman, aged sixty-one years, who was suffering from carcinoma of the left breast of some six months' duration. The general health was very much impaired. The growth was situated in the upper part of the breast and was of the size of a hen's egg and both the axillary glands and their lymphatics were affected. On Jan. 7th, 1896, the breast was removed together with the axillary glands and fat, the lymphatics, and the pectoral fascia. In April there was a recurrence of the disease in the neighbourhood of the cicatrix and on July 18th several nodules, varying in size from that of a pea to that of a walnut, were removed. A portion of these growths was sent to the Clinical Research Association and reported on as follows on July 29th: "Both specimens show a soft carcinomatous growth, with small alveoli and very scanty stroma. At first sight it might be mistaken for sarcoma but the mode of growth at the edge and the invasion of the fatty tissues is unlike that of sarcoma. In the section of the skin the dense fibrous tissue in the corium prevents any very rapid multiplication of the cancer cells." Three weeks after this second operation other nodules appeared in the scar and later a group developed below it and in the subcutaneous fat. Further interference was declined and, indeed, did not seem to be feasible. The nodules steadily increased in size and number. In September, 1896, at the suggestion of Dr. Bishop, thyroid extract was given quite as a forlorn hope. At first 3 gr. were taken daily and the dose was gradually increased till 15 gr. could be taken daily. During the eighteen months that the treatment was persistently followed it was found necessary occasionally to suspend the use of the drug for some days on account of its toxic effect. The patient is now quite well. She has gained flesh and health to such an extent that it is difficult to believe that she is the same person who was operated upon two years and four months ago. There is no trace of the disease to be discovered.

Remarks by Mr. PAGE.—Such are the facts. It may be that this case is a vagary of recurrent cancer, but taken in conjunction with the cases of recurrent carcinoma reported by Dr. G. Beatson of Glasgow, in all of which thyroid extract was given, I consider it to be one of great importance and interest, so much so that I intend to try the persistent administration of thyroid extract in every case of recurrent or inoperable carcinoma of the female breast coming under my observation. In due course I trust to record the results of the experiment and in the meantime the case is reported in the hope that it may induce others to give the treatment a trial.

Remarks by Dr. BISHOP.—I am much indebted to Mr. Page for permission to add the following remarks. When despite the completeness of the first operation the growth returned three months later and when only three weeks after the second operation it again made its appearance the case looked hopeless. It was then that in sheer desperation I determined to try thyroid extract, having read Dr. Beatson's papers,[1] notwithstanding his opinion that it has "little effect when given alone." Mr. Page cordially approved of the experiment. At first it did not seem to have any effect but it was soon apparent that no increase in size was taking place and the patient maintained—rightly I think—that the growths were softer. In the spring of last year, however, about six months after the treatment was commenced a lump appeared above the operation scar and grew rapidly till it

[1] THE LANCET, July 11th, 1896, p. 104, and July 18th, 1896, p. 162.

was as large as a walnut when it seemed to cease growing. I did not examine the breast from Christmas of last year (when in addition to the growth just mentioned there were a number of nodules in and about the scar and a group below it in the subcutaneous fat) until April 18th last, when I was amazed to find that every trace of the growths was gone. I at once informed Mr. Page and he immediately went to see the patient and confirmed my observation.

It is always dangerous to draw conclusions from a single case but if thyroid extract had no effect upon the growths to what is their disappearance due? And if beneficial results from its use are, as Dr. Beatson maintains in his papers, dependent on a previous oöphorectomy why should it alone not succeed after the menopause has been passed? If it is really, and of itself, of utility in carcinoma of the breast then it ought also to be of service in carcinoma of other parts of the body, and I suggest its trial in inoperable cases when the growth is situated elsewhere than in the mamma. In this connexion also it would be interesting to know whether the subjects of thyroidectomy or those in whom that gland is functionally inactive are peculiarly liable to carcinomatous growths. I am not aware that such is the case. It would also be interesting to get information as to the condition of the thyroid gland in the subjects of this disease. How the thyroid extract acts it is very difficult to surmise. Whether it alone, or in conjunction with the menopause (either naturally or artificially produced), tends to promote a fatty degeneration of the carcinoma cells, or by stimulating the lymphatics to remove the carcinomatous material (to which theory there would seem to be obvious objections), or by increasing metabolism enables the phagocytes to cope with the disease, or acts in some other way, further data can alone supply facts for a decision.

Not the least puzzling feature of the above case is the development of a growth during the treatment. At the time, however, the patient was suffering great anxiety owing to the illness of her husband and was constantly up at night. The general health suffered much and it is possible that the thyroid tabloids were neglected. What we learn from this, and I think also from Dr. Beatson's cases, is that to do any good the administration of thyroid gland must be pushed to its full physiological effect and continued over a great length of time.

A CASE OF DECAPITATION.

BY T. EDWARD SANDALL, B.A., M.B., B.C. CANTAB.,
MEDICAL OFFICER OF HEALTH OF ALFORD; LATE HOUSE PHYSICIAN AND HOUSE SURGEON AT CHARING-CROSS HOSPITAL.

THE operation of decapitation is one which is so rarely required in midwifery practice that I think it desirable to report the following case. I have no means of ascertaining statistics as to the frequency of cases in which decapitation has been required, but I feel sure that it is an operation which it is very seldom the lot of a general practitioner to perform. A neglected shoulder presentation in which version is impossible is usually described as the condition which renders decapitation justifiable and necessary, but in the case I am about to describe the presentation was more rare and complex, being a true transverse presentation, the chest being the presenting part, with both arms prolapsed. The history of the case is as follows.

About 10 A.M on March 21st, 1898 I received a message from Mr. G. Bosson of Alford, asking me to come to assist him in a difficult midwifery case in a village about three miles away. On arrival at the house I learned the following particulars. The patient was a married woman who had previously had two children born at full time, the labours having been natural and fairly easy. She had had good health during her pregnancy, was at her full time, and there were no special circumstances about the case. Labour had begun on the afternoon of March 19th; the pains had gradually become stronger during the night and the membranes ruptured about 10 A.M. on the 20th, when the nurse wished to send for Mr. Bosson, who had been engaged to attend the patient. The husband, however, declined to go for the medical man, urging that his wife was not "bad enough," and that she would get over it all right without medical assistance as she had done before. The pains continued all day and all the next night, and at about 8 A.M. on the 21st, as the patient seemed to be making no progress and was becoming exhausted, the nurse insisted on the husband fetching the medical attendant. Mr. Bosson saw the case for the first time about 9 A M. on that day and on examination found a transverse presentation as described below. He at once attempted to perform podalic version, but finding it impossible to reach a leg without an anæsthetic and recognising the difficult nature of the case he shortly afterwards sent for me to assist him. On my arrival I examined the patient and found the following condition of things. The right hand of the child was projecting outside the vulva, while the left hand could be felt immediately within the vagina, and on passing the finger up the sternum could be felt presenting, the chest being firmly pressed down by the contraction of the uterus. The head lay in the left iliac fossa, the neck being hyper-extended, and the chin could be reached by the finger with difficulty; the trunk and legs lay to the right, the only part which could be felt being the front of the abdomen, and it was quite impossible to touch a foot or a leg. The diameters of the pelvis appeared to be normal. The patient was somewhat exhausted, the pulse being 120, somewhat small, and regular, but on my proceeding to administer chloroform by a Junker's inhaler she took the anæsthetic well, expressing herself thankful to get some relief from the pain. When she was fully under chloroform Mr. Bosson attempted to reach a foot or a leg with the idea of performing podalic version, but after a considerable time he gave up the attempt and as an alternative tried to bring the head down by traction with the finger in the mouth, but the uterus was by this time so contracted down that he was unable to move the child in any way. He then requested me to try while he continued the administration of chloroform as, owing to a somewhat greater length of finger, I had a slightly longer reach. I found it quite impossible, however, even with the whole hand in the vagina to get high enough up to reach a leg, and the uterine contractions caused so painful a cramp of the fingers after a time that I was obliged to desist, and I found it equally impossible to bring down the head though I exerted very forcible traction by a finger in the mouth which could be reached with great difficulty. The patient meanwhile was becoming more exhausted, the pulse-rate rising to 140 and decapitation seemed to be the only possible way by which to bring about delivery. I therefore drove home to fetch a Ramsbotham's hook, which instrument I fortunately possessed, the patient being allowed to come round from the anæsthetic. On my return at about 2 P.M. I again administered chloroform, but the tonic contraction of the uterus was now so great that Mr. Bosson found it impossible to reach the neck of the child and requested me to try while he attended to the administration of the anæsthetic. After some time, passing the whole hand into the vagina, I managed with difficulty to pass my forefinger in front of the neck and hook it round, so drawing the neck down as much as possible. I then passed the decapitating hook up, point to the left, along the forefinger of my right hand, turning it backwards over the neck. Withdrawing the right hand I passed the left forefinger up to meet the point of the hook and, thus guarding against injury to the soft parts, by a sawing motion combined with traction I decapitated the child. By slightly pulling the arms, assisted by external pressure, the body of the child was now easily extracted and the head was delivered by means of the forceps. The patient, whose pulse-rate was 170, appeared to be very exhausted, but she gradually rallied as she recovered from the anæsthetic, the pulse-rate falling to 140. The placenta was expressed in about ten minutes; it came away without any trouble and there was very little hæmorrhage. The child was a healthy male, of rather large size but with no abnormality whatever, and apparently had lived up to the time of labour. I left the patient under the care of Mr. Bosson at about 3.30 P M. in a fairly satisfactory condition considering the strain she had gone through and the length of time she was under chloroform, but unfortunately she never rallied from the shock. I did not see her again, but I learned from Mr. Bosson that she gradually sank and died on the morning of the 23rd, about thirty-six hours after delivery.

Apart from the operative interference required I think this case worth recording on account of the extreme rarity of the presentation. Dr. Galabin in his "Text-book of Midwifery" states that he has never yet met with a case in which the

foot or knee could not be reached, but it was absolutely impossible to touch either in this case even with the patient under chloroform pushed to the extreme surgical degree. Cephalic version was rendered impossible by the firm contraction of the uterus down upon the fœtus and decapitation therefore became the only method of treatment. With regard to the operation itself, although I need hardly say that I have never performed it before or seen it performed I found very little difficulty in carrying it out when once the neck was encircled by the finger. The presence of both arms in the vagina and the impossibility of pushing them up out of the way interfered to some extent, however, by allowing very little room in which to work, and a good deal of care was required in passing the decapitating hook to prevent any injury to the maternal soft parts which, fortunately, I succeeded in doing.

Being in the country and therefore having no access to a good library I cannot lay claim to having studied the literature of the subject, but the text-books which I possess—Galabin, Playfair, Lusk, and also Ramsbotham—do not describe the peculiar form of presentation which was found in this case. In all the forms described in these text-books the presentation of the head or feet with the hands is mentioned and version in such cases is usually possible, but a true transverse presentation with marked opisthotonos and both arms prolapsed is not mentioned and is, therefore, I conclude, exceedingly rare. The usual causes of transverse presentations as generally given were here conspicuous by their absence. The child was a normal, healthy, living male at full term and not a dead, premature, or macerated fœtus as one might expect to find. The mother was a well-built, healthy woman with no obvious pelvic contraction, as her two previous easy full-term labours show, and there was no other maternal abnormality to cause obstruction to labour. I greatly regret the unsuccessful termination of the case, but I feel convinced that the patient lost her life owing to the neglect of the husband to send for medical aid at the proper time. If the patient had been seen earlier version would probably have been possible under chloroform, but the long delay no doubt complicated the presentation, necessitating the operative procedure I have described with, unfortunately, a fatal result.

Alford, Lincolnshire.

A CASE OF TETANUS; EARLY AMPUTATION; RECOVERY.

BY W. N. CLEMMEY, M.R.C.S. ENG., L.R.C.P. LOND.,
HONORARY SURGEON TO THE BOOTLE BOROUGH HOSPITAL, LIVERPOOL.

A MAN, aged twenty-nine years, was admitted to the Bootle Borough Hospital on May 25th, 1892, under the care of Mr. R. J. Sprakeling, suffering from a compound comminuted fracture of the bones on the outer side of the left foot (the cuboid and the fourth and fifth metatarsals), caused by the wheel of a cart going over it. Suppuration with separation of the dead bone followed, during which time the cavity of the wound was well sprayed with carbolic lotion and dusted with iodoform powder and the foot enveloped in a bran poultice which was frequently renewed. An "iron" mixture was prescribed. The patient continued in fair health and spirits up to June 5th—i.e., eleven days after admission—when he had slight trouble in swallowing a piece of orange pulp. On the 6th this difficulty was emphasised with regard to everything but fluids, the patient complaining that his tongue and the back of his mouth felt stiff. Other symptoms quickly made their appearance. His pupils were widely dilated and slight nystagmus was noticeable but sight, hearing, and taste were normal. He had some spasmodic contraction of the temporals and masseters, also of the left sterno-mastoid, preventing him from separating his teeth more than half an inch apart and keeping his head fixedly turned towards the left side. The reflexes were as follows:—Abdominal and epigastric: on right side when first tried +, but soon tired; on left side +. Cremasteric: right +; left very much −. Patellar: right +. Plantar: right +. Ankle clonus was present. The organic reflexes were normal. Owing to all the symptoms pointing to the onset of tetanus the foot was removed immediately by amputation through the middle of the leg. The patient took the chloroform well. On the 7th the patient was about the same. On the 8th the spasms of the muscles of the jaw seemed worse although the patient had no trouble in swallowing liquids. The reflexes became easily tired and perspiration was profuse. The patient slept well. On the 9th slight opisthotonos was noticeable but the reflexes were not so excitable; speech was still impaired and it took the patient six seconds to say the alphabet. On the 15th owing to the appearance of a bromide rash, the administration of this drug, of which he had been taking 20 gr. three times a day since June 6th, was stopped, and 10 minims of tincture of hyoscyamus and 20 gr. of chloral hydrate were substituted. On the 17th he was able to move his head slightly from side to side and there was improvement in his speech, the alphabet being said in five seconds. On the 19th two hypodermic injections of extract of physostigmine (♏ x = gr. ½) were administered. In the evening the patient was able to open his mouth more widely and to speak better and could sit up in bed. On the 20th three more injections were administered, but owing to the patient being very depressed, restless, and troubled with perspiration they were stopped. On the 21st stiffness of the muscles reappeared and as he had had no sleep for some days ¼ gr. of morphia was given with good result, the patient expressing himself as being "better than ever he had been." On the 23rd he was able to sit up to his meals which now consisted of tea, bread-and-butter and "slops." The reflexes were still exaggerated and ankle clonus was present; the stump when dressed twitched convulsively; towards evening the patient became very restless, especially during sleep. On July 5th solids were eaten without any trouble and the alphabet was repeated in five seconds. On the 13th the reflexes were almost normal; there was no ankle clonus and the muscles were soft. The alphabet was gone through in four seconds. When seen on Sept. 9th the patient was quite well.

The present theory of the disease—viz., that the bacillus is localised to the point of inoculation and that a ptomainic poison is generated at that spot, is absorbed into the blood, and gives rise to the muscular contractions characteristic of the disease owing to irritation of the central nervous system—is to a degree illustrated in the foregoing case. There can be no doubt that in this case the bacillus found entrance at the time of injury, seeing that after the patient's admission the wound was most assiduously plied with antiseptics and that all the wounds in the same ward were perfectly healthy, and I think it is a fair presumption that if this process had not been carried out the disease might have shown itself sooner and have been more virulent in type. The first symptoms detected were pharyngeal in character and were fortunately early recognised and the removal of the part inoculated was performed at once. In spite of this, however, *the symptoms for the first four days afterwards became intensified*, the jaw spasms becoming worse, and on the fourth day after operation there was opisthotonos. A further interesting fact in this case to be noted is that the skin reflexes were on excitation very markedly exaggerated but that after once or twice responding they became imperceptible,

The above facts are rather suggestive that the ptomainic poison either becomes (after its area of generation is removed) for a few days more virulent when in the blood, or so weakens in a progressive way the general physiological resistance of the system, or else that it has a progressively paralysing action upon the reflex inhibition centres in the brain and cord. It may further be, as has been suggested, that there are in the tetanic poison two or more substances of different constitution, one the true tetanic poison of what may be called a constant pathogenic index acting in a definite manner upon the motor cells, the others acting in a progressive way upon the general system and upon the reflex inhibition centres. The fact that the skin reflexes were first exaggerated and then so easily tired seems to suggest especially some disturbance of the sensory portion of the reflex arc. This seems probable from the fact that in tetanus the motor apparatus—i.e., the motor nerves and muscles—is shown to be capable of prolonged tetanic action—the muscles of the face by their contraction forming the risus and the masseters forming the lockjaw.

Bootle, Liverpool.

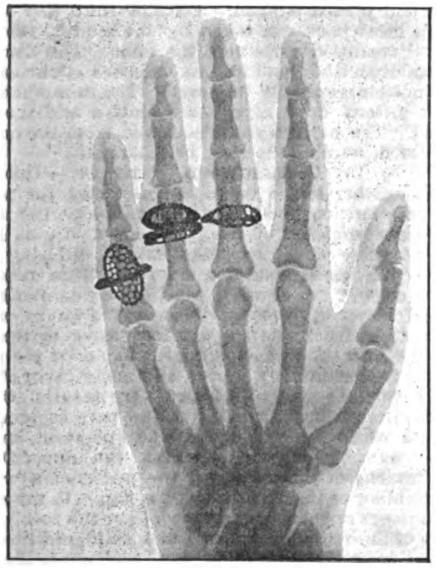
SHORT EXPOSURES IN PRACTICAL X RAY WORK.

BY C. THURSTAN HOLLAND, M.R.C.S. ENG., L R.C.P. LOND.,
HONORARY MEDICAL OFFICER IN CHARGE OF X RAY DEPARTMENT, ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

ONE of the great disadvantages in x ray work is the length of exposure necessary to get a good photographic result. Macintyre (of Glasgow) and Webster (of London) have both done "snapshot" work, using large coils; but the large size, and consequently great weight, of these coils is a drawback, as it is almost impossible to take an 18-in or 20-in spark coil to the bedside of a patient, and in addition the cost of these large coils is very considerable. Besides this, short exposures are very advantageous in many ways: (1) the patient has not to be kept still for so long a time, and to anyone in pain this keeping still is very irksome; (2) it is of advantage in the case of young children who cannot understand the necessity of absolute immobility; (3) the risk of setting up x ray dermatitis, &c., is smaller; and (4) the time of the operator is saved.

Lately, working with 6-in and 10-in coils, I have obtained good results in many cases with compartively short exposures and I now use this method in nearly all cases. Working with a 6-in coil the adult hand represented by Fig. 1 was taken with an exposure of fifteen seconds, whilst with a 10-in. coil the knee and ankle-joints of an

FIG. 1.



Skiagram of adult hand with rings. Palm on plate. Exposure 15 seconds.

FIG. 2.



Skiagram of knee-joint of adult male. Inner side on plate. Exposure 30 seconds.

FIG. 3.



Skiagram of ankle-joint of adult male. Inner side on plate. Exposure 30 seconds.

FIG. 4.



Skiagram of elbow-joint of adult showing congenital deformity. Exposure 30 seconds.

adult male shown in Fig. 2 and Fig. 3 were obtained with exposures of thirty seconds each and the elbow-joint of an adult congenitally deformed (Fig. 4) was taken in thirty seconds. All these results compare favourably with similar ones obtained by exposures reckoned in minutes.

My method is as follows. Having tested the tube with the screen to see that it is working at its best—and in my opinion a tube giving a good screen result can always be depended upon to give a good photographic result—the exposure is made. Then the plate (usually a "Cadett-lightning") is put into a weak rodinal developer (1 part to 64 or so of water) and left in the dark room. In the course of a few hours the plate is taken out and fixed. Sometimes, in order to obtain the best possible print, the plate must be intensified, but as a rule this is not necessary. The length of time developing is no disadvantage, as for immediate purposes the screen is nearly always sufficient and the plate can be left to develop itself, so that there is no waste of the operator's time.

In addition to the skiagrams shown above I have others of a hand taken in five seconds, a thick adult chest and shoulder taken in three minutes, and so on. I have used Apps-Newton coils with the ordinary interrupters and tubes supplied by Newton and Co.

Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

HAMPSTEAD HOSPITAL.

A CASE OF PERFORATING APPENDICITIS; GENERAL PERITONITIS; ABDOMINAL SECTION; RECOVERY.

(Under the care of Dr. E. COLLINGWOOD ANDREWS.)

A BOY, aged twelve years, was on Dec. 21st, 1897, admitted to the Hampstead Hospital for acute peritonitis. Late on the evening of Dec. 18th he complained of feeling chilly and unwell and on the following morning he had a dull pain all over the abdomen with sickness and a shivering fit. On the 20th the pain became much more acute and no food or medicine could be taken without vomiting. The bowels acted moderately. On admission to hospital the temperature was normal and the pulse, which was small and hard, was 115. Pain and retching were incessant and the face was flushed and anxious. The whole of the abdomen was rigid and abdominal respiration was absent. No definite tumour could be discovered. The pain was referred to the region of the umbilicus and there was no special tenderness about McBurney's spot. The rectum was empty and much "ballooned," but afforded no clue as to the nature of the attack. It was apparent that the case was one of acute general peritonitis due to perforation of a viscus and the early history appeared to point to the appendix as the seat of the disease. Dr. Andrews decided to operate forthwith and gas and ether were administered by Dr. Cook, while Dr. Ware assisted the operator. The usual incision, with its centre at McBurney's spot, was made, and on opening the peritoneal cavity the whole of the parietal and visceral layers were found to be much inflamed and a strong fæcal odour was observed. Between the coils of intestine in the right pelvic fossa there was a collection of very foul pus, which was carefully prevented from reaching the other portions of the abdominal cavity. The appendix was adherent to the small intestine and was with difficulty freed and brought out of the abdominal opening. Its distal two-thirds were much inflamed and thickened and half an inch from the tip there was a perforation of the size of a pea through which fæcal matter was oozing. The meso-appendix, having been ligatured in three portions, was divided and a ligature was passed round the appendix a quarter of an inch from the cæcum. The appendix was now cut through and the mucous surface of the stump was touched with pure carbolic acid. Irrigation was not employed, but the abdominal cavity was carefully sponged and a large indiarubber drainage-tube was passed down into the pelvis. Further, in order to shut off the abscess cavity, it was well packed round with iodoform gauze and the abdominal wound was sutured in the usual way. For two days subsequently to the operation there were persistent vomiting and much restlessness. The temperature remained normal and the pulse about 120. Nothing was taken by the mouth except a few teaspoonfuls of hot water; *per rectum* nutrient enemata of port wine and Valentine's meat juice were given and there was injected hypodermically $\frac{1}{100}$ gr. of strychnia, with $\frac{1}{6}$ gr. of morphia added when there was much pain. There was a free discharge of dark foul pus and the dressings had to be frequently changed; the gauze packing was taken out on the second day. Flatulent distension was relieved by the passage of a rectal tube and on the second day there was a watery and offensive stool. On the third day a little Valentine's meat juice was taken by the mouth, the pulse and general condition remaining the same. The discharge of pus then diminished and lost its offensive odour and the general condition gradually improved. The tube was finally taken out fifteen days after the operation and the sinus soon closed. The patient was discharged from the hospital perfectly cured, wearing the usual belt and pad.

Remarks by Dr. COLLINGWOOD ANDREWS.—This case affords yet another lesson as to the necessity for prompt operative interference in cases of perforation peritonitis. I refrained from irrigation of the peritoneal cavity as I considered that there would be grave risk of diffusing fæcal matter and that no irrigation could succeed in rendering aseptic the coils of bowel which were already contaminated. I attempted, however, to isolate them by the gauze packing and to drain the inevitable suppurating cavity by the tube. No doubt the formation of a peritoneal flap over the stump of appendix is theoretically correct and under other circumstances I have done this with satisfactory results. In the present case the general condition of the patient precluded any measure which would lengthen the operation, and in a subsequent case, in which I removed the appendix for recurrent attacks of inflammation, the peritoneum was too adherent to allow of the formation of a flap. In my experience the absence of the flap does not affect the result. The ballooning of the rectum is unusual in a child, and, contrary to a recent assertion, it did not disappear under the anæsthetic. In this case, as in other abdominal cases, I was much impressed by the aid afforded to the surgeon by the charting of the pulse in addition to the temperature on one of Mr. Mayo Robson's clinical charts.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

FIVE CASES OF ABDOMINAL SURGERY AND A CASE OF HYDATID TUMOUR OF THE BRAIN.

(Under the care of Dr. COURTNEY NEDWILL.)

THE six cases which we publish below are excellent examples of the valuable results which can be obtained by modern surgical treatment and they demonstrate clearly, if any proof were needed, that surgery at the antipodes will not suffer in comparison with the surgery of Europe. Probably the most interesting of the cases are the first and the last. The case of removal of a stone from the common bile-duct shows how firmly fixed these calculi may be and how much the obesity of the patient increases the difficulty of the operation. The case of hydatid of the brain illustrates the accuracy with which tumours of certain portions of the brain can be localised. In comparatively few cases have hydatid cysts of the brain been treated surgically with success. We hope to refer to this subject shortly.

CASE 1. *Stone in the common bile-duct.*—A married woman, aged thirty-three years, was admitted to the Christchurch Hospital, New Zealand, on April 27th, 1897. For three years she had been subject to attacks of violent colic at varying intervals. The pain had been referred to the region of the gall-bladder and had been followed by very slight jaundice and high coloured urine. She had never discovered gall-stones in the fæces although she had looked for them. She was on admission nine weeks pregnant. She was free

from jaundice and there was no bile pigment in the urine. On May 4th the abdomen was opened on the right side but the patient was so very stout that the incision had to be prolonged upwards and downwards before the gall-bladder, which was only slightly distended, could be reached. After great efforts a stone could be only just reached by the tip of the finger in the common duct. The abdominal wound was now extended as high as the cartilages of the ribs would permit and by lifting them up with a broad retractor Dr. Nedwill was able to get the stone isolated in the duct between the index and middle fingers, but he could not move it either up or down. He tried to needle it next but he could not fracture it. By forcibly lifting up the ribs he could just get sight of that part of the duct between his fingers containing the stone. He therefore packed strips of gauze round his fingers and slit up the duct with a scalpel. The stone was so tightly embedded that it was with difficulty extracted. The opening in the duct was carefully sutured by a fine continuous silk ligature and the abdomen was closed. The stone was of the diameter of a hazel nut but longer. On May 18th the temperature had been normal since the operation. The patient suffered from neither pain nor discomfort. On June 4th she was discharged from the hospital.

CASE 2. *Acute intestinal obstruction by a Meckel's diverticulum.*—A girl, aged sixteen years, was admitted to the hospital on Dec. 28th, 1896. She was quite well and healthy on the 24th, but on the 25th she was out of sorts and unable to take her food. Her bowels were very costive and were only slightly acted on at the latter date. Since then they had not been moved and no flatus had been passed by the anus. On the 30th, when she was transferred to Dr. Nedwill's care, vomiting was very frequent, the pulse was small, and the abdomen was greatly distended. No information was gained by rectal examination. The temperature had been subnormal but was now 100° F. Dr. Nedwill opened the abdomen in the middle line and after some search found the bowel on the right side to be congested and enormously distended up to a certain point and beyond this collapsed and empty. A cord-like band, which ran from the umbilicus towards the right side, was divided between double ligatures and the obstruction was relieved. There was some delay in convalescence owing to suppuration in the abdominal scar, but the patient was discharged from the hospital in good health on March 13th.

CASE 3. *Large multilocular colloid ovarian tumour weighing 16 lb. containing only about half a pint of thick viscid fluid.*—The patient was a married woman, aged twenty-two years, with a tuberculous history. She was small and about 5 ft. 2 in. in height and had a normal weight of about 6½ st. She was admitted to the hospital on April 20th, 1897. She had one child two and a half years old. The last menstrual period occurred eighteen months previously to admission. She had a large ovarian tumour, which was tense and solid to the feel, but which appeared at some points as if it were fluctuant. The measurement round the abdomen was 32 in. The umbilicus was bulging. The cervix was badly lacerated and the uterus was small and moveable. On the 27th Dr. Nedwill opened the abdomen and found the peritoneum to be adherent to both the abdominal wall and omentum. After exposing the surface of the tumour and plunging into it a large Wells's trocar only one or two tablespoonfuls of thick gelatinous fluid escaped. The tumour was so huge that Dr. Nedwill thought that he would try to break it up from the centre, but it was so solid that he quickly abandoned this idea and extended the abdominal wound close down to the bladder and as high up as the ribs. The tumour was, however, so bound down by large adhesions containing enormously distended vessels stretching all over it like extended fingers that before he could deliver it many ligations had to be applied. Instead of dividing these bands between double ligations he found he could more quickly free the tumour by clamping the bands on the tumour side and only ligaturing the other end. There were so many of these adhesions that all the long locking forceps in the hospital were engaged on them. Dr. Nedwill was then able to turn out the tumour, but it brought away with it a large quantity of adherent bowel. The bowel having been carefully separated the pedicle was easily reached and ligatured. It was a very small pedicle, not larger than an ordinary thumb. The patient was now in such a collapsed condition, although scarcely any blood had been lost, that Dr. Nedwill hurriedly mopped out the pelvis, into which he thought some of the thick fluid might have escaped, and closed the abdomen. During the operation the patient had had two hypodermic injections of strychnine and about half a pint of saline solution was injected into the cellular tissue below the left breast. It was, however, only by lowering the head and holding it down over the end of the operating table that her pulse was kept going. Mr. Edward Gane, the assistant house surgeon, the anæsthetist, had to do this several times, as on restoring her to the horizontal position the pulse failed. It may be mentioned here that on a former occasion Mr. Gane, in Dr. Nedwill's opinion, averted a fatal termination by having recourse to this same method in a case where Dr. Nedwill removed a large tuberculous kidney. On the 28th the patient was doing fairly well. The pulse was rather small and rapid. The temperature suddenly rose to 103° F. during the night, but only for a short period. On May 2nd the temperature showed a slight rise at night. There was some offensive discharge from the rectum, but otherwise the patient was comfortable. On the 4th an abscess under the left breast was opened; it contained gas. On the 7th the abdominal wound had healed. The temperature was still high at night. The phthisical mischief at the left apex was progressing. On the 18th there was still a slight rise of temperature at night. Some foul-smelling discharge from the bowel took place. There was slight incontinence of the rectum, but no cause was ascertainable. The temperature remained elevated at night from April 28th to May 24th. On May 20th the abdominal wound was swollen and red with pus issuing from the scar; a good-sized abscess was evacuated. After this the temperature remained normal. The patient put on flesh rapidly and was discharged from the hospital on June 23rd.

CASE 4. *Tubal pregnancy.*—A married woman, aged thirty-five years, was admitted to the hospital on June 15th, 1896. She had had fourteen children without trouble occurring during any pregnancy. She had had no miscarriages. She had menstruated regularly till six weeks before admission, but she was then suddenly taken with pain across the abdomen on getting out of bed in the morning. For a month this pain continued, but for the past fortnight she had been free from it. She had had a vaginal discharge for the past five weeks and two weeks before admission she passed "a lump of flesh." On abdominal examination a well-marked tumour was seen on the left side extending from Poupart's ligament to just below the level of the umbilicus. The swelling was fixed in position and resonant on percussion. On the 17th Dr. Nedwill opened the abdomen and found that the peritoneum, omentum and tumour were all closely adherent together. Several coils of intestine had to be stripped off the surface of the tumour and in one place part of the sac had to be left adherent to the bowel. A good many adhesions were brushed off with a soft sponge but several had to be tied. This mass, which was of about the size of a cocoa-nut, was then turned out and was found to consist of coagulated blood in the broad ligament with a tubal fœtation. As the left ovary was cystic, it and the tube and the broad ligament were removed. The abdomen was closed. The temperature remained normal throughout and the patient was discharged from the hospital on July 31st. Some months after the operation she returned with almost all the usual symptoms of Graves's disease well-marked. This condition was present before the operation but was not well-defined.

CASE 5. *Tubal pregnancy of the left side and ovarian cyst of the right ovary.*—A woman, aged thirty years, was admitted to the hospital on October 24th, 1896. The patient stated that she had menstruated early in August but not since then. For the past six weeks she had had a sanguineous discharge from the vagina. The abdomen was distended in both flanks but much more so on the right than on the left side. The uterus was felt in the middle line. Douglas's pouch was occupied by a fairly large-sized tumour. The fornices were filled up with a swelling continuous with that felt in the abdomen. The cervix was pushed forward. Dr. Nedwill saw the patient in the country about ten days before her admission to the hospital. Her temperature was then 102° F. The fulness in Douglas's pouch was then not nearly so well marked. On Oct. 27th Dr. Nedwill opened the abdomen and found the right tube to be distended and ruptured. The blood-clot had passed over the middle line in front to the broad ligament on the opposite side and down into Douglas's pouch. There was quite a quart of clot turned out. The tube and broad ligament were ligatured and removed. On the left side

there was a small ovarian cyst of about the size of an orange and it was removed. Although Dr. Nedwill occupied some time in sponging out the pelvis he thought that it was prudent in this case to pass in a drainage-tube deep down into Douglas's pouch. On Oct. 28th the patient was very comfortable and the temperature was normal. The drainage-tube was removed. Until Nov. 2nd there was no bad symptom. The temperature was normal on this date. On the 3rd she complained of pain over the right side. The temperature, which had risen to 100·4° on the previous evening, became normal in the morning. The bowels were well opened. The wound had completely healed except where the drainage-tube was inserted. A considerable quantity of sanguineous pus was discharged through this opening. On the 8th the pus was perfectly sweet and was still escaping from the drainage-tube opening. On the 20th the opening had nearly closed; there was no abdominal swelling. On Dec. 1st the patient was well and was discharged from the hospital.

CASE 6. *Hydatid tumour of the brain*.—A girl, aged seventeen years, was admitted to the hospital on Dec. 3rd, 1896. There was no history of mental disease or neurosis in the patient's family. She had always been in good general health, but was inclined to be hysterical. There had been some obstruction to her left nostril for about six years. She did not look robust but she was well nourished. She was quiet and collected in manner and answered questions readily and with intelligence. Eight months before admission she fell from a pony. She appeared to be frightened and excited, but she did not so far as was known sustain any physical injury and was in her usual health on the next day. In the course of the following six weeks she complained of numb sensations in the left hand and sometimes of cramp, the fingers closing on the palm. Little notice was taken of these symptoms at first, but afterwards more attention was paid to them. The paralysis in the arm became almost complete about six months before admission. Two months later weakness of the leg on the same side was observed, the ankle being affected. She was, however, able to get about. She was attended for those symptoms, which were put down to hysteria. The patient herself said that about a year before admission—at any rate, before the accident, which appears to have been a slight one—the right side of the face was drawn up. This was attributed to the faulty position of one of her teeth and was thought to be of no moment. For the last five months she had been subject to attacks resembling epilepsy. Usually the attacks began with a numb sensation in the left fingers which flexed and extended on one occasion. Subsequently the third finger was the first affected. The first three or four attacks were followed by loss of consciousness, but in later attacks consciousness had been retained. Her sight had been good, but about two months before admission she began to see things double. This had interfered with any sustained effort. She was subject to bilious attacks with vomiting and was constipated. She had shown no symptoms of hysteria since her admission to the hospital. The respiratory, circulatory, and digestive systems were normal. There was no evidence of depressed bone in the skull. There was paresis of the left facial muscles, but no ptosis was present. The pupils were equal; the reaction to light and accommodation was normal. The tongue was protruded straight. The pulse was normal. Ophthalmoscopic examination showed that there was double optic neuritis, the neuritis being intense in the right eye. Minute hæmorrhages were observed in both retinæ. She had diplopia, seeing objects multiplied; there was single vision with the left eye, but objects were multiplied with the right eye. The corneal surface was regular. There was very considerable loss of power of the left arm with slight wasting. There did not appear to be any diminution of tactile sensation, but there was considerable analgesia. The muscles reacted readily to the faradaic current; there was paresis of the leg of the same side, the peroneal muscles being chiefly affected. The knee-jerk was increased and there was well-marked ankle clonus. The urine was acid and contained no albumin or sugar. The day after her admission to hospital the patient had an attack resembling epilepsy, consciousness being retained. The attack occurred in the early morning and details were not observed. The patient got up daily and seemed to be in good spirits. On the 13th, while Dr. Walter Fox, the house surgeon, was testing the left leg gently for ankle clonus, she suddenly cried and said that a fit was coming on. She looked pale and seemed to be a good deal frightened. The left wrist was first seen to be in extreme flexion, no separate movement of the fingers being noticed. The forearm was flexed on the arm, the arm commenced to jerk and the left leg was violently drawn in flexion. The spasm of the arm extended apparently to the whole of the side and then to the right arm till the whole body was involved. The eyelids were rapidly opened and shut, the pupils were somewhat dilated but equal, the pulse was rapid, the patient retained consciousness throughout, and could speak. She complained of no pain, but appeared to be much frightened. The attack lasted about thirty seconds, leaving the patient pale but quite collected. Some headache followed about an hour later. She was then menstruating. On the 21st it was noted that during the past week the patient had had two epileptiform attacks, one being attended by complete unconsciousness. On another occasion she was awakened by a violent pain in the right side of the head and became unconscious. There were no convulsions. By Feb. 15th, 1897, the patient's condition under treatment had become more marked, the optic neuritis was more intense and the attacks of headache, vomiting, and Jacksonian epilepsy were more frequent. The left hand and forearm were always moist and seemed to be warmer to the touch; the surface thermometer registered 97°F. On this date (Feb. 15th) she came under the care of Dr. Nedwill. He trephined over the motor area of the right side and came down upon a hydatid cyst. The cyst was emptied of its contents and washed out with boric solution. It held just 4 oz. of this fluid and was quite 4 in. deep. Dr. Nedwill then dried its internal surface by mopping it with sponges and attempted to close it with a continuous fine silk suture, but its cavity quickly collapsed, and he found that, no matter where he inserted a fine needle, hæmorrhage was so free that he had to abandon this procedure. He also found it quite impossible to approximate the edges of the dura mater. A strip of gauze was inserted in the cyst. No bone was replaced. On the 16th the patient slept well; there was no vomiting or collapse. She had a jumping sensation in the left hand. She could move the left arm, flex the elbow, and raise the arm to the shoulder. The gauze was removed and the edges of the scalp were brought together by silkworm-gut sutures. On the 17th the temperature had been normal since the operation and the pulse had been quiet. There was still improvement in the power of the arm. There was a good deal of leakage (blood serum) on the dressing. On the 18th the face was swollen. The temperature was 100°. She had a slight twitching on the left side of the face and arm. On the 22nd there was still a large quantity of cerebral fluid coming from the wound. The patient expressed herself as feeling quite well. On the 23rd the vision of the left eye equalled $\frac{6}{9}$ and the patient could read No. 10 Jaeger; with the right eye she saw the board only. On March 4th the general condition had much improved. She had no headache, vomiting, or fits; in fact, she felt as well as ever she did. The motor symptoms still continued. There was a swelling of about the size of a small orange over the seat of the operation. For some days previously to the 12th a chocolate-coloured discharge had issued from the top of the wound. On the latter date the swelling was increasing and the scar was becoming thin under pressure. On the previous night the patient had twitching in the left leg and right arm, otherwise she was as well as possible. On the 14th the swelling was cut down upon and a quantity of brain substance was discharged. On the 21st the hernia was slightly larger. A small piece of brain substance was protruding through the wound, otherwise the patient was well. Her leg was much stronger and she could walk with greater freedom; the arm was also stronger, but she could not flex her fingers. Her eyesight was not so good; she said that she could not see where she was going. With the left eye she saw only the board and the same with the right (not No. 10 Jaeger). On the 28th ophthalmoscopic examination revealed that the post-neuritic changes in the retinæ were very marked. In the right fundus the swelling of the disc had largely disappeared. The retinal changes in the central area were characterised by white spots with deposits of pigment. The same condition was present in the left fundus but to a greater extent, not, however, so much over the central area. She was discharged from the hospital on April 5th. On May 16th the patient showed herself at the hospital. The cerebral hernia had entirely disappeared. The slight leakage from the scar had stopped. The pulsation over the seat of the operation was little, but

the trephine opening could be distinctly felt. The patient had not had any attacks of headache, sickness, or convulsions. The paralysis of the arm had improved considerably. She could now grasp firmly, whereas when she left the hospital no attempt could be made to flex the fingers. She could flex and extend the elbow and the muscles were much larger and firmer; the same improvement had taken place in the leg; the gait was perfect and it was impossible to detect which had been the affected side. With regard to vision she could not see the test board and could only perceive fingers held at a distance of a few feet from her face. Ophthalmic examination showed the disc to be white and the atrophic vessels small. The appearance previously noted in the retina was not now so marked, but there were still numerous white round spots all over the retina, although more marked in the central region. Her temperature, it may be remarked, both before and after the operation, was normal except on one occasion when it went up to 100. On Sept. 1st the patient again presented herself at the hospital. She was in much the same condition as she was at the time of the last report. There was now spastic contraction of the flexors. It was of course to be regretted that she had not sooner been trephined.

Remarks by Dr. NEDWILL.—I am much indebted to Dr. Walter Fox and his assistant, Mr. Edward Gane, for the trouble they have taken in preparing these notes for me. Dr. Fox made all the ophthalmic examinations. Indeed, the success of the cases reported has been largely due to the great care the patients received from the resident staff in the after treatment.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Urethral and Vesical Calculi.—Cyst of the Urachus.

A MEETING of this society was held on May 24th, Mr. BRYANT, the President, being in the chair.

Mr. LYNN THOMAS (Cardiff) exhibited Urinary Calculi removed from three cases. 1. Nine urethral calculi removed through the perineum of a man. There was a very tight annular stricture behind which the urethra was dilated, and in this dilated sac nine phosphatic calculi had formed. Their total weight was 230 gr. 2. A vesical calculus weighing 6 oz. 6 dr. The stone was too large for removal through the perineal incision and was removed by a suprapubic incision, the extraction being aided by the stone being pushed upwards by the finger introduced through the perineum. The stone was formed of alternate layers of oxalate of lime and uric acid. 3. A vesical calculus weighing 7 oz., also removed through a suprapubic incision. On section it showed a mixed formation. There was an outer layer of oxalate of lime, then one of mixed uric acid and oxalate of lime, then a layer of phosphates, and a nucleus of uric acid and urates. All the cases did well after operation.—The PRESIDENT remarked on the interest of the specimens and congratulated Mr. Thomas on his results.

Mr. ALBAN DORAN read a paper on a case of Cyst of the Urachus, with notes on Urachal and so-called "Allantoic Cysts." The patient was a woman, aged fifty-nine years. During an attack of abdominal pain a cystic tumour of considerable size was detected. The uterus moved separately behind the cyst, which occupied the middle line of the abdomen between the umbilicus and pubes, bulging towards the left. The cyst lay in front of the peritoneum; inferiorly there was another cyst or loculus lying immediately in front of the bladder. A pint or more of dirty brown slightly glairy fluid containing shreds of lymph was found inside the cyst the wall of which was largely made up of plain muscular fibre. After free incision along its whole length the cyst was packed with iodoform gauze. The patient made a good recovery and the cyst shrank to very small dimensions. Mr. Doran noted that Luschka and Wutz showed many years since that the urachal canal was patulous to a certain extent in most human subjects and that minute cystic dilatations were frequent. Urachal fistula was a well-known complaint, sometimes associated with suppuration of part of the canal. Much had been written, especially in Germany and America, on urachal cysts, but the term had been applied too freely to various tumours and collections of fluid closely related to the abdominal walls below the umbilicus. Cases reported by Lawson Tait, George Morgan (Brighton), Ill (Newark, U.S.A.), and Douglas (Nashville, U.S.A.) were quoted by Mr. Doran and compared with his own case; they appeared to be genuine examples of urachal cyst. A remarkable series of very large cysts described by Lawson Tait and Byron Robinson was also referred to. Tait attributed them to arrested development at the stage of embryonic life when the allantois was growing out of the peritoneal cavity. He taught that instead of contracting into the umbilical vesicle the allantois became included in the abdomen; then it served as peritoneum to the pelvic and lower abdominal viscera and sometimes filled with fluid, forming an "allantoic" or big urachal cyst. Tait and Byron Robinson, however, openly admitted that their explanation of the development of these cysts was purely theoretical and had never been confirmed by a post-mortem examination, dissection, or frozen section. Wutz, a few years before Tait's cases were published, showed that older reports of very large "urachal cysts" were faulty. Cases reported by Hoffmann, Heinecke, Roser, and Wolff seemed to Wutz to be more than doubtful. Most of them were probably old encysted dropsies. In Tait's series tuberculous disease of the peritoneum was diagnosed in several instances. Byron Robinson's description of the supposed allantoic membrane which replaced, according to Tait's theory, the peritoneum was compared with notes of the appearances of the parietal and pelvic peritoneum noted by Mr. Doran, Cone (Baltimore), and others in chronic tuberculous peritonitis, with or without encysted dropsy. The theory failed to explain how the bladder, a part of the allantois, seemed to be perfectly normal in Tait's cases, whilst the rest of the allantois underwent at an early stage of development such extreme modifications. In short, Tait's cases, though of high interest and deserving of further consideration, were not certainly of allantoic origin. In conclusion the surgery of true urachal cysts was considered. When such a cyst could be dissected out the peritoneum detached from behind it should be trimmed away as it was apt to slough. Frequently the cyst could not be enucleated from the parietes and the peritoneum and required to be freely incised and drained. In all cases the operator must carefully inspect the relations of the upper boundaries of the cyst to the peritoneum and abdominal viscera. He must likewise be sure that he had determined the position of the bladder below. Its cavity might communicate with the cyst, then the communication must be closed according to the principles of plastic surgery. Every case should be watched as the bladder might give way after the operation through the forcing open of the vesical orifice of the urachus or through yielding of its walls, which had become damaged during operative manipulations, or possibly by the pressure of the drainage-tube.—The PRESIDENT said that the paper had recalled to him two cases which he had met with some years ago whose nature then puzzled him but which he now had no doubt were cases of urachal cyst. The first was that of a woman on whom he operated for a supposed ovarian cyst. In making the incision through the abdominal wall he came on a cyst containing clear serous fluid. On examination this was found to be in front of the peritoneum. Below it was closely attached to the bladder and was separated with considerable difficulty, but ultimately the whole cyst was removed. The wall of the cyst was remarkably thick and fibrous. The second case was that of a man, thirty years of age, who was admitted to Guy's Hospital suffering from severe abdominal pain, high temperature, and a swelling reaching from the umbilicus to the pubes. There was an external abnormality in the shape of slight epispadias. The patient said that there had been a lump of "the size of a small cocoanut" just below the umbilicus for years, but that there had been no pain till shortly before admission. The urine drawn off from the bladder was normal. An incision was made into the cyst and a large quantity of exceedingly foul-smelling matter escaped, but there was no definite urinous odour. The cyst was packed with lint which had been dipped in terebene oil. The cyst contracted up and at about the fourth dressing it was noticed that urine escaped through the wound from time to time. This was verified on several subsequent occasions. The cyst ultimately closed and the man recovered. At the time he thought that he was dealing

with a peri-vesical abscess, but after hearing Mr. Doran's paper he felt certain that this was a urachal cyst.—Mr. DORAN, in reply, said that he was much interested in the cases which had been related by the President. With regard to the one which had been dissected out he mentioned that there was one recorded by Rotter in which there was a cyst above the bladder and on cystoscopic examination a small growth of villous cancer was seen at the fundus. On operation the cyst was found to be a distended urachus. The villous growth had no doubt closed the orifice into the bladder. In the cases mentioned by Mr. Bryant there must have been forcing of Wutz's valve. Mr. Doran pointed out that other cysts, such as ovarian cysts and encysted collections of fluid due to tuberculous peritonitis, might occur at this point. If these were treated by tapping (a method which Mr. Doran strongly condemned) or even if it were drained the cyst might contract up towards the abdominal wall and still more closely simulate a urachal cyst.

HARVEIAN SOCIETY OF LONDON.

Cancer of the Body of the Uterus.

A MEETING of this society was held on May 12th, the President, Dr. J. F. GOODHART, being in the chair.

Dr. HANDFIELD-JONES read a paper on Cancer of the Body of the Uterus. After referring to other causes of uterine hæmorrhage at and after the menopause he brought forward a series of cases which illustrated the difficulty of diagnosing malignant disease of the body of the uterus at an early stage and asked whether growths which might be considered benign adenomata and which remained stationary for a long period might ultimately take on malignant degeneration and rapidly destroy the patient. Some authors had considered all such growths as malignant from the first, but the point was clinically of importance with regard to the possibility of destroying such degenerations at an early stage without resorting to extirpation of the whole womb. The value of uterine scrapings obtained by curettage was discussed and cases were quoted to show the unreliability of such examinations in arriving at a definite diagnosis. Experience went to show that clinical signs and symptoms were of more value in estimating the gravity of the disease and the need for operative measures than any microscopical evidence, though it was allowed that the latter was of value as a confirmatory test. Cases were quoted in support of the view that cancer of the body of the uterus was much less malignant than cancer of the cervix, and evidence was given to show that malignant disease of the body of the womb might run a very long course before producing a fatal termination. Increased experience went to show that cancer of the body of the uterus was not so especially limited to nulliparous women, but occurred with almost equal frequency in those who had borne many children. In conclusion the "early" signs which justified resort to vaginal hysterectomy were reviewed and special stress was laid on rapid increase in the size of the uterus.

The PRESIDENT said that microscopical examination, although sometimes useful in the detection of malignancy, was very unreliable. More valuable evidence was afforded by digital examination and by the clinical aspects of the case. A growth at the time of the menopause was far more likely to be malignant than simple. He was convinced that simple growths might eventually become cancerous. On the other hand, the growth of a cancer was sometimes delayed for months or even for years. In the case of hepatic cancer the growth might become quiescent or even shrivel up and practically disappear. It was therefore difficult to decide whether extirpation of the uterus should be the rule of practice as soon as malignancy was discovered. Much depended on the mortality which attended vaginal hysterectomy, and on this point he asked Dr. Handfield-Jones for further information.

Dr. GOW considered that the microscopical examination of intra-uterine growths was often unsatisfactory and that the evidence of malignancy or non-malignancy obtained by this method should not be allowed to weigh against the results of clinical examination. If a soft, well-defined growth was found inside the uterus of a woman who had passed the menopause and was suffering from hæmorrhage it was a safe rule to consider it malignant and to act accordingly. In some cases where the patient lived many years after malignant disease of the body of the uterus had been diagnosed it was open to doubt whether the diagnosis was correct.

Dr. AMAND ROUTH emphasised the importance of looking upon metrorrhagia at the menopause as a very serious symptom, requiring investigation to determine its origin. He considered the microscopical examination of scrapings from the uterus to be unreliable, owing to the fact that surface scrapings might be benign, yet the deeper parts might be infiltrated with a malignant form of the same growth. He instanced cases of papilloma and adenoma. He thought the finger *in utero* a better guide in most cases. He advocated the removal of any uterus after the menopause where after curetting recurrence of metrorrhagia occurred with a definite progressive enlargement of the body of the uterus, and he would do this even if surface scrapings gave a negative result. Ordinary senile or fungous endometritis did not cause progressive enlargement of the uterus, though it might in a few cases recur and be cured by a second curetting.

Mr. PARKER YOUNG thought that at present too much reliance must not be placed on the microscope, as he had found in undoubted malignant disease, both of the uterus and the breast, that negative results were obtained, and one ought, therefore, to be careful in pronouncing an opinion that the case was not malignant when the examination by the microscope failed to detect it. In listening to the paper he had not heard mention of examination *per rectum*, which often helped materially in diagnosis, as did the peculiar offensive odour of the discharge. As regarded the length of time which patients the subjects of malignant disease might live, one case pronounced as such by leading gynæcologists had survived over ten years without any operative interference.

Mr. C. B. KEETLEY asked whether oöphorectomy had been practised in cases of uterine cancer.

After some remarks by Mr. JACKSON CLARKE, Dr. HANDFIELD-JONES replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Action of certain Drugs and Mineral Waters on the Secretion and Composition of the Bile.—Effect of Exercise on the Hæmoglobin.—Leontiasis Ossea.—Gangrenous Appendicitis with Peritonitis.—Exhibition of Cases and Specimens.

A MEETING of this society was held on May 6th, Mr. C. J. WRIGHT, Vice-President, being in the chair.

Dr. BAIN (Harrogate) read an interesting paper on the Action of certain Drugs and Mineral Waters on the Secretion and Composition of the Bile.

Dr. EDGECOMBE (Harrogate) read a paper on the Effect of Exercise on the Hæmoglobin with reference to the Value of Rest in the Treatment of Anæmia, embodying the results of a long series of observations which he had made. After referring to the daily variations in hæmoglobin, corpuscles, and in the worth of the corpuscles that normally occur in healthy subjects, he showed that these variations are reversed in subjects who work during the day and rest during the night, the extent of the variation being roughly proportionate to the amount of exercise taken. The effect of active exercise was to cause a fall in worth or loss of hæmoglobin. Examining a large number of exercise days and comparing them with no-exercise days he showed that the normal day fall and night rise in worth of the corpuscle were considerably greater after exercise than after no exercise, the rise being in excess of the fall, thus proving that exercise causes a slight over-production of hæmoglobin. The average level of the worth was higher during a period of free exercise than during a sedentary period. Passive exercise (massage) caused a diminution in the volume of the blood without any change in worth of corpuscle. The effect of rest in bed was to lessen the amount of the day fall in worth. He summarised his conclusions as follows: (1) there is a normal day fall and night rise in the worth of the corpuscle representing a destruction and regeneration of hæmoglobin; (2) active exercise primarily increases the amount of destruction and secondarily stimulates a more than corresponding reproduction; (3) passive exercise diminishes the volume of the blood without affecting the worth; and (4) rest reduces the extent of the day fall in worth, representing a diminished destruction of hæmoglobin.

He concluded by pointing out the bearing of these facts on the treatment of anæmia, adding that they provide a physiological foundation for the well-known value of rest in bed in the treatment of that affection.

Dr. CHURTON showed a case of Leontiasis Ossea in a girl, aged nine years. The child weighed 3st. 5lb. The parietal region was much enlarged and the bones were thick and firm; the occipital ridge was thick. The nasal bones were level with the enlarged superior maxillæ, so that no bridge seemed to exist. The temporal and malar bones were thickened. The lower jaw, although much enlarged, was small in comparison with the upper. The chest was not deformed but the ends of the ribs were markedly enlarged at the anterior ends. The spine was normal. The lower ends of the radii and ulnæ resembled the appearances seen in rickets. The pelvis was perhaps thickened. The femora were short and curved outwards and the tibiæ were curved forwards. The external and internal malleoli were thick and elongated. The patient was the ninth child in a healthy family and was well and strong up to seven years of age. There was no diminution of intelligence. During sleep perspiration was rather profuse about the head.

Mr. LITTLEWOOD showed a case of Gangrenous Appendicitis with Peritonitis. The patient was a man, aged twenty-two years, on whom he had operated on April 2nd, 1898. The attack commenced six days previously. At the time of operation the temperature was 99° F. and the pulse was 80. The abdomen was opened in the middle line. The small intestines were distended and inflamed, with patches of purulent lymph on the surface. The right rectus was divided. The appendix was found to be quite gangrenous and lying in a collection of pus on the right surface of the mesentery of the small intestine. The appendix was removed and the peritoneum was wiped out with gauze and gauze drainage employed. The pulse rose to 120 after the operation and on the evening of the next day was 148. On the fifth day the pulse was 100. The bowels were well opened in about twenty-four hours with large doses of Rochelle salts and enemata. The patient made a good recovery.

The following cases, pathological specimens, &c., were exhibited:—

Dr. CHURTON: A case of Paræsthesia of the Seventh and Eighth Cervical and First Dorsal Nerves, caused by localised Syphilitic Pachymeningitis.

Dr. LIDDELL (Harrogate): (*a*) Two cases of Ichthyosis; and (*b*) a case of Raynaud's Disease.

Dr. HELLIER: Thrombosis of the Broad Ligament Veins from a Puerperal case (with temperature chart).

Mr. PRIDGIN TEALE: "Carter's Suture Case," for use in fracture of the jaw, which he has designed and presented to the Leeds Infirmary.

Dr. ADOLPH BRONNER (Bradford): (*a*) Case of Osteo-Sarcoma of the Orbit; and (*b*) case of Transplantation for Traumatic Defect of both Eyelids.

Dr. TREVELYAN: (*a*) A case of Recurrent Syphilitic Hemiplegia with Anomalous and Partial Recovery from the Second Attack; (*b*) a case of Secondary Spastic Paraplegia, Recovering; (*c*) an Unusual Case of Paralysis of one Arm; (*d*) a case of Erythro-Melalgia with Trophic Disturbance; (*e*) Cultures from a case of Acute and Complicated Lumbar Myelitis; (*f*) a specimen of Cerebral Hæmorrhage; and (*g*) a case of Deep Jaundice with considerable Glycosuria.

Dr. TREVELYAN and Mr. LITTLEWOOD: An unusual specimen of Laryngeal Tuberculosis, with microscope preparations.

Mr. LAWFORD KNAGGS and Dr. TREVELYAN: A case of Traumatic Division of the Sciatic Nerve six months ago, with immediate suture.

Mr. LAWFORD KNAGGS: (*a*) Colectomy nine months ago—patient and specimen; and (*b*) Erasion of Ankle by Clutton's Method.

Mr. HALL (Bradford): Columnar Carcinoma of the Ovary.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Anterior Colporrhaphy.—Toxæmia in Pregnancy.—Cæsarean Section.—Hysterectomy.

A MEETING of this society was held on May 11th, Dr. MILNE MURRAY, Vice-President, being in the chair.

The following specimens were exhibited:—

Dr. HALLIDAY CROOM: (1) Myoma of the Ovary; (2) a Dermoid Ovarian Tumour; (3) Fibroid removed by Hysterectomy; and (4) a Fibroid removed by Myomectomy, part having to be cut away before the ovaries could be reached for their removal.

Dr. BREWIS: A Four Months Pregnant Uterus with several small fibroids and one large cystic fibromyoma attached; owing to the rapid growth of the latter the whole was removed by hysterectomy.

Dr. JARDINE (Glasgow): (1) Drawing of a Curious Central Tear of the Perineum; and (2) Two Uteri from cases of Cæsarean Section.

Dr. R. C. BUIST (Dundee): Uterus with a Malignant Adenoma of the Fundus removed from a patient where the symptoms commenced eighteen months after the menopause.

Dr. HAULTAIN: Tubal Gestation evidently at the end of the second month and removed for internal hæmorrhage; there was no rupture but the blood was seen escaping from the fimbriated extremity.

Dr. HAIG FERGUSON: Two specimens of Tubal Gestation removed at one operation from the same patient; the one was an intra-ligamentous sac and the other a lithopædion.

Dr. R. C. BUIST read a paper on Recent Modifications of Anterior Colporrhaphy. Cases of prolapse may be divided into two large groups—(1) those with an initial retroversion or retroflexion, and (2) those with initial weakness of the pelvic floor and cystocele. Cystocele implies the existence of weakness, not only of the pelvic floor, but also of the muscular wall of the bladder. The normal bladder can empty itself in virtue of its intrinsic contraction in whatever position the body may be. In cystocele this power is lost and unless the patient adopts special means the bladder is never entirely emptied and the bladder wall is thus never fully contracted. A vicious circle is thus produced, impairment of the muscle is soon induced, and this again increases the difficulty of evacuation. From this point of view the obliteration of the cystocele is an important factor in the success of any treatment of prolapse. The fact that scar tissue is weak tissue is one of the most important elements in the failure of operations for prolapse of the female genital organs, and many ways have been devised to get rid of this weakness and to ensure that the scar or line of greatest weakness should not coincide with the line of greatest strain. After referring to the methods of different operators it was noted that nothing was done directly to correct the dip of cystocele. Dr. Buist described a plan he had carried out in operating on a case of cystocele persisting after the operation of total extirpation of a uterus and cystic ovaries. He made on the anterior wall of the vagina a mesial incision extending from the urethra to the fundus of the vagina, dissecting on each side between the vagina and the bladder with the handle of the knife. He then stitched the loose bladder wall together with chromic gut, passing the stitches through the muscular wall only and puckering the loose portion together. The anterior vaginal wall was then shortened by bringing the two ends of the longitudinal incision together so that it became transverse and stitching it up in that position. As the vulvar cleft was rather long the knife was carried round the posterior part of the aperture, splitting as in Tait's operation. The result is up to the present completely satisfactory.—Professor SIMPSON stated that the operations for this condition, though giving good results at first, were unsatisfactory owing to the cicatricial tissue giving way. Dr. Buist's proposal was interesting and ingenious and well worth a trial.—Dr. HAULTAIN had leanings towards ventrofixation as the operation for relief of these conditions, as the results were very satisfactory and there was little or no risk attached to it.—Dr. BARBOUR, Dr. BALLANTYNE, and Dr. MILNE MURRAY joined in the discussion and Dr. BUIST replied.

Dr. KYNOCH (Dundee) read a paper on Toxæmia in Pregnancy, with illustrative cases. By toxæmia in pregnancy is generally understood that condition occurring in the pregnant state as the result of the presence in excess of toxic material; as far as is known the character of the poison is of the nature of alkaloids. The excretion of waste material is in large part effected through the kidneys and this may account for the albuminuria of pregnancy rather than mechanical pressure or reflex spasm. Clifford Allbutt finds evidence for the presence of a circulating toxin in pregnancy from the fact that healthy urine contains toxic material. The nature of the poison is unknown. Bouchard found that it was not urea. Many obstetricians regard the convulsions as arising from the action on the nerve centres of a poison which is the result of tissue metabolism elaborated partly by the mother and partly by the fœtus. Bacteriological researches of different

investigators all point to the same conclusion. Lindermann has recorded a case of fatal vomiting where he found neuritis in several nerves with fatty degeneration of the liver and kidneys in both mother and fœtus; the spleen was also enlarged, differing from the atrophy which is found when death has been due to inanition. He accordingly believes the cause of the vomiting in this case to have been an auto-intoxication. Salivation in early pregnancy has also been thought due to excess of toxin present in normal urine. Toxins absorbed from the bowel may be rendered harmless by the protective influence of the liver, but if disease of the liver be present or an excess of toxins be absorbed then symptoms of poisoning are produced. Dr. Kynoch then gave details of three cases.—Professor SIMPSON, Dr. CONNEL, Dr. CALDER, Dr. HAULTAIN, Dr. BUIST, and others took part in the discussion.

Dr. JARDINE (Glasgow) read notes of four cases of Cæsarean Section. This operation is now displacing craniotomy to a certain extent, but that it will ultimately take the place of the latter is not to be expected. The first case was that of a primipara; labour had lasted for some time; the os was of the size of half-a-crown with the membranes unruptured. The pelvis was rickety. The operation was carried out in the usual way. The bleeding from the uterus was controlled by Comerni's method of firmly pressing a pessary down in it, thus enabling the operator to dissect slowly down till the membranes bulge into the wound, which can then be enlarged to the full size of the pessary with practically no loss of blood. The pessary is quickly removed and the incision is enlarged sufficiently to extract the child. An arm presented but the feet were grasped and the child was quickly extracted. The child was alive but, like all these children, required resuscitation. The uterus was firmly grasped by an assistant and the placenta was quickly expelled. From 18 to 20 No. 10 silk sutures were put into the uterus, including the muscular and serous coats, also a few superficial catgut sutures. The Fallopian tubes were then tied in two places and divided between them, so as to effectively sterilise the patient. The abdomen was closed in the usual way. Convalescence was uneventful. The infant had a hæmorrhagic vaginal discharge when five days old. The pelvis had a diagonal conjugate of $3\frac{5}{16}$ in.; the conjugata vera would be about $2\frac{1}{2}$ in. Eight months after operation a small abscess formed to the left of the cicatrix and is still discharging. As the uterus is free and atrophied the discharge is probably coming from the seat of the ligatures on the left tube, in which region there is some thickening. Menstruation has occurred every three weeks since the operation. The second case was that of a woman very deformed with a diagonal conjugate of $2\frac{3}{4}$ in. and a true conjugate of less than 2 in. The patient recovered well; she has not menstruated since the operation. Details were then given of a third case which developed symptoms of septicæmia and the patient died four days after the operation. Post mortem there was distinct evidence of peritonitis. The fourth case was that of a woman pregnant with her fourth child; the three previous had required craniotomy. The conjugata vera was estimated at $2\frac{1}{2}$ in. At the operation the os was nearly fully dilated and the membranes had ruptured. In this case the incision was carried well up to the fundus; the child was resuscitated. On the second day the urine was found to be albuminous and to contain tube casts. She died on the seventh day, evidently from nephritis. It was thought she might have contracted a chill just before the operation. Post mortem the abdominal and uterine wounds were found to be healthy; there was no peritonitis.

Dr. JARDINE also read a short note on a Curious Central Tear of the Perineum.

Dr. N. T. BREWIS gave notes of a case of Total Hysterectomy for large Fibrocystic Tumour of the Uterus. The patient when seen had not menstruated for four months and had a rapidly growing tumour in the abdomen. This was found on operation to be a large fibrocystic tumour weighing 10 lb. and attached to the uterus by a pedicle. The abdominal wound was closed without drainage. The patient made an excellent recovery.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Adeno-Carcinoma of the Mamma.—Addison's Disease.

A MEETING of this section was held on May 6th, Dr. J. M. PURSER, the President, being in the chair.

The SECRETARY, Dr. McWeeney (for Mr. WHEELER), described a specimen of Adeno-Carcinoma of the Mamma and demonstrated the slides, which presented the typical microscopic appearances of this condition—a plexus of glandular tubules, most irregular in shape, occasionally filled up with epithelium, elsewhere cystic, and presenting small papillomatous ingrowths. In places the basement membrane had been broken through and irregular masses of epithelium were lying free in the connective tissue. The cells were mostly high-columnar, but in some groups were nearly cubical and presented typical examples of the conditions described by Hansemann as anaplasia and hyperchromatosis. To the naked eye the tumour resembled a lymphatic gland, being soft, white, egg-shaped, and distinctly encapsuled. The microscope showed that in one spot the tubular structure had broken through the capsule and had just begun to invade the adipose tissue outside. The tumour had been removed from a woman, aged sixty-seven years, and had been noticed a year prior to operation. — Dr. E. H. BENNETT said the case reminded him of one which occurred in his practice three years ago. The tumour in this case was freely moveable, non-adherent to the skin or the tissues of the gland. The patient was thirty-five years of age and was in the third month of pregnancy, but he removed the tumour as it was growing rapidly, though believed to be benign. It was encapsuled and shelled out quite easily. The patient recovered in six days. Subsequent examination of the tumour proved it to be a most malignant adenomatous carcinoma—rather a carcinoma than an adenoma. In less than two months it recurred and he removed the breast and tumour and glands in the neighbourhood without meeting any infected tissue in the glands. The operation was severe and was almost immediately followed by abortion. Recovery ensued and at present there is no sign of recurrence. — Dr. MCWEENEY, in reply, said that Dr. Bennett's case interested him much. The condition of an undoubtedly encapsuled tumour proving to be malignant was of considerable clinical interest.

Dr. A. R. PARSONS described three cases of Addison's Disease.—Dr. CRAIG said that he thought the second case the only one of the three which seemed to agree with all the symptoms which go to form a picture of Addison's disease.—Dr. MCWEENEY expressed surprise at the diagnosis in the first case. In the only necropsy he had made in Addison's disease—a case under the care of his senior colleague, Sir C. Nixon—it was difficult to find any adrenals at all. They were reduced to yellowish masses no thicker than paper, forming hardly perceptible thickenings on the capsule covering the upper and inner aspects of each kidney. Microscopic examination showed this to consist of somewhat pigmented fibrous tissue containing a number of very atrophic-looking ganglion cells. There were several parallel lines of these, probably about 40 or 50 cells in all; they had lost their processes and had become extensively pigmented and rounded in outline, and it was only from their large size and the peculiar appearance of their nucleus and the fact that some of them had kept some stumps of their processes that it was possible to make the diagnosis that they were ganglionic in origin.

BRISTOL MEDICO-CHIRURGICAL SOCIETY — The eighth meeting of the session was held on May 11th in the Medical Library of University College, Dr. J. E. Shaw being in the chair.—Dr. B. J. Baron showed a patient with Congenital Syphilis of the Throat and Nose.—Dr. J. O. Symes showed microscopic specimens of Trichomycosis Nodosa (Lepothrix).—Dr. W. H. Newnham showed a specimen of Dermoid Cyst. Dr. Aust Lawrence commented on the specimen.—Dr. W. H. Newnham read a paper on Twelve Abdominal Sections. Mr. Morton. Dr. Aust Lawrence, Dr. Waldo, Mr. Carwardine, and Dr. E. H. Stack spoke on the subject.—Mr. W. R. Ackland read a paper on Some Secondary Effects of Dental Irritation. Mr. Harsant, Mr. Ewens, Dr. Cave, and Dr. Aust Lawrence discussed the paper.—Professor Fawcett showed numerous anatomical specimens recently added to the school museum; he also showed various microscopic specimens of the Minute Anatomy of the Brain, and on this subject he spoke at length and illustrated his remarks by many diagrams and by a large number of beautiful sections which he threw directly on the screen by means of the oxy-hydrogen light.—Professor Fawcett read a paper on the Surgical Anatomy of the Frontal Sinuses and exhibited a large number of skulls to illustrate his paper.

Reviews and Notices of Books.

A Student's Textbook of Zoology. By ADAM SEDGWICK, M.A., F.R.S. Vol. I. London: Swan Sonnenschein and Co. 1898. Price 18*s*.

THE work of Professor Adam Sedgwick is so well known to teachers and students of zoology in this country in his English edition of Claus' Lehrbuch that the present work will be sure to attract considerable interest. It is called a Student's Textbook but we cannot help thinking that a teacher's reference book would more aptly describe it. This is owing to the fact that the system of fully describing types of the chief divisions of the animal kingdom has been intentionally set aside in order to gain room for the notice of a greater number of animals' names. The result is that the book is full of information, indeed for its size it probably contains a larger number of absolute facts than any other work of its kind, but in our opinion the matter is too condensed to be easily assimilated by the student. There are no introductory chapters on the general structure of animals or on the principles of classification but the work opens with a definition of the Protozoa followed by a table showing their classification. The various classes and subclasses are next dealt with and the orders and families noticed with considerable condensation. To each family a singularly complete list of genera is added and the authority for each genus is placed in brackets after its name. We may notice in passing that Hæmatoococcus and the Mycetozoa are included among the Protozoa. In this way the animal kingdom from the Protozoa to the Chætognatha is described, the Arthropoda, Echinodermata and Chordata being reserved for another volume which, the author states, is in preparation. This second volume will, if there is room, include a part dealing generally with the facts and principles of zoology. The references to current literature are singularly full and are brought well up to date; they are placed, not in a bibliography at the end of the book, but, where they are likely to be most useful, in footnotes after the various orders and families with which they deal. The mass of names with which the book abounds renders a complete index most necessary and the author is to be congratulated on having supplied a very excellent one. The illustrations are numerous and are mostly those with which readers of Claus' book are familiar; they are clear and help the text but are otherwise of little artistic merit. The book is a most valuable contribution to zoological literature and will be of special use to advanced students and teachers as well as to those working at special groups who wish to keep in touch with general zoology. We hope that it may meet with sufficient success to be kept well up to date in the future.

Therapeutics of Infancy and Childhood. By A. JACOBI, M.D. Philadelphia: J. B. Lippincott Company. Second edition. 1898. Price 15*s*.

THE author in this work gives the results of his long experience of the diseases of childhood and the practical information which the book contains will be found very useful by those whose daily practice brings them face to face with sick children. Since the well-being of every child depends so much upon proper feeding and healthy surroundings, the author has done well to devote a large space to those important subjects, diet and hygiene. No attempt is made to give universal rules which shall be applicable to every case, for that is impossible, but the general principles upon which a suitable diet in health and disease must be based are clearly laid down, and when they are well understood the exceptions will be found less difficult to deal with. The importance of water as a therapeutic agent is strongly insisted on. Large quantities of it should be mixed with the infant's food, and the author thinks that many digestive disturbances can be explained by a deficiency of this fluid. Healthy children should also be offered an occasional drink of water, as they sometimes wish for drink when they do not wish to eat, and in many general diseases, such as diarrhœa, fevers, &c., it is very important that water should be plentifully given.

The methods of feeding and nature of the foods best suited to children are considered in detail.

In the chapter on General Therapeutics there will be found general directions for the treatment of different diseases and many useful hints on the administration of medicines are given. The necessity of making a diagnosis before entering upon treatment and the dangers of trusting too much to the practice of "meeting symptoms as they turn up" are pointed out.

The treatment of the different diseases are then considered in detail under the heads of the various systems. The author is a strong believer in the efficacy of drugs when they are skilfully used and he has produced a book which will be a valuable guide to others.

The Elements of Hypnotism. By RALPH HARRY VINCENT. London: Kegan Paul, Trench, Trübner, and Co. The International Scientific Series. 1897. Price 5*s*.

THE author claims for hypnotism that it has now gained a position in the scientific world and therefore approaches the subject from the scientific standpoint.

From time immemorial has existed and been recognised a condition of the mind linked in the superstition of the past with various unknown powers. It has been attributed to the Deity and to the Devil, to a universal fluid, to animal magnetism, and to galvanism. Even animal magnetism and galvanism have now been differentiated, having no more to do with hypnosis than the "aëriform fluid" of John Baptist van Helmont which we now know as gas.

Mesmer seems to have been ignorant of the real nature of his power, confusing it with something absolutely and entirely distinct from hypnotism as we now understand it. He was, as the author remarks, attracted to the question of magnetism, his interest being aroused by certain wonderful "cures" performed by one Father Hehl, a Jesuit, who effected them, so it appeared, by the subtle influence or fluid which was imparted to the patient from steel plates and magnets specially prepared for the purpose. But under all the charlatanism of Mesmer lay the subtle power, as yet not understood—real yet indefinite, potent yet illusive: a something which had influenced humanity in all ages and could influence the lower animals also, and which has dominated the imagination of every old lady when she has religiously swallowed her bread pill. It is the force we now recognise in hypnotic suggestion.

Having passed in review the historical aspect of the question and presented the student with a variety of ideas both with regard to animal magnetism and mesmerism and with regard to the hypnotism of the present day divested of what Dr. Lloyd Tuckey calls "a mass of superincumbent rubbish" the author proceeds to place the investigator on a sound and scientific basis. In a chapter headed "The Physiology of Hypnosis," which the author in his preface to the present edition informs us is entirely new, he considers that the method there suggested is the one most likely to yield results of permanent value. He remarks that in order to obtain an accurate view of the relations of the hypnotic to the normal condition it is necessary to have a clear conception of the following: the nature of nervous action,

of the structure and function of the nervous system, of the interdependence which exists between the various organs of the body and the central nervous mechanism and of the character of this interdependence. In making such a demand as this the author seems to us to be asking a great deal and we doubt if there are many even of the leading physiologists of the day who could claim a clear conception such as he requires.

In the following pages, however, he sets forth a description of the nervous system which is, perhaps, after all, sufficient for his purpose. After tracing the course of an external impression or stimulus to the reflex action in which it results he dwells particularly upon the inhibitory influence exerted by certain portions of the nervous system upon the remainder and arrives at the conclusion, the originality of which possibly lies with Bernheim, that the etiology of hypnosis is largely dependent upon the alterations in the nervous balance of inhibitory impulses. He considers the condition of hypnosis to be the result of an inhibitory influence over the higher psychical activity and that with the conscious function debarred from action the stimulus is expressed in other than conscious terms, the operator being enabled to regulate the course of a given stimulus and determine its reaction.

Although the ideas expressed are merely speculative and the book does not add to our knowledge in the same definite manner as the practical experience of such writers as Kingsbury, Lloyd Tuckey, or Milne Bramwell, or the collection of cases published by J. M. Wood, still it is a welcome contribution to the store of our literature upon the subject.

Schenk's Theory: The Determination of Sex. By Dr. LEOPOLD SCHENK, Professor at the Imperial and Royal University and Director of the Embryological Institute in Vienna. Authorised translation. London: The Werner Company. 1898. Pp. 173. Price 5*s*.

PERHAPS no medical question of the last twelve months has excited so much interest among a considerable section of the public as the newspaper announcement that Dr. Schenk of Vienna had discovered a method of predetermining the sex of children. Under any circumstances such a statement could hardly fail to attract attention and in the present instance additional piquancy was imparted by the suggestion that some noble family or other had been enabled by this discovery to obtain that desideratum, a male heir. Dr. Schenk, who is Professor of Embryology in Vienna University, has now explained his views to the world in a volume of moderate size, an English edition of which is published simultaneously with the German original. After a sketch of various theories of sex production which have been held at different periods both ancient and modern he gives a qualified adhesion to that of cross heredity (*gekreuzte Geschlechtsvererbung*), according to which the offspring tends to be of the opposite sex to that of the more vigorous of the two parents, so that if the mother in her way is of greater procreative capacity than the father in his the offspring will tend to be of the male sex. The nutrition of the mother is, according to Dr. Schenk, the principal factor in bringing about this result. In order that she may have male progeny her food must not only be of a kind calculated to maintain her in health and strength, but she must in addition be able to assimilate it so completely that her urine yields no sugar when submitted to the sensitive phenylhydrazin test. On the other hand, women whose urine contains even minute traces of sugar are more likely to have daughters than sons; but they are able not unfrequently to reverse this tendency if they are willing for some months before conception to exclude carbohydrates from their food as much as possible, confining themselves mainly to nitrogenous and fatty diet. The frivolous-minded will welcome these views as a complete solution of the momentous question, What to do with our girls? but, speaking seriously, the method is not one for universal application and expectant couples will do well not to be over-sanguine. Abstract arguments can serve no useful purpose, while, on the other hand, the theory may be easily tested by the average of a moderate number of cases. Sterility is not touched upon at all—in fact, fecundity is presupposed; and Dr. Schenk expressly states that he is not prepared with any suggestion for creating a tendency towards female births. The book is unpretentiously written without any straining after effect or any lavish use of technical terms or any passages which might offend professional susceptibilities; the author's position in one of the great continental medical schools will be a sufficient inducement to gynæcologists and obstetricians to make themselves acquainted with its contents. The English version follows the German edition as closely as the idioms of the two languages permit.

Sajous' Annual and Analytical Encyclopædia of Practical Medicine. Philadelphia: The F. A. Davis Co. Vol. I. Price 5 dollars.

IT is with some regret that we notice that the invaluable Sajous' Annual will appear no more, at least in its old form. That form was simply a necessity for ourselves as medical journalists, but according to its editor it did not always meet the demands of the general practitioner. Dr. Sajous has therefore conceived the idea of uniting in one volume a text-book of medicine and a reference book. It is arranged alphabetically, and one volume will appear every six months and the whole alphabet will be covered in three years. During this time there will also be issued a monthly supplement containing the very latest extracts from medical journals as additional references. The first volume now before us contains subjects from Abdominal Injuries to Bright's Disease, and they are arranged on the following plan. First is given a description of the disease, its definition, symptoms, etiology, pathology, diagnosis, prognosis, and treatment. These are all printed in large type and are interspersed with quotations in small type from the literature of 1896 and 1897 dealing with the various matters treated. It will thus be seen that though the new form does not quite take the place of the old one in some ways yet in others it does what the old one could not do—i.e., act as a text-book—and we have no doubt that the addition of the monthly Cyclopædia will make the reference matter as complete as was the old five-volume edition. The associate editors number one hundred and come from many European countries as well as from the United States. The book is carefully printed and beautifully illustrated and reflects great credit upon all concerned in its production. It is, of course, impossible in the space and time at our command to adequately review a work of this character, so that we have only attempted to give some idea of its scope. Subscriptions must be taken out for the entire series at $5 per volume—i.e., $30 in all—and this will secure a six-volume reference work with thirty-six monthly supplements of journalistic medical literature.

LIBRARY TABLE.

The X Rays: their Production and Application. By FREDERICK STRANGE KOLLE, M.D. New York: J. S. Ogilvie Publishing Company.—We venture to think that it is time that some limit should be put upon the publication of x ray manuals large numbers of which have been printed since the memorable discovery by Professor Roentgen. We are far from saying that the x ray experimentalist should be without a knowledge of the principles

underlying electrical phenomena. The x rays are, of course, a manifestation of electric energy and the proper place to discuss the subject is in a work or text-book on physics. The present editions of our standard works on physics with a few exceptions do not treat of the x rays, but there is little doubt that these will shortly be brought up to date and that room will be found for a chapter on the x rays in extension of the general subject. As a rule more than one-half of the books on x rays are devoted to pure physics, the practical application of the rays being sufficiently described in a few pages. In the book before us, Part I., consisting of 53 pages, is devoted to the description of electrical phenomena, which would be found in any standard work on electricity. Other 14 pages are devoted to photography — how to print, tone, fix, &c. The chapters on x ray apparatus and the practical application of the x rays in surgery, &c., are distinctly good, but there are plenty of text-books (too many we think) of equal merit in this respect. We repeat that further works on this branch of electrical phenomena are not wanted, and they will be still less needed when new and revised editions of the standard works on physics are issued.

Lehrbuch der Physiologischen Chemie mit Berücksichtigung der Pathologischen Verhältnisse, für Studierende und Aerzte. (*Manual of Physiological Chemistry with Reference to Pathological Conditions, for Students and Physicians.*) Von RICHARD NEUMEISTER, M.D., Ph.D., Professor der Physiologischen Chemie an der Universität Jena. Zweite Auflage. Jena: Gustav Fischer. 1897. Price 17 marks.—This is probably one of the most comprehensive works on the subject, having no exact analogue in the English language. The excellent text-book of Chemical Physiology and Pathology by Dr. Halliburton is the nearest approach to it in regard to the ground which it covers and its practical sections. A remarkable and admirable feature of the work before us is the carefully compiled bibliography which is conveniently distributed throughout the pages in footnotes. Amongst these references we find frequent mention of articles published from time to time in THE LANCET. The index is also exemplary both in regard to authors and subjects. The book is divided into two chapters: I. Nutrition, and II. the Animal Tissues and Fluids. The former chapter is divided into six sections and the latter into nine sections. The largest section in the book is that devoted (fünfzehnter Abschnitt) to the urine, being subdivided into twelve paragraphs. The subject matter has been well brought up to date, as will appear from the processes given for the separation of albumins, of proteoses, &c., and the complete analyses of urine with especial reference to creatinine, glycuronic acid, inosite, &c. To those engaged in physiological research, to pathologists, and to workers in like fields possessing a knowledge of technical German, the book will be most valuable for reference purposes.

Praxis der Harnanalyse. (*The Practice of Urine Analysis.*) Von Professor Dr. LASSAR-COHN. Zweite Auflage. Hamburg und Leipzig: Leopold Voss. 1898. Preis 1 mark.—This is a handy practical *brochure* on the examination of urine presenting just that information to the practitioner which will guide him in diagnosis. We find nothing novel in the methods described. They are in general simple and accurate. No importance appears to be attached to the estimation of uric acid. This may now be done with greater accuracy than hitherto by the ammonium-chloride method, the resulting precipitate of acid ammonium urate being converted into uric acid by the addition of hydrochloric acid. In the concluding pages will be found a short and useful chapter on the analysis of the gastric juices.

Pasteur. By PERCY FRANKLAND, Ph.D., B.Sc., F.R.S., and Mrs. PERCY FRANKLAND. London, Paris, and Melbourne: Cassell and Co., Limited. 1898.—To workers in every field of science there could not be a more interesting biography added to "The Century Science Series" than that of Louis Pasteur. There is a chapter for everyone: the chemist, the pathologist, the physiologist, the bacteriologist, the manufacturer—in a word, all. Dr. Frankland and his wife have given us a delightful and simple sketch of the great man's career in the volume before us. It is not very long since the world mourned the loss of Pasteur, and the interesting details of his life gathered from the full obituary notices in our own columns and elsewhere will still be fresh in mind. The story of Pasteur's great achievements will never pall and Dr. and Mrs. Frankland's book will be often taken from the shelf for reference to its clear and well-written chapters. Though a small volume it contains a remarkably complete outline and all scientific workers will be grateful to its authors and will rightly regard it as a simple but worthy tribute to the great master.

Glass Blowing and Glass Working. By THOMAS BOLAS, F.C.S., F.I.C. London: Dawbarn and Ward, Limited; New York: Truslove and Comba. 1898. Price 2*s.* net.—To the practical chemist some knowledge of glass-blowing is indispensable, and inasmuch as chemistry is a branch of medical science the little book which Mr. Bolas has produced will be read with profit by medical students. Within a space of 212 octavo pages the author has contrived to say all that anyone needs to know about *ars vitraria*, including a historical sketch of the art and a practically complete bibliography. The only omission in this latter portion of the book appears to be "Souffleur à la Lampe et au Chalumeau, par M. Pédroni," published in the Librairie Encyclopédique de Roret, Paris. Among the novelties contained in the book is the description of the blowing of bulbs from solid glass rods—an art which has almost been forgotten—and an account of the manufacture of a new kind of draughtsman's pen, the invention of the author. This pen consists of a reservoir from which issues a capillary tube (the "nib") and the little instrument should prove very useful in applying caustic liquids in surgery. The description of a syringe consisting entirely of glass is interesting and this syringe should prove useful from an aseptic point of view. The book is embellished with a coloured frontispiece illustrating a number of fancy articles for decorative purposes which are well within the scope of an amateur's ability, and practical drawings of all processes are scattered throughout the text. In writing the manual the author has kept in view the words of his preface, "I have aimed at making the present work not only a laboratory, workshop, or household guide to the various phases of glass-working at the blowpipe, but also to some extent technically educational in the real sense of the term, as leading towards an understanding why each particular thing is done and as facilitating that interdrift of method from craft to craft which is so conducive to progress." Altogether the book can be thoroughly recommended and should stimulate many to practise glass-blowing as a useful hobby.

Notes on the New British Pharmacopœia, 1898. London: C. J. Hewlett and Sons.—This well-known firm of druggists have sent us a useful little pamphlet under the above title. It notes in succession the Changes in Nomenclature, the Weights and Measures, Dosage, Additions, Omissions, Important Alterations, New Drugs, Formulæ and Processes. The work should be found very useful to practitioners, for it shows at a glance the alterations in the new Pharmacopœia which will have to be remembered, and the table of important alterations in particular will be found valuable. The conclusion the writers come to is that the new Pharmacopœia

is a decided advance upon its predecessors but that it might be still better. We may add that Messrs. Hewlett offer to send a copy to any medical man who applies for one. Their address is 40, Charlotte-street, E.C.

JOURNALS AND REVIEWS.

Manchester Royal Infirmary Students' Gazette.—The first number of this new periodical appropriately makes its appearance with the opening of the summer session and commences so well that we heartily wish it success. The members of the infirmary staff contribute a number of articles, the most entertaining of which is devoted to the clinical history and probable post-mortem appearances of Sir John Falstaff.

Analytical Records

FROM

THE LANCET LABORATORY.

(1) ZOMÈLA SKIN SOAP; AND (2) UNGUENTUM ZOMÈLA.

(THE ZOMELA CO., LIMITED, ZOMÈLA-BUILDINGS, JOHN BRIGHT-STREET, BIRMINGHAM.)

BOTH preparations were found to be of decided merit. The soap was perfectly neutral, bland, and pleasant to use. On applying the phthalein phenol test for free alkali the result was quite negative. The ointment was found to contain lead in association with a fatty basis of a permanent character, that is, one without any tendency to become rancid.

FEVER FOOD.

BRAND AND CO., MAYFAIR WORKS, SOUTH LAMBETH ROAD, VAUXHALL, S.W.)

This combination supplies a distinct want. The food is composed of essence of beef, with cream and yelk of egg. It is a whitish-yellow jelly contained in hermetically sealed tins. Its taste is pleasant and suggestive of custard. We found no objectionable preservatives. It is prepared for the use of European travellers and others in tropical climates where fever is prevalent and where cream and yelk of egg are often difficult to obtain.

STARLIGHT SOAP.

(LEVER BROTHERS, LIMITED, PORT SUNLIGHT, CHESHIRE.)

We have carefully examined this soap and find that it fulfils all the requirements of a detergent intended for the skin. It has a greenish tint and is agreeably and delicately scented. According to our examination the quality of the ingredients used is beyond reproach. Our experiments showed the soap to be absolutely free from alkali or other objectionable substances. The soap contains a minimum of moisture and while it lathers well it does not do so too freely or extravagantly.

OLD SCOTCH CREAM WHISKY.

(R. H. THOMSON AND CO., 130, CONSTITUTION-STREET, LEITH.)

This spirit is probably correctly described as a "pure malt whisky." It possesses a smooth mellow flavour and the delicate character of a matured and malt-derived alcohol. The results of analysis were as follows: alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to proof spirit 83·54 per cent.; extractives, 0·79 per cent.; mineral matter, *nil;* acidity calculated as acetic acid, 0·025 per cent. These results are consistent with the statements concerning the character and purity of the spirit.

STERILISED CREAM AND MILK.

(THE DAHL MILK CO., DRAMMEN, NORWAY; AND H. FRANCIS AND CO., 8, ARTHUR-STREET WEST, E.C.)

Both these preparations were found to be satisfactorily sterilised. Their respective analyses were as follows. Cream: water, 68·55 per cent.; fat, 23·32 per cent.; mineral matter, 0·53 per cent.; curd, &c., 7·60 per cent. Milk: total solid matter, 11·77 per cent.; fat, 2·90 per cent.; and mineral matter, 0·64 per cent. According to these results we cannot regard the products as presenting a rich composition, although some allowance must be made for the difficulty of obtaining a satisfactory sample for analytical operations. The cream and milk, however, were both thoroughly whipped before a sample was decided upon. The flavour of the cream was excellent and the milk also was not marked by any pronounced boiled flavour.

ST. RAPHAEL QUINQUINA WINE.

(BOWEN AND MCKECHNIE, CROSS-STREET, FINSBURY.)

We have examined this wine on a previous occasion, but it has since been modified, chiefly in regard to the wine employed as a menstruum of the cinchona bitters which it contains. While agreeing that the wine is undoubtedly of tonic value we do not think that this change has altered its character for the better, especially in regard to taste.

FERRU COCOA.

(THE FERRU COCOA MANUFACTURING CO., 329, GOSWELL-ROAD, E.C., AND QUEEN-STREET, CARMARTHEN.)

Normally cocoa contains no iron and its addition in an organic form in the preparation before us is a step of some importance. According to our analysis the cocoa contains 0·3 per cent. of iron in the form of albuminate. We were able also to separate a small quantity of caffeine, the alkaloid of kola. In addition, the cocoa contains a small proportion of malt. The astringent matters of the cocoa do not appear to interfere with this form of iron, so that the iron probably reaches the alimentary canal in the same condition (of albuminate) in which it is added to the cocoa.

CAPTOL.

(4711 DEPOT, 62, NEW BOND-STREET, W.)

Captol is a pleasantly-smelling limpid alcoholic fluid containing chiefly chloral and tannin in a state of combination. It is described as a hair tonic, this property being referred to the tannin as a specific for reducing secretion and to chloral on account of its anti-parasitic action. The unpleasant effects of each in separate form are said to be avoided by this particular combination known as captol. Our analysis confirms the presence of the constituents stated as well as of small quantities of resorcin and salicylic acid. We have tried this preparation clinically and found it not only pleasant to use but apparently effectual in preventing the formation of dandruff. It is said to have given excellent results in reducing the secretions of the sebaceous glands and in preventing premature baldness.

HORSERADISH MUSTARD.

(C. H. SENN, 329, VAUXHALL BRIDGE-ROAD, S.W.)

This is an interesting addition to the list of table delicacies. In it is preserved the pleasant and peculiar aroma of fresh horseradish. It presents the appearance of ordinary mustard paste, but is lighter in colour. It affords an excellent condiment.

THE CHEMICAL PROFESSION.—The Presidents of the Institute of Chemistry of Great Britian and Ireland, the Society of Chemical Industry and the Society of Public Analysts entertained a large company at a reception held at the galleries of the Royal Institute of Painters in Water Colours, Piccadilly, on May 24th. The visitors were received by Dr. Stevenson, Dr. Clowes and Dr. Bernard Dyer and their wives. The gathering was a great success judging from the crowded state of the galleries. It was difficult to appreciate to the full the excellent programme provided, which included the admirable collection of water-colour paintings on the wall and a selection of music given by well-known artistes. There were several well-known members of the medical profession present.

New Inventions.

A NEW GONORRHŒA SYRINGE.



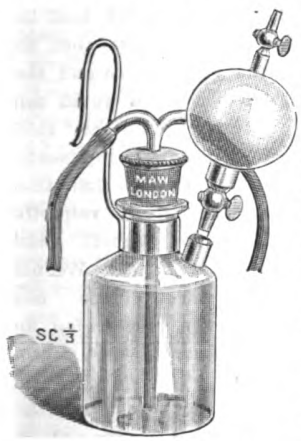
THE syringe which the accompanying figure illustrates I have termed the "opposite current" gonorrhœa syringe. I claim for it the following advantages: There are opposite currents—a single forward current and several backward currents. The backward currents, which are facilitated by grooves on the pipe, are essential for thorough cleansing of the urethra, while the forward currents will irrigate thoroughly any infective material which may have been pushed forward by the instrument during introduction of the pipe into the organ. The pipes are made of vulcanite and so will not be liable to be affected by the chemicals used in the injections. They are made of different lengths. The suction-tube feeds the ball continuously, so that there is no need of introducing the pipe into the organ more than once to effect a thorough cleansing.

I believe this principle of opposite currents to be a novelty in syringes for the treatment of gonorrhœa. The makers are Messrs. Arnold and Sons.

S. MALLANNAH, M.B. Edin.
Ramkote, Hyderabad, Deccan.

AN A.C.E. AND CHLOROFORM APPARATUS.

THIS apparatus has been introduced in order that A.C.E. may be used in throat and nose cases through a nasal tube, thus obviating the use of chloroform alone. The additional safety of A.C.E. has been proved by experience, mortality from its use standing midway between that of chloroform and ether. The following is an extract from a lecture by Dr. Dudley Buxton: "I still feel bound in the light of our knowledge to say that chloroform should never be given unless there is some cogent reason for substituting it for ether or mixture." In operating upon the nose and mouth, where a tube must be used instead of a facepiece, it has formerly been absolutely necessary to use chloroform, the chloroform being administered by means of a Junker. If A.C.E. be administered by means of a Junker the ether evaporates more rapidly than the chloroform. The patient, therefore, receives a large dose of chloroform at the end of the operation at a time when he can least withstand it. In this apparatus a reservoir is formed by a bulb which communicates with the bottle. By means of a tap small quantities are added during the operation. The advantages claimed are that the percentage of chloroform remains the same throughout. A nasal tube method of anæsthesia becomes as safe, as convenient, and as reliable as when a facepiece is used, there being no need to use pure chloroform. Pure ether may be placed in the bulb and added to the A.C.E. mixture or chloroform should symptoms arise indicating any such proceeding. The anæsthetic never runs short. The apparatus can be immediately changed into an ordinary Junker. If chloroform is used in this apparatus a small quantity can always be retained in the reservoir or bottle without refilling. I have tried bulbs of various sizes and have found that one holding between one and a half and two ounces to be the most convenient. Another method of using the apparatus is to place pure ether in the bulb and A.C.E. in the bottle. The ether should then be added from time to time in small quantities, thus keeping the A.C.E. at the same strength. In over fifty cases in which I have used this apparatus only once have I had the slightest trouble. In this case a boy, aged twelve years, robust and with red hair, requiring an unusual amount of anæsthetic, came partially out of deep anæsthesia. I was using pure ether in the bulb so perhaps the amount of chloroform vapour he received was too small. The apparatus, I am confident from the number of times I have dropped it, is no more breakable than an ordinary Junker. The price of the apparatus (which can be obtained of Messrs. Maw, Son, and Thompson) is about the same as that of an ordinary Junker. The price of new bulbs can be counted in pence.



ALFRED J. HULL, M.R.C.S. Eng., L.R.C.P. Lond.
Hanover-street, W.

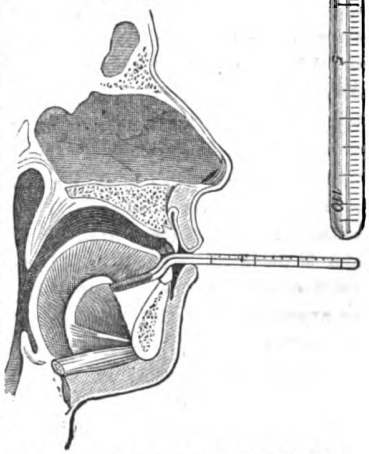
A NEW CLINICAL THERMOMETER.

IN taking a patient's temperature difficulty is sometimes experienced in making the patient place the thermometer in the right position in the mouth and also in its retention there. These difficulties are greatly reduced by using a thermometer which has been made for me by Messrs. Down Bros. It has a double bend in it, as shown in Fig. 1, for which the following advantages are claimed: 1. That it is more comfortable to the patient. 2. That it naturally falls into a better position in the mouth. 3. That it is more easily retained in position. 4. That the tongue can lie right down on the bulb and there is no space left in the floor of the mouth for saliva to collect. 5. That the temperature is taken in a shorter time and is more accurate as the bulb is thoroughly covered by the tongue and is in complete contact with the mucous membrane of the tongue and mouth. It does not lie in a pool of saliva or in such a position that the air can pass freely over it. In order to demonstrate these qualities it is only necessary to place first the wrong end of the thermometer in one's own mouth and then the bulb end, when at once the great difference will be appreciated.

FIG. 1.



FIG. 2.



A. HEYGATE VERNON, F.R.C.S. Eng.
Boscombe, Bournemouth.

THE LANCET.

LONDON: SATURDAY, MAY 28, 1898.

ON the opening day of the session the General Medical Council was reinforced by a Crown Representative—in the place of the late Sir RICHARD QUAIN—whose appointment has a significance which calls for notice. Public expectation in the profession had contemplated the election either of a general practitioner of good standing or of a registered medical man of high position practising dentistry. The general body of practitioners will not feel quite satisfied till one of the Crown nominees is appointed from its own ranks, and it can scarcely be other than an oversight that such an appointment has not yet been made. In the minds of statesmen the medical profession should not mean only the select few who fill the offices of the medical corporations or the chief chairs in medical schools. The medical profession must be taken to include the busy practitioners who do the real public work of the profession by night and day and upon whose efficiency the health and life of the people so much depend. One or two Crown appointments on the Council for this sort of member would to a certain extent meet the demand for a better representation of the profession as a whole in the General Medical Council. Meantime the appointment of Mr. CHARLES SISSMORE TOMES, F.R.S., F.R.C.S. Eng., and L.D.S., to be for five years a Member of the General Council of Medical Education is one that has much to commend it. The position which Mr. TOMES holds in the profession and in the Schools of Dentistry, his Fellowship of the Royal College of Surgeons of England, and his researches into the development and structure of the teeth in various animals make him at once an ideal representative of dentists on the Council and a valuable acquisition to a body which, in addition to supervising medical education, has to regulate the teaching of dentists and to a growing extent their practice. It is undeniable that the dentists have claim to some representation, and in discussing the appointment before it was made we allowed this to be the case, although we held, and still hold, that the voice of a general practitioner is just now more required in the deliberations of the Council. But it must not be forgotten that the dentists contribute towards the Council's funds, are subject in some degree to the Council's authority and regulations, and are liable to incur its censure and even erasure from the Dentists' Register. Until a Direct Representative of their order is provided by law it does seem reasonable that they should occasionally be recognised in a Crown nomination. The appointment of Mr. TOMES, who is at once a medical man and a dentist, is also opportune, as the Council is being called on to define its views and recommendations on the subject of dental education and examinations and as there is a collision of opinion between those who estimate dentistry as a merely mechanical trade and those who would require the whole science of medicine and surgery to be learnt by the practitioners of the useful specialty.

An acute encounter between Mr. VICTOR HORSLEY and the President, Sir WILLIAM TURNER, marked the opening of the session. As our readers know, Mr. HORSLEY, in one of the reports which he thinks it his duty to issue from time to time to the registered practitioners of England and Wales (and which we consider it our duty to publish to Mr. HORSLEY'S constituency), said that immediately on his appointment the President "committed a deliberate attack on the rights of individual members of the Council and a new and very serious infringement of constitutional government" in debarring a member of the Council from inspecting certain documents in the archives of the Council. Mr. HORSLEY is a man with the courage of his opinions and he put down on the programme a motion intimating that "at the earliest convenience" he would call attention to this action of the President. The President was equally anxious to have such a charge disposed of and it was discussed within an hour of the commencement of the business of the Council with the result that without proceeding to division the whole Council upheld their President's action. The question raised was one of great importance and, later, was settled in a sense satisfactory to Mr. HORSLEY and anyone wishing to make reasonable use of the documents of the Council. It is probable that Mr. HORSLEY had no intention to give a personal character to the discussion. Those who best know his keen interest in such questions will find it most easy to believe that he only meant to raise a constitutional point of great importance. On this view it is to be regretted that he did not wait for the meeting of the Council. The end he has in view would have been gained more easily and without exciting that attitude of opposition to himself which was still maintained in regard to his subsequent motion, seconded by Dr. GLOVER, for a committee to inquire into the conduct of the legal business of the Council. On this subject we cannot think that the Council was quite well advised. We believe that the lawyers of the Council have done good service and that the investigations of an impartial committee would only have emphasised the fact. It is absurd to think that lawyers are so thin-skinned as they were represented to be by some of the speakers, or to say that there was anything essentially unreasonable in a respectful inquiry into the legal business of the Council, which is necessarily difficult and complicated. On Wednesday a second and highly important debate took place, on the motion of Dr. GLOVER, concerning the regulations under which the documents of the Council shall be accessible to its members. The speeches and division showed that the Council was actuated by the double desire to secure the safety of its documents and at the same time to make them available for the use of members in any reasonable way and for any reasonable purpose, while it was felt to be necessary that special care should be taken to ensure that all information so gained relating to penal cases should be regarded as confidential. We venture to hope that the regulations, for details of which we

refer our readers to our report of the day's proceedings, will work well. They ought to facilitate all proper use of the documents which are confidently declared by the counsel of the Council to be its property and not that of any of its individual members. This seems to be sound doctrine but it must not be interpreted so as to render such property useless for the guidance of members who are heretical enough to think that the Council has not reached absolute perfection in the management of its business and the exercise of its powers.

We were sanguine enough last week to hope that the Council had disposed for some time of the question of the Midwives Bill, but such is not the case. By formulating its views with great care at the request of the Privy Council it has induced the Lord President to advise the promoters of legislation to come to an understanding with the General Medical Council as representing the profession. The promoters have asked for a conference with either the Council or a committee of the Council. The Council has appointed a committee with the understanding that they will listen to what the promoters of the Bill have to say but will not be in a position to alter the expressed views of the Council on the matter. They will, in fact, whatever words are employed, "receive a deputation," but they will not take part in a conference.

IT is matter for serious regret that neither the last nor the present Government has recognised the need for legislative action to remedy the defects of existing provisions for certifying causes of death upon which so much light was thrown by Sir WALTER FOSTER'S Committee a few years since.

The Registrar-General's fifty-ninth annual report, dealing with the vital statistics of England and Wales in 1896, contains a most valuable analysis of facts and figures relating to uncertified causes of death in recent years and to their local distribution which deserves the careful attention of all who are interested in this important but neglected subject. This report shows that during 1896 the number of deaths registered in England and Wales was 526,727; of these deaths the causes of 482,109, or 91·5 per cent., were certified by registered medical practitioners, and of 32,990, or 6·3 per cent., by coroners after inquest, while the causes of the remaining 11,623, or 2·2 per cent., were registered as uncertified, no certificate being available in these cases either from a registered medical practitioner or from a coroner. It is satisfactory to learn that the proportion of these uncertified deaths is steadily, if slowly, declining; it was 3·8 per cent. in 1881-85, 3·1 in 1886-90, 2·5 in 1891-95, and had further fallen to 2·2 in 1896. The percentage of these deaths in 1896 ranged in the various counties from 0·6 in London, 0·9 in Wilts, 1·0 in Somerset, and 1·1 in Monmouth, to 4·2 in Hunts and Warwick, 4·5 in North Wales, and 4·6 in Hereford. Before, however, discussing the distribution of these deaths in greater detail it will be well briefly to notice a useful table given in the report showing the 11,628 uncertified deaths classified according to age and assigned cause. The first noticeable fact is that 6704 of these uncertified deaths were of infants under one year of age and 2200 of persons aged upwards of 65 years, the remaining 2724 being of children and adults aged between one year and 65 years. Among infants aged under three months 6·2 per cent. of the causes of death were uncertified, while the proportion decreased rapidly at subsequent age-periods and was lowest, 0·7 per cent., between 15 and 25 years; among persons aged upwards of 65 years the proportion rose again to nearly 2 per cent.

As regards the assigned and registered causes of uncertified deaths it should be pointed out that the registrar is instructed before registering a death to ascertain whether any registered medical practitioner was in attendance during the last illness of the deceased person or whether an inquest has been held, and in either case to require the production of the statutory certificate of the cause of the death. In case no such certificate can be obtained, and in case the circumstances do not require him to report the death to the coroner, the registrar is instructed to obtain from the ordinary informant of the death the best available information as to the cause of death for insertion in the register as an uncertified cause of death. Uncertified deaths consist for the most part of cases in which there was no medical attendance during the last illness of the deceased or in which the attendance was of an unqualified or unregistered practitioner. As a matter of fact, it appears that some cause was assigned for all the 11,628 uncertified deaths in 1896 excepting only in 625 cases, in which the cause of death was returned as "unknown." It is not surprising to learn that in a very large proportion of these cases the assigned cause is distinctly indefinite—for instance, 2899 deaths were returned as due to convulsions, atrophy, or debility, 208 to teething, 213 to diarrhœa, 767 to old age, and 1791 to premature birth and congenital defects. Among the more definite causes assigned to uncertified deaths may be noted 236 from measles, 25 from diphtheria, 24 from small-pox, 111 from whooping-cough, and 31 from scarlet fever. Child-birth was the assigned cause in 45 cases, cancer in 53, and no fewer than 204 uncertified deaths were referred to different forms of violence.

These 204 uncertified deaths attributed to violence bring us naturally to the most important part of the Registrar-General's recent statistics bearing upon this subject. The assigned cause of death in uncertified cases has obviously little real or scientific value, but it may at any rate be assumed that at least these 204 deaths were actually the results of violence, and as a commentary upon the present state of the law it is useful to consider how it was possible for these deaths to be registered without due inquiry and certification and the holding of an inquest as distinctly directed by law. Registrars are strictly instructed to report to the coroner previously to its registration every death caused directly or indirectly by violence or attended by suspicious circumstances, as well as all deaths the causes of which are unknown and all sudden deaths the causes of which are uncertified. There is little reason to doubt that registrars with only occasional exception carry out these instructions, more especially as regards violent deaths, the breach of which necessarily involves reproof from the central office, and the Registrar-General now tells us for the first time

some of the results of the reference of deaths to the coroners. It appears that within the knowledge of the Registrar-General 42,644 deaths were reported to coroners in 1896; that in 32,990, or 77 per cent., of those cases inquests were held, while in the remaining 9654, or 23 per cent. of the whole, the coroners decided that inquests were not necessary. It appears from the table given in the report under notice that of 100 deaths referred to coroners in the several counties in 1896 the proportion of inquests held did not exceed 40 in Warwick, 55 in Essex, 56 in Hereford, and 57 in Huntingdon and in Dorset; whereas the proportion ranged upwards to 89 in Northumberland, 90 in Monmouth, 91 in Wilts, and 94 in London. As registrars perform their duties under precisely identical instructions and superintendence throughout England and Wales, it must be assumed that these wide variations in the relation of inquests to reported deaths is due to the varying discretion of coroners as to the necessity for holding inquests. The Registrar-General reports that the large majority of the 9654 deaths reported to coroners but concerning which no inquests were held were registered as uncertified, but that in about 1400 of the cases medical certificates were duly obtained. He concludes, therefore, from a careful analysis of the documents in his possession, that of the 11,628 uncertified deaths in 1896 about 8228, or 71 per cent., had been reported to coroners and thus subjected to some kind of investigation, although no inquests were held and the causes of death were necessarily registered as uncertified. It follows, therefore, that not more than about 3400 of the uncertified deaths had not been reported to coroners.

These statistics conclusively prove what has frequently been asserted in these columns (based on the constant relation between the proportion of inquests held and of uncertified deaths), that under the present conditions of registration law a certain number and proportion of uncertified deaths are governed by the varying action of different coroners in the exercise of their discretion as to the necessity for holding inquests. In London and Wiltshire, for instance, in which the coroners held inquests in 94 and 91 per cent. respectively of the cases reported to them, the percentage of uncertified deaths in 1896 was only 0·6 and 0·9 respectively; whereas in Essex and Warwickshire, where the coroners held inquests in only 55 and 40 per cent. of the reported cases, the percentage of uncertified deaths was equal to 3·6 and 4·2 respectively. No stronger proof of the neglect of some coroners to perform their statutory duties in certain cases is needed than the reported fact that 204 deaths from violence in 1896, presumably reported to coroners, were registered as uncertified because no inquests were held.

The Registrar-General's statistics are to some extent satisfactory, proving as they do that more than 70 per cent. of the deaths reported by him as uncertified in 1896 were subjected to some kind of investigation by coroners and were considered by them to be cases in which inquests were unnecessary. From another point of view it is satisfactory to know that, pending further legislation on the subject, the proportion of uncertified deaths may be reduced to a minimum by the action of coroners, as it is beyond question that the high proportion of uncertified deaths in Warwickshire, for instance, is the direct result of the low proportion of inquests held in that county, while the low proportion of uncertified deaths in London is as surely the result of the high proportion of inquests held within that county. It is evident, however, that some provision is urgently needed in order that it may be impossible for any death to be registered or any order for the burial of the body to be issued unless the cause of such death has been duly certified either by a registered medical practitioner or as contained in the verdict of the coroner's jury after the holding of an inquest where medical evidence has been given. With regard to the cases of uncertified deaths referred to in the Registrar-General's report further provision should be made by which *all* such cases before registration should be referred by the local registrars to the coroner for investigation. The coroner should be empowered in the course of his inquiry, when no inquest is necessary, to engage the services of a medical practitioner, upon whose certificate of the cause of death, after investigation with or without post-mortem examination, the death should be registered as "certified." By such regulations, which a few clauses in an Act of Parliament could establish, no uncertified death would be registered, and the accomplishment of this most necessary reform could be effected at a comparatively small additional expenditure from the borough or county funds out of which coroners and the expenses connected with inquests are now paid.

WE have frequently thought that people in this country have never thoroughly realised the great obstacles which had to be overcome and the hardships which had to be encountered by the troops taking part in the late Tirah expedition. The nature of the country with its great topographical difficulties—naturally lending themselves to its strong and easy defence by the numerous warlike tribes of trained marksmen inhabiting it — presented altogether different conditions from those which obtain in the Soudan for example. The Afridis took care not to concentrate in any numbers so as to afford an opportunity for any general engagement like that of the brilliant affair with the Dervishes at Atbara. Whatever may have been said and thought of the design of the Tirah expedition it was nevertheless thoroughly carried out and, as subsequent events have shown, it has proved successful, for it has attained its object—namely, the penetration of the Tirah territory, the defeat of the tribes, their pacification and submission. Allegations have been made—whether justly or unjustly we cannot say—regarding the inefficiency of some of the officers composing the military staff of the army in the field; but we are proud to say that the efficiency and good work performed by the medical services have throughout the campaign been generally recognised. We shall have to refer, too, to an application of one of the latest advances of science during the Tirah campaign which proved of great practical value in military surgery and speaks well for the up-to-date enterprise and care of the medical service. Although we have already published a paragraph on the "Health of the Tirah Field Force" in THE LANCET of May 21st under the heading of "The Services," yet some of its statements well merit brief recapitulation. The maximum number of British

troops employed at any one time in the late military operations on the North-west Frontier of India, extending from June, 1897, to February, 1898, was 18,000. Taking one item only—that dealing with the extent of invaliding—it appears that up to April 12th, 1898, only 489 men passed through Deolali as invalids to England, including 106 suffering from gunshot wounds, 163 from ague, and 202 from all other diseases. This low percentage speaks volumes for the endurance of the troops and the efficiency of the hygienic, medical, and commissariat arrangements provided for the army in the field, especially when it is contrasted with the terrible results of our experience in the Crimea forty years ago. The progress which has since then been made in these respects, as in every other connected with modern warfare, is simply immense.

Of the results, moreover, of modern science as applied to military surgery we have a striking illustration in the late application of the Roentgen rays in warfare as set forth by Surgeon-Major W. C. BEEVOR of the Army Medical Staff in his extremely interesting lecture at the Royal United Service Institution on May 20th last. Surgeon-Major BEEVOR had charge of the apparatus supplied for the use of the Indian Frontier Expedition, where for the first time it formed part of the equipment of the regular medical service in the field. He gave a very instructive history of what had been accomplished through the instrumentality of the x rays, illustrated by examples drawn from experience, which showed indubitably that even in savage warfare and under the most unlikely and adverse conditions the apparatus could be, and was, successfully applied in the prevention and relief of human suffering. Nor was his lecture wanting in a truly practical aim, for he proved that this new method of applied science could be carried anywhere and used with the troops operating in the field in front as well as at a base hospital in their rear. He came to the conclusion, however, that human transport is for this purpose by far the safest and most satisfactory in every respect. His dhoolie bearers succeeded in carrying the necessary apparatus—the battery, delicate glass tubes with their platinum terminals, conducting wires, &c.—slung on a pole, from Bagh camp in Tirah, down the defile to Dwatoi and down the Bara Valley to Peshawur without injury. There is no need to remind readers of THE LANCET of the extreme usefulness of the Roentgen rays in military surgery, for this has already been so established as to be sufficiently obvious. It only now remains to discover whether any, and if so what, modifications can be introduced for better adapting the apparatus to the varied conditions of war over and above those which had suggested themselves in the late frontier expedition. We consider that the highly satisfactory results obtained by Surgeon-Major BEEVOR and his *confrères* are interesting and extremely creditable to the scientific energy and enterprise of the military medical service.

BRISTOL ASYLUM.—The report of the committee for 1897 shows that at the end of that year the number of patients was 751 (373 males and 378 females); of these 673 were chargeable to Bristol. Considerable progress is being made with the enlargement of the asylum, by which means increased accommodation will be provided for 139 additional patients.

Annotations.

"Ne quid nimis."

FIRST REPORT OF THE PRINCE OF WALES'S HOSPITAL FUND.

THE first report of the committee of this Fund is before us, and although, as is well known, the income secured is far short of that which is desired, the Fund reached a very large sum. The total amount collected up to Dec. 1st, 1897, was £227,551 12*s.* 7*d.* Of this amount the sum of known annual subscriptions reaches £21,443 1*s.* 5*d.* The total amount distributed among the various hospitals in 1897 was in round numbers £57,000, and there has been invested the sum of £167,020 19*s.* 8*d.* The income arising from this and the known annual subscriptions will provide altogether an annual income of about £25,000, which, however, is but a quarter of the sum desired every year. The amount distributed as annual grants was £22,050 and the special donations in honour of Her Majesty's Diamond Jubilee amounted to £34,776 5*s.* There is one point about the Fund which reflects the highest credit on the committee and the officials and that is that the whole sum of £227,551 12*s.* 7*d.* was collected at an expenditure of only £3704 7*s.* 9*d.*, being a percentage of £1 12*s.* 6*d.* The promised annual subscriptions range from £1000 to 1*s* and the donations from £12,500 to 6*d.* We are glad to see that the distribution committee say:—"To open wards closed for want of funds is certainly a most important object; and on the understanding that we are dealing with the income of the Fund, and that a sum given to any hospital this year for the purpose under consideration will probably be continued in future years and so may be regarded as a grant of so much *per annum*, we have recommended that considerable sums be so employed. ..... It would be mere mockery to invite any institution to undertake the opening of closed wards by making a grant to it this year unless there were some reasonable prospect that a similar provision could be made in the future." The needs of the London hospitals are only too well known and we can only hope that the fervour of the Diamond Jubilee having in part died away the charitable—and by this we do not only mean the rich but those who could easily afford some small sum—will not be prevented from renewing or in only too many cases fro commencing their subscriptions.

THE VALUE OF A DIPLOMA IN PUBLIC HEALTH.

NOT a few of those many medical men who within recent years have obtained diplomas in public health from one or another of the qualifying bodies will fail, we much fear, to reap a due pecuniary reward for all their labours. We use the term pecuniary reward advisedly since nothing can take from the possessors of these diplomas the enhanced interest in matters sanitary and social which the knowledge they have thus acquired confers upon them. The disappointment to which reference is made will arise in the main from paucity of appointments and from poverty of pay; but in spite of this it will come as a surprise to many to hear that in some appointments the possessors of experience and of diplomas will be sent away while the owners of neither will be elected. Such, however, has recently been the case in Essex, when, on the creation of a new urban sanitary district out of part of a rural sanitary district, the necessity to appoint a medical officer of health arose. Here there were, we are informed, three applicants: one, the holder of an M.D. degree, who was the medical officer of health of the rural district out of which the new district has

been created, and whose name is well known amongst East Anglian sanitarians; another, besides being a graduate in medicine and surgery, held two diplomas in public health. The third, the selected candidate, was, it appears, untutored either in the school of experience or of special diplomas, and held but the Licentiate of the Society of Apothecaries. What can we say as to this newly created urban sanitary body but that it, too, presumably possesses neither experience nor diploma? We are afraid that this view of the situation does not excuse the action of its members, because the want of experience from which they suffer should surely have induced them to obtain an experienced officer to guide their faltering footsteps. Fortunately the Local Government Act of 1888 has done much to prevent abuses of the kind to which reference is here made and renders it very improbable that a district with a population of some 50,000 will be saddled with a medical officer of health who has had no special training for the post.

"THE MEDICINE MAN."

MEDICAL men have frequently been presented on the stage and almost invariably as beneficent agents, but the stage "doctor" who is a villain is something more or less new. Dr. Tregenna, the practitioner in question, is a very clever man and much run after by fashionable people, none the less because he is an unorthodox practitioner, although he does possess a real power over his patients. He has studied the secrets of the brain and exercises his influence by will power mainly, though at times he employs "suggestions" as well. It will easily be imagined what sort of representation Sir Henry Irving gives of such a character. Tregenna is decidedly an uncanny person and selects his patients or victims from all classes of society. In the opening scene we see him in an East-end mission room, where he exercises his influence over costermongers and dock labourers and informs a gentleman of the former calling that he can listen to his brains as well as his heart. Here we might mention, as Sir Henry Irving is always careful about minutiæ, that the small end of a single stethoscope and not the large is the right one to apply to the patient. The finale of the first Act is decidedly impressive. One of Tregenna's patients is a drunken bully named Bill Burge, magnificently played by Mr. Mackintosh. Tregenna is determined to get this animal, "my tiger," as he calls him, into his Retreat, but Burge objects and in forcible language goes out into the night. "He will come when I want him," says Tregenna and sits down alone, except for the presence of a foolish parson, before the fire. There is silence in the room, only outside is heard the noise of oaths, screams, and an organ. Tregenna remains motionless and thinking; presently the door opens and Burge wanders in like a man in a dream. "My tiger has come back from his jungle, you see," says Tregenna, and the curtain falls. The last three Acts take place at "The Retreat" where, Sylvia Wynford, the daughter of a woman whom Tregenna had loved and whom in revenge on the man who had married her he is resolved to render insane, is a patient, for, as he says, "the will that can cure a disease can also bring it on." So he sets himself to bring about this disease—namely, melancholia—from which Sylvia's mother had suffered, and succeeds. Miss Terry is excellent here, as might have been expected from her playing of Ophelia. Bill Burge is also a patient in "The Retreat" and under Tregenna's influence has become as meek as a new-born lamb, a change which does not commend itself to his wife, who comes to see him. Mrs. Burge, admirably played by Miss Dolores Drummond, is furious with Tregenna for taking all her husband's spirit out of him, and this is the most realistic scene in the play. The end of the drama is that Tregenna, on learning that Sylvia's father had never heard of him when he married his wife, restores Sylvia's reason to her. Burge suddenly develops homicidal mania and goes for Tregenna with a knife. But the old will power still asserts itself and "the tiger" drops his knife. Then, however, Tregenna makes his fatal mistake. "Back to your den," he says, trying to push Burge out. But Burge immediately feels his immeasurable superiority in physical strength, throws Tregenna on the sofa and slowly strangles him. This scene, with the one exception that Sir Henry Irving omitted the asphyxial convulsions, was startling in its realism. We cannot praise the drama as a play, but Tregenna has a masterly exponent and should Sir Henry Irving correct the two little errors we have pointed out from a medical point of view he would make his rendering of an improbable character practically perfect.

SIGNS OF ABATEMENT OF THE SMOKE NUISANCE.

RECENTLY we have written strongly on the shameful way in which the air of the metropolis has been befouled by the almost solid outpourings of the chimneys of hotels, restaurants, and other buildings. We note with satisfaction that there are signs of our action having had good effect. Already we have observed an improvement in the neighbourhood of THE LANCET offices. This is due doubtless to the action of the London County Council, and at their last meeting (on May 24th) it was stated that a letter had been sent to no less than twenty-three vestries and district boards in London in whose districts the most serious nuisance from smoke has recently been observed. We trust that the Council will continue their vigilance in this matter as there is no possible excuse for the existence of such an undoubted evil.

ANNUAL MEETING OF THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

THE annual meeting of the Workhouse Infirmary Nursing Association was held on May 19th at the house of the Hon. Mrs. Reginald Talbot, Dr. T. D. Savill being in the chair. The past year has been a somewhat eventful one for the association, which has lost its President by the death of H.R.H. the Duchess of Teck and the honorary secretary by the resignation of Miss Wilson through ill-health. The latter, however, retains her connexion in the capacity of treasurer. As already recorded in these columns the association contemplates bringing its labours to an end, in the belief that the magnitude of the task is no longer within the scope of private enterprise. The difficulty of finding suitable candidates and of raising the necessary funds for their training appear to be the chief reasons which have influenced the committee in this decision. But, as we have already pointed out, surely these are not new obstacles in the work of the association, and it is only necessary to compare the state of nursing in workhouses now with the condition of matters when the movement was started, at the initiation of Miss Twining and the Marchioness of Lothian in 1879, to show how successfully it has coped with them. Moreover, the recent "Nursing in Workhouses Order" issued by the Local Government Board, which is largely due to the efforts of this body, though it may not do all that is wanted, is a large step in the right direction and should certainly tend in time to make the service more popular in the nursing world. We are glad to notice that the chairman in his opening remarks stated that the association does not intend to bring its labours to a close but only to forego the training of probationers. It will continue to look after the interests of the nurses still attached to the

association and to advise boards of guardians in difficulty and help them as far as possible. The difficulty experienced by county and provincial guardians in procuring nurses is really becoming acute and unless something can be done the "Order" referred to will be in danger of becoming a dead letter from lack of trained nurses to fill the vacancies. We constantly hear of guardians advertising for months unsuccessfully, although offering, in some instances, fair and even handsome salaries. Is it not time that the question was submitted to the investigation of a departmental committee, so that the extent of the difficulty and the best means of remedy might be fully revealed?

THE BIRTHDAY HONOURS.

THE list of birthday honours is a small one and the representation of our profession in that list is small also. Surgeon-Lieutenant-Colonel J. G. Rogers, D.S.O., head of the Egyptian Sanitary Department, has been made a K.C.M.G., and Dr. Andrew Milroy Fleming, Principal Medical Officer of the British South African Police, has been made a C.M.G. Surgeon-Major-General Robert Harvey, D.S.O., has been made a C.B., and Brigade-Surgeon-Lieutenant-Colonel A. M. Branfoot, Professor of Midwifery in the Madras Medical College, has been made a C.I.E. It is noticeable that the navy has been neglected in the last distribution of birthday honours.

THE EDUCATIONAL THEORY OF THE UNIVERSITY OF WALES.

DR. ISAMBARD OWEN has recently delivered an address on the University of Wales and its educational theory to the members of the Teacher's Guild of Great Britain and Ireland, which address deals with the constitution and policy of the new University. It will, undoubtedly, do a great work in the future consolidation and organisation of university teaching in Wales, for although only founded in November, 1895, it has already 530 matriculated students in the three University Colleges of Aberystwith, Bangor, and Cardiff. After a full consideration the promoters of the University decided that non-collegiate students could not be successfully combined in one university with collegiate students, so that the members of the University will have to pursue at one of the Welsh colleges a prescribed form of curriculum. This curriculum is not drawn up so exclusively as to curtail the bias of teaching of any individual teacher, but the teacher's scheme in any of the colleges has to be finally agreed to by the University Court, after it has been submitted to the teachers in other colleges. It is therefore expected that a practically uniform standard for examinational purposes will be secured, whilst giving more freedom to individual teachers, than is the case where a rigid syllabus is laid down by the Senate of the University to which every professor and teacher must adapt his teaching, as is the case in the existing University of London. In so far as teaching is made to take precedence of the examination the charter scheme is undoubtedly drawn on proper lines. The advancement of knowledge by the encouragement of research, as well as the conferring of degrees, is also insisted on, and this is primarily the proper duty of any real university; but the mere presentation of a thesis or dissertation embodying independent work by a candidate for a degree requires a stricter interpretation than is usually the case. The University Court—the executive and legislative body—is comprehensive enough for even these democratic days, being composed of no less than 101 members — viz., 36 members from the University Colleges, 26 appointed by county councils, 13 by the Crown and a similar number by the graduates, 6 by the Central Board of Intermediate Education, 3 by the head masters and mistresses of public intermediate schools, and 3 by the head teachers of public elementary schools in Wales. The Chancellor completes the list and he is elected by the Crown and appointed for life. The University is to be congratulated on having the Prince of Wales as its first Chancellor. The constitution of the governing body is certainly unique, for it differs *in toto* from any other supreme university authority and may suit Wales, but is hardly likely to be followed by the founders of any future university. The advisory power is the University Senate, which is composed of the heads of the various departments of teaching in the several colleges, and with them the course of the University will rest, for obviously it can only be under most exceptional circumstances that the higher authority will neglect or set aside their recommendations. In passing candidates an external examiner has the final authority, although the Vice-Chancellor and internal examiners appointed by the three Colleges are joined with him in the Examining Board. The scheme is therefore in its essence a federation of colleges under the name of a university and does not materially differ from that of the Victoria University.

PLAGUE IN CHINA.

THERE is unfortunately only too much reason to suppose that plague is becoming increasingly prevalent in some of the coast cities of China. The following extract from the official returns for the present year published in the Hong-Kong newspapers shows that there is ample cause for anxiety with respect to that city:—

Week ended	Cases.	Deaths.
Jan. 1st	Nil	Nil
,, 8th	2	1
,, 15th	Nil	Nil
,, 22nd	2	2
,, 29th	2	4
Feb. 5th	5	3
,, 12th	5	5
,, 19th	9	6
,, 26th	46	42
March 5th	22	17
,, 12th	16	12
,, 19th	31	28
,, 26th	47	40
Total	187	160

"During the twenty-four hours up to noon, March 31st, 11 new cases and 10 deaths were reported, making the total since Jan. 1st (ninety days) 224 cases and 195 deaths." Plague is also said to prevail in Canton to the extent of about 100 cases a week, and to be increasing in Macao although the Portuguese authorities of the latter city are very reticent on the subject.

STREET NOISES.

THE judgment in the Kent County Council by-law case, upon which we commented in THE LANCET of May 21st, has, we are glad to see, attracted a great deal of attention both in the daily and the weekly press. We have received the prospectus of a new society—namely, the Society for the Suppression of Street Nuisances. Its ideals are admirable, only we think their scope is too wide. Certainly rowdyism, obscene language, solicitation, and unnecessary cries and noise ought all to be put down with an unsparing hand, but to take them all in hand at once would require another Hercules. The first two nuisances will never be put down until magistrates have the power and be obliged to exercise it of ordering a flogging for the members of the various gangs who go about with revolvers and knives. As for solicitation, that is an evil which it is almost impossible to stop. But noises can and

must be put down, and if the press, the society under consideration, and the sister Society for the Suppression of Street Noises, will only work hard, the County Council or somebody will be obliged to do something. For the present, however, we would advise the new society to confine its energies to the suppression of the last-named nuisance and after some peace has been restored to the streets then to turn its attention to the others mentioned in the circular.

SIR HERBERT KITCHENER'S DESPATCH.

SIR HERBERT KITCHENER'S despatch regarding the battle of Atbara has now been published, together with a special order to the Army, promulgated with the approval of the Secretary of State for War. The Commander-in-Chief, in conveying Her Majesty's congratulations upon the brilliant success of the recent campaign in the Soudan, dwells upon the able plan of the operations and the gallantry with which these operations were carried out and specially alludes to the great march of the British Brigade to the Atbara. Lord Wolseley concludes his Order by saying that "the good services of all those brought to notice will be considered at the conclusion of this year's operations." This carries our thoughts to the larger and more important campaign which remains to be undertaken for the capture of Khartoum and to the decisive battle which has still to be fought with the Khalifa's forces in order to decide the mastery of the Anglo-Egyptian power over the Nile valley. We heartily congratulate the medical officers of the British and Egyptian armies on the way in which their services, which were both difficult and onerous, are recognised. Sir Herbert Kitchener says: "The medical arrangements of the British Brigade under Brigade-Surgeon-Lieutenant-Colonel Macnamara and his staff, and of the Egyptian army under the direction of Brigade-Surgeon-Lieutenant-Colonel Gallwey and his staff, were, under the somewhat difficult circumstances of the operations, satisfactory, and the energy and skill displayed by the medical staff under their direction are deserving of much credit."

ANIMAL ODOURS.

THE lamentable accident which occurred the other day, resulting in the death of a little child from injuries received while driving in a brougham with his nurse, raises several other questions than the obvious and pressing one of the control of street nuisances. The horse in the brougham was frightened by the smell of a performing bear which was being led along in the street, ran away, the brougham collided with a waggon and was upset, and the child was killed. Horses are well known to be disposed to fits of unreasoning fright and no horse unless carefully trained can bear the smell of two animals—namely, the bear and the camel. The smell of the latter is offensive enough to human nostrils, but this would not explain the terror which a horse exhibits at first sight or smell of a camel. But the reason for the horse's dread at the smell of a bear must, we suppose, be found in a reminiscence continued through the race from the time when the cave bear fed upon the primitive horse. In the case of the camel it cannot be simply that the smell is disagreeable to the horse, for horses have no objection to goats, the smell of which, though not so offensive as that of a camel, is very similar in character. And on the other hand it cannot be, as in the case of the bear, the fear that the camel will do some harm. Animal odours, both human and otherwise, form a curious chapter in medical lore. In the *Journal of Cutaneous and Venereal Diseases* for July, 1885, appeared an abstract of a prize essay by Dr. Monin "Sur les Odeurs du Corps Humain," which contained a vast amount of information on the subject. It is well known that individuals of the same race possess various smells. For instance, the smell of red-haired people is often very offensive, a fact noted long ago by Ambrose Paré. The strong smell of the negro, too, has often been commented upon by travellers. Alexander the Great was said by Plutarch to emit a smell of violets, and several gynæcologists have noticed the peculiar aromatic odour, in no way offensive, given off by certain women during the menstrual period.

THE TEMPLES OF ÆSCULAPIUS.

As will be seen in our diary of coming events for next week Dr. Richard Caton will deliver on June 4th at the Royal Institution the first of a course of lectures on the "Temples and Ritual of Asklepios at Epidaurus and Athens." Much new and valuable information—of particular interest to medical men it should be noted—has been obtained lately concerning the Temples of Æsculapius. This information has not been as yet communicated to English audiences, but they could not obtain it from a better source than Dr. Caton, who has studied both the Hieron of Epidaurus and the Asklepion at Athens and who brings medical as well as classical knowledge to bear on the matter. The lectures will commence at 3 P.M. at the Institution, Albemarle-street, Piccadilly.

THE RELATION OF HOSPITALS TO INFIRMARIES.

THE Executive Committee of the Walsall and District Hospital recently received a deputation from the board of guardians of the neighbourhood with regard to a complaint that a patient had been discharged from the hospital and sent to the workhouse under circumstances which did not justify that course. Remarks had been made at a meeting of the guardians by members who evidently did not understand the principles which underlie hospital relief, but it is only fair to these gentlemen to say that when matters were duly explained to them they expressed themselves as satisfied with that explanation. It appears that a cripple was run over and brought to the hospital. He was bruised but not seriously injured and when well enough to be discharged was sent to the infirmary as he was a pauper. The allegation made against the hospital officials was that the patient had been sent to the infirmary before he was in a fit state to be discharged because he was a pauper, thereby suggesting that paupers were not so well cared for at the hospital as other patients. A full explanation was given by the secretary and others connected with the hospital, showing that any patient in a similar condition would have been sent home if he had had one to go to. The relation of hospitals to infirmaries is fairly well determined. Hospitals are intended for the relief of those patients unable to pay for medical or surgical attendance and nursing whose cases are considered severe enough for admittance as in-patients (we are not dealing here with the question of out-patients or outdoor relief), but there must be a reasonable hope that permanent or considerable temporary relief can be given. If the case is considered hopeless as regards further improvement or is likely to be considerably prolonged the patient is advised to go to the infirmary, where the subjects of such chronic cases receive competent medical attendance for the rest of their lives unless they sufficiently recover to earn their own living. As hospitals are intended for acute cases only and a certain number of beds have to be kept vacant for the reception of urgent cases night and day, it would be obviously unfair to such patients to have beds occupied by infirm patients who may live several years. There is frequently some unwillingness on the part of hospital patients to go to a workhouse infirmary; this can be readily understood, but the objections must be overruled for the sake of those whose lives timely medical or surgical aid may be effective in saving. Workhouse

infirmaries are now very different to what they were, although the nursing in many of them leaves a great deal to be desired; in others, however, it is everything which can be wished for.

CONSTANT PRESENCE OF THE PNEUMOCOCCUS ON THE SURFACE OF THE TONSIL.

THE pneumococcus may be found in the mouth as a simple saprophyte in healthy subjects. M. Wetter has shown that the inoculation in mice of the saliva of individuals who had not been subjects of pneumonia caused pneumococcic septicæmia in 20 per cent. of the experiments. He found the saliva of those who had suffered from pneumonia more virulent; in four-fifths of the experiments septicæmia was produced. At the meeting of the Société des Hôpitaux of April 15th, MM. Bezançon and Griffon showed by culture methods that the pneumococcus was present not frequently but constantly in the mouth. They had found that the serum of young rabbits aged about two months was a favourable medium for the cultivation of pneumococci. Mucus removed from the surface of the tonsil of forty individuals of all ages, some healthy and others suffering from various complaints, invariably yielded on this medium cultures of pneumococci. An important practical conclusion follows from this discovery. It is not sufficient to successfully inoculate the saliva or to make cultures from it to prove the presence of a pneumococcic affection. The expectoration or exudation must be directly examined and the presence of a large number of encapsulated diplococci which colour by Gram's method be proved.

RUMINATION IN MAN.

THE Journal of the American Medical Association, April 9th, 1898, contains an interesting paper by Dr. W. Sinkler on Merycism or Rumination in Man. This disorder was described as long ago as 1687 by the great anatomist Fabricius of Aquapendente and subsequently by numerous writers, but only a small number of cases has been placed on record. Rumination must not be regarded as simply vomiting of food. It is a return of food shortly after it has been swallowed unattended by nausea, retching, or disgust. The regurgitated food is either rejected or re-masticated and swallowed again. The act is analogous to the process of chewing the cud in the lower animals. To explain the latter a hypothesis has been put forward which, to say the least, is ingenious. The habit of rumination is thought to have been acquired by the herbivora when the carnivora first appeared on the earth. Fearful of attack the ruminants grazed rapidly ready for flight at the first intimation of danger; then having reached a place of safety their food was regurgitated and its mastication completed. In man various causes for rumination have been assigned, but the majority of writers agree that it is a neurotic condition; indeed, it must be regarded as nearly allied to neurotic vomiting. Heredity is a factor and may act indirectly through a neurotic diathesis. In one instance a grandfather, a father, and a son were affected. Rumination may be the result of imitation, as in the case of two children who copied the practice from a governess. The prognosis, as might be expected, is not good. Many cases improve under treatment, and often with no treatment there are intermissions of from one to three years, but sooner or later there is a relapse. In many cases patients voluntarily return to the habit either because they like to retaste their food or because the regurgitation relieves gastric distress. The treatment mainly consists in attention to the general health; in many cases the habit will be arrested as long as this is well maintained and return when it fails. If there is indigestion it must be corrected; here lavage may be useful. The diet should be carefully regulated and the amount of liquid reduced to a minimum. Thorough and complete mastication is essential. The patient should be trained to control the inclination to regurgitation.

THE INTER-HOSPITAL BOAT RACES.

THE usual races between representatives of the various hospitals were rowed on May 18th. The course was from Putney to Hammersmith Bridge. For the Senior Cup three hospitals sent boats—London, Middlesex, and St. George's. St. George's won the toss and they selected the middle station, apparently on account of the tide. Middlesex had the Middlesex and London the Surrey side. Shortly after the start Middlesex, being sheltered by the bank from a strong wind, drew ahead and opposite the boathouses were a length to the good, but they were evidently in want of training, and St. George's, whose crew contained two old "blues," rapidly overhauled them. Halfway up the course the St. George's boat was more than two lengths ahead of the London, whilst Middlesex were struggling gamely in the rear. An exciting race ensued between the first two boats. The London men rowed well against their formidable rivals. They were in splendid condition, which tells more than anything else in these races, and rapidly drawing level with St. George's, finally won by a clear length. In the race for the Junior Cup (presented for the first time this year) the Middlesex representatives easily beat those of the London Hospital. It seems a pity that more hospitals do not take an interest in and send crews for these events. Surely amongst such large hospitals as St. Bartholomew's, Guy's, and St. Thomas's there ought to be sufficient energy to induce four men to train and to endeavour to earn laurels for their schools. St. Thomas's, we understand, did enter but afterwards "scratched."

POST-GRADUATE CLINICAL STUDY IN THE METROPOLIS.

A SCHEME has recently been set on foot to provide clinical instruction for recently-qualified men after a coöperative fashion in the metropolitan hospitals and thus to offer to those concerned the advantages of clinical teaching hitherto sought in Paris, Vienna, or Berlin, by as far as possible collecting the scattered clinical material of the London hospitals together—i.e., by opening the teaching given in a number of hospitals to anyone who cares to comply with certain regulations. A reference to our advertisement columns will show that nine of the great London hospitals are coöperating in this matter. A ticket of admission valid for a three months' course costs 7 guineas, one for six months 10 guineas. These cards will admit their holders to any part of the clinical instruction at the several hospitals which is open to their own students, inclusive of operations and post-mortem examinations. They will be issued upon personal application any weekday except Saturday at the office of the Metropolitan Schools of Medicine, West Wing, Examination Hall, Victoria Embankment. Evidence of qualification must be furnished before a card can be issued. The system has only been in operation some three weeks and has already met with success, as, in our opinion, it thoroughly deserves to do. The wealth of clinical material in the London hospitals is enormous, but is so split up that it is not of such value as, for instance, that in Vienna, where it is practically all collected together in one building. Though of course this new system cannot alter the *locale* of the various hospitals, yet by enabling a learner to go from one to the other and to enjoy equal facilities at each it will go far to remove the disabilities under which clinical teaching in London has hitherto laboured as compared with foreign schools. All particulars may be obtained on application to the Honorary Secretary, Metropolitan Schools

of Medicine, at the Examination Hall, Victoria Embankment, W.C. The above scheme is a very laudable effort to improve matters with existing material, but it may be said against it that a qualified medical man cannot obtain the teaching he requires at the same time as an unqualified one. To obviate this an idea has been mooted of starting a post-graduate hospital and college at which instruction shall be confined to qualified men alone. The subject is such a wide one that we are compelled to reserve its consideration in full to a future issue.

HEPATIC ABSCESS CAUSED BY ASCARIS LUMBRICOIDES.

IN the *Deutsche Medicinische Wochenschrift* of May 19th Dr. Bruno Leick, assistant physician in the Greifswald University Clinic, describes a case in which a hepatic abscess was found to contain an ascaris lumbricoides. The patient was a shepherd's wife, thirty-five years of age, who began to suffer from pain in the region of the liver in February, 1897. In the end of May she observed a tumour above the navel and in June she was admitted to the hospital. She was then greatly emaciated and was obviously very ill; her temperature in the forenoon was approximately normal; in the afternoon it was raised, varying from 100·4°F. to 101·4°. Her abdomen contained a tumour larger than a child's head, which extended from the navel to the ensiform process, and by its elasticity, taken in connexion with the patient's enfeebled and hectic condition, suggested a suppurating hydatid. Laparotomy on July 7th disclosed a small encapsuled abscess lying in front of the liver, and a puncture which was made in its base passed through ¾ in. of liver substance into an abscess cavity containing yellow creamy fœtid pus. On July 10th, whilst the dressings were being changed, an actively moving ascaris was found in the abscess. The patient made a good recovery.

THE VACCINATION BILL: IMPORTANT COMMUNICATION FROM MR. T. W. RUSSELL.

THE following letter to Mr. Labouchere from Mr. T. W. Russell the Parliamentary Secretary to the Local Government Board is of considerable interest. The remuneration of public vaccinators is to be fixed by regulations of the Local Government Board made under Clause 3 of the Bill, and in framing regulations the Board is to take account of domiciliary work. The repeal of Section 6 of the Act of 1867 refers only to the present method of payment of public vaccinators. As Mr. Chaplin has already repeatedly explained, the Bill makes no provision whatever as to the institution of proceedings by vaccination officers and gives no additional powers to the Board in this respect, but powers already exist which the Board now for the first time proposes to bring into operation. Mr. Labouchere is to be thanked for having elicited this clear and definite pronouncement by Mr. Russell:—

Local Government Board, Whitehall, S.W.,
20th May, 1898.

Dear Labouchere,—The reply to your letter of the 18th inst. as to the Vaccination Bill is as follows:

1. The officers appointed under the Vaccination Acts to prosecute persons charged with offences against those Acts or otherwise to enforce those provisions are the vaccination officers.

The Vaccination Bill now before Parliament gives no additional powers to the Local Government Board with regard to these officers or the institution of proceedings by them.

2. The Bill gives no additional powers to the Local Government Board with regard to obliging boards of guardians to institute proceedings under the Vaccination Acts.

3. The substitution of domiciliary vaccination for stational vaccination will render it necessary for the Board to make regulations with regard to the duties and remuneration of the public vaccinators, and the reference to public vaccinators in Clause 3 is for this purpose.

4. The provisions of section 6 of the Vaccination Act of 1867 which are proposed to be repealed refer only to the remuneration of the public vaccinators and in no way affect the remuneration of the vaccination officers or any payments in respect of the institution of proceedings by the guardians of those officers.

Any provision which may be made by the Local Government Board in regulations issued by them as to the institution of proceedings either by the guardians or the vaccination officers would be made under powers which the Board already possess and not under any powers conferred by the Bill.—Yours very truly, T. W. RUSSELL.

THE SUTURE OF THE BILE-DUCTS

IN the *Bulletin* of the Johns Hopkins Hospital, April, 1898, Professor W. S. Halsted describes an ingenious device to facilitate suture of the bile-ducts. He states that to close an incision in the normal ductus communis choledochus has been considered so impracticable, not to say impossible, and the result of suture even of the abnormally thickened duct so uncertain, that it is the practice of all surgeons to wait weeks, months, or even years for the duct to dilate and thicken rather than interfere promptly in cases of obstruction of the common bile-duct by calculus. The operation may be postponed to "give nature a chance" to expel the stone but never for the sake of giving the duct time to thicken. The dangers of this practice are many, and when at last the surgeon interferes the patient is very weak. By using little hammers which he has devised Professor Halsted has sutured the common duct in dogs five times, and the common duct twice and the cystic duct once in man. The wall of the duct is clearly exposed and two presection stitches are inserted to act as retractors. The incision is made between them. The stone having been removed the threads are drawn apart and a hammer of the proper size is introduced. The duct is gently raised from its bed and drawn by the hammer towards the operator. Mattress stitches of silk are then applied, one over the heel and the others in front of the handle. Although the finest stitches are used they necessarily perforate the wall of the duct, but no harm results for the duct is usually sterile.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of this society was held on May 20th at 11, Chandos-street, W., Mr. Christopher Heath, Vice-President, being in the chair. From the report read by the secretary it appeared that 8 new members had been elected in 1897, 12 had died, and 1 ceased to be a member, leaving 287 on the books; 1 widow and 3 orphans had been taken on, 4 widows had died, and 2 orphans had become ineligible through age for further grants. At the end of the year there were 50 widows and 12 orphans in receipt of grants. The interest from the funded property had been £2989 1*s.* 7*d.*, the subscriptions were £302 8*s.*, and the donations £22 1*s.* No legacies had been received and a sum of £77 14*s.* life subscriptions had to be invested. The funded property amounted to £97,300. A sum of £2924 16*s.*, including a Christmas present of £434, had been given to widows and orphans and the expenses of the year were £245 7*s.* Mr. Warrington Haward was elected a treasurer in the place of Sir Richard Quain, Bart., deceased; and Mr. C. F. Keele, Dr. Bate, Sir A. Garrod, Mr. Hazel, Mr. Lynch, and Dr. Cullingworth were elected directors in the place of the six senior directors who retire. A discussion took place as to the best way of making the society better known and of increasing the number of members, the society holding out such easy means of providing for widows and orphans of deceased members. A special grant of £26 was made to a widow who was not eligible under the by-laws for ordinary grants. Mr. Heath proposed from the chair a resolution expressing regret that the President, Sir James Paget, Bart., had been prevented from presiding at the meeting for the first time during his presidency of 14 years. A vote of thanks to the editors of the medical journals for their kind assistance in making

known the work and objects of the society was moved by Sir Samuel Wilks, Bart., seconded by Mr. Lynch, and carried unanimously. A vote of thanks to the chairman closed the meeting.

REPORT OF THE MEDICAL OFFICER OF HEALTH OF THE COLONY OF HONG-KONG.

THE island of Hong-Kong, upon which are situated the city of Victoria and a number of villages, has an area of rather more than 29 square miles. The average monthly temperature throughout 1897 was 71·7° F., the highest recorded temperature being 91·8° in September and the lowest 41 0° in February. The total rainfall for the year was 100·03 in., the wettest months being August with 25·5 in. and June with 23 3 in., while the driest months were December with 0 48 in. and March with 0·81 in. The census taken in 1897 showed the total population to be 246,880, classified as follows: Chinese civilians, 233,280; non-Chinese civilians, 8482; army and navy, 5118. Dr. Francis W. Clark states that 4688 deaths were registered during 1897. The deaths among the Chinese were 4484, corresponding to a death-rate of 19 08 per 1000, whilst those among the non-Chinese community were 204, giving a death-rate of 14·89 per 1000. The total number of cases of infectious disease reported by registered medical practitioners during the year was 389, distributed as follows: bubonic fever, 21; small-pox, 293; enteric fever, 65; diphtheria, 2; puerperal fever, 7; and scarlet fever, 1. Among the Chinese 712 deaths from malarial diseases and 173 from beri-beri were recorded. Among the European civil community the largest number of deaths under any one heading were 11 attributed to apoplexy and heat apoplexy; next after these were small-pox and phthisis, 9 each; there were also 4 due to sprue and 1 to beri-beri. Only 21 cases of bubonic fever were discovered during the year, all of them being of Chinese nationality. Dr. Clark does not consider that infection is contracted in the great majority of cases by inoculation through small abrasions of the skin. There were 65 cases of enteric fever reported during the year, 51 being Europeans and 7 Chinese.

WE understand that the Secretary of State has appointed the following committee to inquire into the question of prison dietaries: the Right Hon. J. L. Wharton, M.P., Chairman; A. H. Downes, M.D. Aberd., Medical Inspector, Local Government Board; Herbert Smalley, M.D. Durh., Medical Inspector, Prisons Board; with Dr. John Baker as Secretary.

DR. SIDNEY MARTIN, F.R.S., will deliver the Croonian Lectures on the Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever at the Royal College of Physicians of London on the following Tuesdays and Thursdays, at 5 P.M.—June 14th, 16th, 21st, and 23rd.

ON Tuesday last the selection of a Fellow of the Senate of the University of London by the Members of Convocation (to fill the vacancy caused by the death of Sir Richard Quain) resulted in Mr. Fletcher Moulton, M.A., Q.C., heading the poll by more than two hundred votes.

MR. CHARLES SISSMORE TOMES, F.R.C.S. Eng., F.R.S., L.D.S., has been nominated a Crown Member of the General Council of Medical Education and Registration of the United Kingdom in the vacancy created by the death of the late President, Sir Richard Quain.

THE Colonial Office has received a telegram reporting that during the week ending May 21st there were 112 cases of plague in Hong-Kong and 107 deaths resulting from the plague. These figures show some decrease in the ravages of the disease.

THE Lord Mayor's dinner in support of the London Hospital last week resulted in the collection of £75,000, with annual donations of over £4000.

PROFESSOR MICHAEL FOSTER will preside over the meetings of Council of the British Association to be held next year at Dover.

THE BRITISH PHARMACOPŒIA.

IV.[1]

Araroba.—The first substance upon the list of Additions, or "articles included in the British Pharmacopœia, 1898, which were not in that of 1885 or in the 'Additions' of 1890," is araroba. The history of this change is interesting. When this substance was first made official in 1885 a double blunder was committed. It was introduced into the British Pharmacopœia under the name "chrysarobin," with "araroba" and "Goa powder" as synonyms, and it was stated to be the medullary matter of the stem and branches dried and powdered. (In a reprint an *attempt* was made to correct these errors.) Since then much confusion has existed about this drug. The British Pharmacopœial error consisted in making the crude drug official instead of its purified extract and in stating that it was the medullary matter when it was known to be, as now stated, "a substance found in cavities in the trunk." By introducing the crude drug under Araroba and its purified extract under Chrysarobin both mistakes are corrected and it is to be hoped that confusion will cease. Physicians are still in the habit of prescribing this substance—chrysarobin—under the name of "chrysophanic acid." This is a distinct mistake; it contains this acid, it is true, in varying proportion, but the name "chrysophanic acid" should not be used as a synonym for chrysarobin, much less for araroba or Goa powder.

It will be noted that the dose of chrysarobin is omitted. This reminds us of another serious mistake in the last revision (in 1885): in the draft issue of the British Pharmacopœia the dose was given as up to 2 gr.; this was fortunately corrected before the work was published and the dose appeared as ⅛ to ½ gr. This maximum dose was dangerous, as serious symptoms have been noticed after doses as small as ¼ gr., and it has been a wise decision to omit the dose of the drug altogether till a pure chrysophanic acid is made official in a future issue and then its dose will probably be about $\frac{1}{10}$ gr. If practitioners had prescribed this remedy in the official doses many deaths would have been recorded.

Aurantii Cortex Recens is now introduced to make the tincture (1 in 4) which was formerly prepared of the strength of 6 oz. to 1 pint. It will be noticed that the old tincture made from the *dried* peel is now no longer official.

Benzol.—This introduction is of little interest to the practitioner. It was formerly in the Appendix and is now made official simply as a solvent for indiarubber and for use in the making of mustard leaves. It may enter into other preparations which we did not notice, for it should be mentioned that in order to find out for what purposes it was made official we had to search the entire volume from cover to cover as the elaborate index is of no use whatever for this purpose, and it took some hours to find out that the drug was apparently introduced only for the above-named preparations.

Bismuthi Salicylas.—This is a valuable addition; it is called also in the British Pharmacopœia the "oxysalicylate," though it is better known as the basic salicylate. It is a white powder which should contain no free salicylic acid. It is insoluble in water and may be taken for long periods in doses up to 20 gr. without producing any untoward symptoms. It may be sprinkled over wounds as a substitute for iodoform,

[1] Articles I., II., and III. were published in THE LANCET of April 16th and 23rd and May 7th, 1898, respectively.

and it makes a very effective application to sluggish ulcers and is the best salt of bismuth for ulcer of the stomach and diarrhœa caused by fermentation of the contents of the intestinal canal. It has been given with advantage in typhoid fever.

Caffeinæ Citras Effervescens is a granular effervescing powder which contains 1 part of caffeine citrate in 25. Its dose is 60 to 120 gr. which are equivalent to about from 2 to 5 gr. of the caffeine salt. It will be a valuable remedy in migraine and the addition of 5 gr. of antipyrin to each dose should afford one of the most effective and palatable combinations for the treatment of this disorder.

Caoutchouc is only introduced as a means of affording an agent to take the place of the old traumaticine which was represented by the solution of guttapercha which is now no longer official. It may be employed as a means of applying chrysarobin in psoriasis, but a better plan is to make the drug into a paste, to spread it over the spots, and to cover with a piece of Mead's rubber plaster.

Carbon Bisulphidum is introduced as a solvent for caoutchouc and phosphorus and it is probable that the revisers made it official for this purpose only, as no dose is mentioned. It is a powerful agent and notwithstanding its objectionable odour it may be used as an intestinal antiseptic in typhoid fever and tuberculous ulceration in doses of from 1 to 2 oz. of a saturated solution in peppermint water. Its spray will freeze like that of ether and when inhaled it produces general anæsthesia like chloroform. 4 minims to 20 oz. of water make a powerful antiseptic liquid suitable for wounds and ulcers. It has been highly recommended as a substitute for the rectal treatment of tuberculous diseases by sulphuretted hydrogen.

Cocaina.—The introduction of the pure alkaloid will supply a want which the hydrochloride was unable to fill. It is almost insoluble in water and glycerin but it is soluble in 12 parts of olive oil and it can thus be prescribed in 5 per cent. solution in this oil for the relief of ear troubles. The hydrochloride is wholly insoluble in oil. It should be observed that there is now an ointment of cocaine 1 in 25, made by dissolving the pure alkaloid in oleic acid and adding lard. This is a most valuable Galenical preparation. The pure alkaloid should be selected when the practitioner prescribes cocaine in the form of suppository with cacao butter.

Codeinæ Phosphas.—This salt of codeine is introduced chiefly because of its solubility being greater than that of the pure alkaloid which is still official. Its dose is the same as that of codeine which could have been omitted with advantage. It enters into the new Galenical preparation, Syrupus codeinæ, which contains ¼ gr. of the phosphate in a teaspoonful and the dose of which is given as from ½ to 2 drachms. It is a valuable sedative in the hacking cough of early phthisis.

Hydrargyri Oleas is introduced to take the place of the old oleatum hydrargyri prepared by triturating 1 oz. yellow oxide of mercury with 9 oz. oleic acid, which was a most unsatisfactory preparation. The new mercuric oleate is a *precipitated* oleate formed by the interaction of corrosive sublimate and sodium oleate. It enters into a new unguentum—Hydrargyri Oleatis (1 in 4)—which will prove useful in the treatment of joint troubles and enlarged glands but which can never take the place of the simple mercurial ointment in the treament of syphilis by inunctions. It is greatly to be regretted that the revisers did not reduce the strength of the latter ointment to 1 in 3. As it is it is wholly unsuitable for inunction and must always be prescribed in reduced strength. The German Pharmacopœial strength is universally accepted as correct and it is regrettable to see practitioners in this country prescribing "Ungt. Hydrarg. Germ."

Hyoscinæ Hydrobromidum.—The introduction of this substance and its ally—hyoscyamine—marks one of the most noteworthy additions in the new volume. It is also known officially by the synonym scopolamine hydrobromide and is defined to be "the hydrobromide of an alkaloid contained in hyoscyamus leaves, different species of scopola, and possibly other solanaceous plants."

There are still many points to be cleared up about the constitution, dose, and action of the hyoscyamus and belladonna alkaloids, but the revisers were wise in including these two new substances without waiting for further light. The hydrobromide of hyoscine or scopolamine is a powerful hypnotic especially indicated in mania and delirium tremens. Krauss states that "after its administration the maniac collapses as if struck by lightning." It affects the general paralytic differently, his calming down being gradual but also complete. We have seen great benefit from this drug in the insomnia accompanying paralysis agitans. The practitioner should be cautious about the dose; the Pharmacopœia gives it as from $\frac{1}{300}$ to $\frac{1}{100}$ gr., and this dosage is as correct as could be given provided it be understood that the dose is to be administered by the mouth. It is, however, given most frequently (and certainly it is more efficacious when so given) hypodermically, and Binz states that the hypodermic dose should for the first time not exceed $\frac{1}{300}$ gr. This is too small a quantity and the physician may safely administer $\frac{1}{100}$ gr. by the skin. This may be increased to $\frac{1}{50}$ gr. afterwards if found necessary.

Hyoscyaminæ Sulphas is closely allied in its action to the preceding substance. The British Pharmacopœia defines it to be "the sulphate of an alkaloid contained in hyoscyamus leaves and possibly other solanaceous plants." Its dose is given as identical with scopolamine hydrobromide and at first not more than $\frac{1}{100}$ gr. should be given by the hypodermic method. In its action it more nearly resembles atropine than its ally does and it has often been found to fail in insomnia in the ordinary dose. It appears liable to cause delirious excitement sometimes when given with the view of causing sleep. Ringer failed to see any difference between its action and that of atropine in acute mania, but it is just possible that he experimented with an impure salt, as until recently it was very difficult to obtain these alkaloidal preparations in a perfectly pure state. It is used as a remedy for sea-sickness and should be given in doses of $\frac{1}{100}$ gr. by the mouth so as to affect the vision before going on board the ship. It has been used in ophthalmic practice instead of atropine and has been prescribed in paralysis agitans, asthma, chorea, and many other spasmodic affections.

Kaolin is a soft, whitish, insoluble powder, being a purified native aluminium silicate freed from gritty particles by elutriation. It is introduced into the British Pharmacopœia—we found after a prolonged search—as an excipient for phosphorus pill. It makes a good excipient also for permanganate of potassium and gold and silver salts when mixed with a trace of vaseline. Its action as an excipient depends upon its absolute inertness and stability. When carefully powdered it is a very valuable emollient and may be dusted over acute eczema and intertrigo in the same way as fuller's earth and zinc oxide. It will thus be seen that it can well take the place left vacant by the omission of calamina.

Lithii Citras Effervescens is a granular white powder containing 1 gr. of citrate of lithium in 20 gr. It is given in doses of from 60 gr. to 120 gr., equivalent to from 3 gr. to 6 gr. of the citrate. This preparation now takes the place of the old lithia effervescing water or liquor.

Morphinæ Tartras and its liquor are now official for the first time, but their introduction is only of pharmaceutical interest as the salt in no way differs therapeutically from the hydrochloride and acetate. It is more stable and dissolves in 11 parts of cold water and is given in the same dose. It is, however, much more suitable for hypodermic injection and the revisers are to be thanked for the removal of one of the most dangerous preparations included in the 1885 British Pharmacopœia; this was the hypodermic injection liquid which contained 1 gr. of acetate of morphia in 10 minims. Each drop contained $\frac{1}{10}$ gr. and the physician was always liable to give ½ gr. more or less than he intended owing to the imperfections in his syringe and to the concentration of the solution. It is now somewhat less than half the old strength and is made with the tartrate of morphia and distilled water 5 gr. in 110 minims and the dose is from 2 to 5 minims.

Naphthol.—This is beta-naphthol in white crystalline scales or in powder. It is a valuable intestinal disinfectant and has been used in pyloric obstruction, tuberculous ulceration of the bowels, and typhoid fever. Its dose is from 3 to 10 gr. which should be given in cachets owing to its disagreeable sharp taste and unpleasant odour. It is a powerful germicide and it has been used externally for itch and ringworm in the form of an ointment (20 per cent.). It can be used in psoriasis, eczema, &c., as a substitute for tar. When introduced first into use it was vaunted as being absolutely free from toxic properties in enormous doses, but it has been known when recklessly employed to cause a fatal irritation or inflammation of the kidney.

Oleum Pini.—This is the colourless aromatic oil distilled from the fresh leaves of Pinus pumilio—a little pine which

grows over the Alpine regions not far from the snow-line. The oil has been in use under different fanciful names at various continental health resorts frequented by phthisical patients and at home attempts have been made to keep the subjects of pulmonary disease surrounded by an atmosphere saturated with the vapour of the oil. It can be administered internally in doses of from 5 to 10 minims, though the British Pharmacopœia gives no dose, and it can be rubbed into the skin or poured upon the cotton-wool of a mask inhaler. It is certainly of more value than the oil of Scotch fir which is now omitted.

Oleum Rosæ is fragrant otto of rose distilled from the fresh flowers of Rosa Damascena. It is of course only introduced for its odour and it enters into the new official representative of "cold cream"—viz., Unguentum Aquæ Rosæ.

Paraffinum Liquidum.—This is not to be confused with the ordinary petroleum oil used for illumination purposes. It is a clear, oily liquid which is devoid of *colour*, *taste*, and *smell*, and which is not fluorescent. It is obtained from petroleum after the volatile products have been removed by distillation. We have failed to notice any preparation in the British Pharmacopœia into which it enters, though we have carefully looked through the volume, and as no dose is given we are at a loss to account for its presence. It is, however, a demulcent and it forms the basis of several popular cough remedies. It may be used as a basis for hypodermic injections and a vehicle for substances used in the atomiser or sprayed into the larynx. Its boasted nutritive properties, which have brought it into competition with cod-liver oil, are illusory.

Physostigminæ Sulphas.—This salt simply takes the place of the alkaloid physostigmine, which was formerly official but which is now omitted. The sulphate is more soluble and better suited for ophthalmic work, being easily dissolved by the lacrymal secretion.

Picis Carbonis Præparata is prepared coal-tar made by heating commercial coal-tar. Wood-tar is still official, but the introduction of coal-tar is a distinct advantage. Its chief use is in therapeutics of the skin, and its liquor—liquor picis carbonis—is now one of the most valuable preparations in the British Pharmacopœia. There is no agent so useful to the physician in eczema as this liquid made into an ointment, 1 dr. to 1 oz. lard. Equal parts of lanoline and vaseline make a better base for it in most cases.

Pruni Virginianæ Cortex.—Virginian prune bark, with its tincture 1 in 5 and its syrup 1 in 7, is now for the first time officially recognised and it is doubtful if the drug will prove equal to the occasion. We do not say that it is of little or no value, but we think of all the new additions it is the one of least worth. It is a gastric tonic with an agreeable taste and the small amounts of prussic acid present in the preparations add to their soothing properties. The syrup makes a very agreeable adjuvant for cough medicines in phthisis and the tincture was believed by Dr. Allbutt to relieve cardiac palpitation.

Quillaiæ Cortex.—This is an active drug owing to the large amount of saponin contained in it. It contains about five times the amount of this active glucoside that is found in senega. It is therefore a more powerful expectorant and its tincture (1 in 20) should only be given in doses of from ½ to 1 dr. This is exactly the same dose as for tincture of senega, which is made four times stronger, being 1 in 5. Quillaia, or "soap bark" as it is sometimes called, has the power of emulsifying oils and fats.

Quininæ Hydrochloridum Acidum.—This is a very important addition to the British Pharmacopœia. We do not approve of the multiplication of the salts of alkaloids, but this one was needed and the profession will hail its introduction without a murmur of dissent. It is introduced for its great solubility and it dissolves easily in less than its own weight of water. The neutral sulphate requires 800 times its weight of water for its solution. The ordinary hydrochloride is still official; it is soluble in 35 parts of water. It will be seen how valuable is the new salt for hypodermic injection and every other use where great solubility is necessary. Its action and dose are similar to that of the older salts.

Salol, or Phenyl Salicylate, in constant use for several years, now finds its place in the new Pharmacopœia. It is a valuable intestinal disinfectant and its value depends entirely upon the fact that it is not acted upon by acids and therefore passes through the stomach unchanged. Upon reaching the alkaline secretions of the duodenum it is changed into salicylic acid and phenol and these exert their valuable antiseptic actions on the bowel. It is quite safe in 10 gr. doses three times a day, but the maximum British Pharmacopœia dose of 15 gr. if given four times a day might produce symptoms of poisoning. Recently it has been discovered by several observers that Salol is liable to form calculi or concretions in the stomach which may pass on down the bowel without change and which may even cause obstruction. This can be avoided if the drug be mixed with any inert or sparingly soluble powder before administration. It has been administered with benefit in all conditions where an intestinal antiseptic is indicated, and as the substances into which it splits are being eliminated by the kidney it acts as a powerful antiseptic upon the bladder and is less liable to irritate than boric acid.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE LANCET of May 14th contained a report of the first part of the twenty-first meeting of the Royal Commissioners. The latter part of the sitting was occupied by the evidence of Mr. Henry George Hills, who appeared on behalf of the Board of Works for the Wandsworth district.

Mr. H. G. HILLS, in the course of his evidence, stated that there was occasionally a deficiency of pressure in the standpipes used for road watering in some parts of the district. This deficiency was most marked at Putney, near Wimbledon Common. The price charged for the water used was considered to be excessive and application for relief was made under the Waterworks Clauses Act. The result was the reduction in the price charged from 9d. to 8½d. per thousand gallons. The deficiency of pressure existed every summer. The board which he represented had taken no legal steps to have the evil remedied. They had written to the Local Government Board but had not complained to the London County Council.

The CHAIRMAN pointed out that powers existed by which the company which supplied the district with water could have been compelled to supply it at a sufficient pressure and in case of default a large money penalty could be exacted. The Board seemed not to have exercised their statutory power.

The views of the Board with regard to the future management of the water supply are given in the following statement:—

1. This Board has always been, and is now, in favour of a water trust being formed for the purpose of purchasing the metropolitan water companies' undertakings and of supplying the metropolis (or the water area included in such companies' powers) with water.
2. This Board was one of the public bodies who promoted in the year 1891 the Bill intituled "A Bill to place the Water Supply of the Metropolis and the Adjoining Districts under the Control of a Public Authority and to make further Provision for such Supply." (Bill 178.)
3. This Board's views on the subject were embodied in a draft Bill prepared by the Executive Committee of the above-mentioned bodies, of which the representative of this Board was a member, but such draft Bill was not adopted as so prepared and the Bill introduced into the House of Commons, though based on the same principle, differed considerably in important details from the views of the Board.
4. In the opinion of this Board the purchase of the water companies' undertakings should be carried out by a board of arbitration containing representatives of the parties chiefly interested and the Board suggested, and is still of opinion, that such board of arbitration should be constituted as follows—viz., the President of the Local Government Board or his nominee, the Governor of the Bank of England or his nominee, 1 person appointed by the Conservators of the River Thames, 3 persons appointed by the water companies, 3 persons appointed by the metropolitan vestries and district boards and the sanitary authorities of the districts outside the metropolis; and that an instruction should be given to the board of arbitration that in settling the purchase of the water companies' undertakings the valuation should be based upon the value of the property to be purchased and not upon the value of the capital stock or shares of the companies.
5. This Board also suggested, and is still of opinion, that the water trust should consist of 30 members constituted as follows—viz., 6 to be elected by the London County Council, 2 to be elected by the Common Council of the City of London, 1 to be elected by the Conservators of the River Thames, 11 to be elected by the metropolitan vestries and district boards and the sanitary authorities of the districts outside the metropolis north of the Thames, and 10 to be elected by the metropolitan vestries and district boards and the sanitary authorities of the districts outside the metropolis south of the Thames.
6. The election of members of the board of arbitration and of the water trust, by the vestries and district boards and sanitary authorities, could be carried out in a manner similar to that provided by 18 & 19 Vict. c. 120. ss. 45, 46, and 47, relating to the election of members of the Metropolitan Board of Works for certain combined parishes and districts therein specified.

7. This Board is not in favour of the management of the water-supply being given to the London County Council, believing that the Council has sufficient work on its hands in carrying out the very extensive and increasing duties which already devolve upon it under the numerous Acts of Parliament relating to the government of the county of London. The control of the water-supply to so large a population and the carrying on of such an immense business as would be formed by the amalgamation of the eight water companies should, in the opinion of the Board, be under a board of management composed of persons who possess special knowledge and experience, and such board should be exclusively occupied in the management of the water-supply. Moreover, the Council does not represent the whole water area.

8. The Board believe that if such a trust as is above suggested were created the water-supply of London would be carried out at less cost than at present; that much waste of water would be avoided; and that many of the anomalies as to the charges for water and other matters which now exist would be abolished.

We print a table which was put in by Mr. Deacon to show concisely the chief facts which he had given in his evidence.

The twenty-second meeting of the Royal Commissioners was held on Monday, May 16th. The first part of the sitting was occupied by hearing the evidence of M. Gaston Cadoux, chief of the Bureau of the Prefecture of the Seine. At the latter part of the sitting Sir A. Binnie gave evidence with regard to the Staines Reservoir Scheme and his evidence was not concluded at the end of the sitting.

IN EXPLANATION OF MR. DEACON'S EVIDENCE AND IN ANSWER TO SIR GEORGE BRUCE'S AND MR. MELLOR'S QUESTIONS THE FOLLOWING FIGURES ARE GIVEN.

—	Average daily supply to London during the year.	Number of consecutive days during which any water would be supplied from the reservoirs.	Average daily supply to London from river and reservoirs during the periods in Col. 2.	Reservoirs in use.				Reservoirs in reserve for cleaning, &c.		Total constructional capacity of reservoirs.	Number of days' storage of total draught upon the constructional capacity.	Cost.	
				Available contents required for storage of water for filtration and supply to London during dry periods and floods.	Constructional capacity allowing for evaporation and bottom impurity.	Number.	Constructional capacity of each.	Number.	Constructional capacity of each.			At £350 per 1,000,000 gallons stored, being estimate under Staines Scheme, 1896 and 1898 (including power). See Q. 8348, present Commission.	Mr. Deacon's estimate (including pumping power).
—	1	2	3	4	5	6	7	8	9	10	11	12	13
	Million gallons.		Million gallons.	Million gallons.	Million gallons.		Million gallons.		Million gallons.	Million gallons.		£	£
Staines Reservoirs Acts, 1896 and 1898 (G. J., W. M., and N. R. Companies).	35·0	—	35·0 (except in case of emergency)	—	3,284	—	—	—	—	3,284	91·0 (of 35 millions only)	1,250,000	—
Royal Commission, Appendix C. 67, page 482.	174·5	97	*184·0*	*5,116*	*6,000*	*3*	*2000*	Nil.	Nil.	*6,000*	34·4	2,280,000	—
Baker and Deacon's Report, page 10.	200·0	114	211·2	6,282	8,000	4	2000	1	2000	10,000	50·0	3,800,000	3,456,[illegible]
Royal Commission, Appendix C. 67, page 482.	222·1	119	*235·0*	*8,609*	*10,000*	*5*	*2000*	Nil.	Nil.	*10,000*	45·0	3,800,000	—
Ditto, ditto.	288·7	165	*300·0*	*17,526*	*18,000*	*9*	*2000*	Nil.	Nil.	*18,000*	62·3	6,840,000	—
Baker and Deacon's Report, page 10.	300·0 *185·5	167 —	311·8 —	19,726 4,000	24,000 6,000	12 3	2000 2000	2 1	2000 2000	28,000 8,000	93·0 43·1	10,640,000 3,040,000	8,[illegible] 2,[illegible]
Deacon's Evidence, May 2nd, 1898, Royal Commission.	†114·5	—	—	15,726	18,000	9	2000	1	2000	20,000	175·0	7,600,000	5,[illegible]

* First portion of the 300 millions in Col. 1. † Last portion of the 300 millions in Col. 1.

NOTE.—The figures printed in italics in Cols. 3, 4, 5, 6, 7, and 10 are extracted from the statement made on behalf of the whole of the water companies to the Royal Commission in 1893. (See Evidence, Questions 11,333 to 11,335, p. 430), and referred to in the Report of the Commission. The figures were stated to have been calculated on the conditions of flow of the Thames in 1887. (See Evidence, Question 11,261, p. 248.) The figures on the same lines in the remaining columns are calculated from the figures printed in italics and from the daily flow of the Thames at Teddington. The first line of plain figures is based upon the Promoters' scheme under the Acts of 1896 and 1898. The results in this case are not strictly comparable with those for the higher quantities in Col. 1 because the 35 million gallons a day, Col. 1, Line 1, is not the whole of the water being drawn from the Thames, whereas the lower figures in Col. 1 do represent the whole of such water.

NOTE.—In the course of Mr. Deacon's cross-examination at the twenty-first sitting of the Royal Commissioners he stated that the following items of necessary expenditure were not included in his estimate as given above: (1) Parliamentary and legal expenses in carrying out the Welsh scheme; (2) new mains to connect the London reservoirs for Welsh water with the existing reservoirs of the metropolitan water companies; and (3) the salary or fees of the chief engineer employed to supervise the work.

PLAGUE AND SANITATION IN BOMBAY.

WE have received this communication from a well-informed correspondent:—The rapid diminution of mortality from plague which has continued since the hot season set in is attributed by many to the habit of the poorer classes of sleeping out of doors at this time of the year instead of crowding into unventilated rooms, as is the practice in the cool season, where they sleep nearly naked and packed as close as they can lie. In the face of the recent recrudescence in Karachi and the outbreak at Calcutta this hypothesis is untenable. Research must be pursued still further to arrive at the truth. In the breathing time that the reduced mortality affords the schemes for the amelioration of Bombay continue to receive attention. Their great object is to extend the town and reduce the congestion of population which has hitherto stood principally in the way of good sanitary administration. Openings and streets are to be made in the overbuilt parts of the town, reclamations are to increase the habitable area, and improvements in house construction will offer superior domestic conditions to the poorer classes. All this is in the future. In the meantime all the vices of building construction appear to go on unchecked. A handsome block of lofty buildings in Italian style has just been completed in one of the best parts of Bombay. It measures 141 ft. by 55 ft. in plan. It is divided into three rectangular blocks by two gullies 3 ft. wide and about one-third of the windows give upon these gullies into which sullage water will be discharged and refuse will be thrown by domestic servants. Within, each floor has the fewest possible number of partitions; wooden partitions are usually added to accommodate tenants as they arrive. In such a building uniform ventilation is impossible. The mean temperature of Bombay is nearly 80° F., periods of calm are very frequent, and with the present day temperature in the shade ranging about 90° the damp air, unless

agitated with punkahs, becomes most oppressive. In the block of houses above referred to it would be very difficult to isolate a case of contagious disease; if a case occurred it would probably be concealed until the building was to some degree infected. If such disorders in building are tolerated in the best parts of Bombay it is not surprising that they should continue in the worst.

At the present time about 10 per cent. of the houses of Bombay are empty, but this does not in the least affect overcrowding. Recently it was found that the *halalcores* or nightsoilmen of the Health Department had taken in a number of friends and relations to lodge in the houses provided for them by the Municipality, causing overcrowding. An attempt was made by the Health Department to dislodge them, which was promptly followed by threats of a strike among the *halalcores*. The lodgers have not yet been turned out. If this could occur in the Health Department it gives some idea of the difficulty which may be expected to attend any attempt to teach rational habits to people who consider any rent at all to be an infliction that must be reduced by every possible means.

Since the riots the labouring class in Bombay is more truculent than before and less disposed to conform to sanitary regulations. House proprietors have here a freedom from responsibility which accounts for much of the disorder and dirt in the town, but no steps have yet been taken to increase their responsibility. Their combined influence on the municipality is chiefly devoted to protecting their private interests. The people generally will, if left to their own inclinations, return to exactly the same mode of life that they followed previously to the outbreak of plague and having enjoyed an amount of liberty—not to say license—in matters insanitary for many years that would not be tolerated out of India by any good Government they are just in the condition to meet domestic legislation in the worst spirit. We have now to find out in what way the sanitary state of Bombay may be improved among people who, although they are familiar with many of the features of western civilisation, are bitterly opposed to those forms of control which experience has shown to be absolutely necessary for the safety of a large, over-populated tropical city. Just now the fugitives from Calcutta are carrying plague infection to the remotest part of Bengal and during the past week the news arrived from Garshaukar that the people had been burying plague victims within their houses to escape the hated segregation rules.

Bombay, May 6th.

THE BATTLE OF THE CLUBS.[1]

THE COVENTRY PROVIDENT DISPENSARY.

THE annual meeting of those interested in this dispensary was held on April 26th. The secretary read the report and said that they had had a successful year in every way. A legacy of £30 had been received from the estate of a late member. The receipts were £3177 0*s.* 7*d.* and the expenditure was made up of the following items: paid to medical staff, £1872 9*s.* 8*d.*; to honorary fund, £1274 13*s.* 2*d.* The secretary then reminded the members that a memorial had been addressed to the committee last year by the medical staff asking for some alterations in the rules. The committee had carefully considered these demands and at the present meeting some alterations would be proposed. If our readers will refer to THE LANCET of Sept 18th, 1897, they will find these demands set forth in the article on the Battle of the Clubs. Shortly, they were these: (1) a wage limit; (2) the cancelling of the rule requiring the appointment of a new medical officer when the aggregate salaries of the staff should equal an average of £350 respectively; (3) all the members of the staff to sit on the committee instead of only two; and (4) children's subscriptions to be raised. These were all refused except the last. At the meeting upon the proceedings of which we are now commenting alterations were proposed in Rules 1, 13, 22, 30, and 35. In Rule 1 it was proposed to substitute for the word "members" the words "working men." On being asked to define "working men" the chairman said they would give the words a very wide application. No wage limit would be adopted and they had only suggested the alteration because the committee thought it would please the Medical Council. They did not want to restrict the membership in any way. The alteration was adopted. Rule 13, which is the one dealing with the appointment of another medical officer, being number (2) of the demands of the medical staff, was then discussed and the sum of £350 was expunged and £400 substituted. Rule 22, concerning the payments for children, came next. It was altered in the following way: that whereas up to now the rule had been that in a family of more than three children 2*d.* a week had been considered enough for all under twelve years of age, families of children should now pay 1*d.* per week for the first and ½*d.* per week for any others if under twelve. These concessions are something, but we do not think that a provident dispensary where it is not wished to restrict the membership in any way is to be commended. Also, we should like to know of what the items of the "honorary fund" consist. According to the secretary this fund is the one from which all payments other than the salaries of the medical men are made, and it seems to us that as the total receipts are £3177 odd, and that the medical men only receive £1872 odd, and also that members presumably only join the dispensary to get medical advice—i.e., that the medical men are the providers of the sole benefit—therefore the medical men ought to be paid a much larger proportion of the profits; in other words, they are sweated.

We have been enabled to inspect a copy of the memorial addressed by the medical staff to the committee of the dispensary and from this document it is quite obvious that the six medical men who compose the staff are fully aware of the invidious position they occupy. The memorial says: "You will readily understand that we ..... who hold diplomas and degrees in the various colleges and universities of England, Scotland and Ireland, cannot afford to isolate ourselves from our profession and allow ourselves to be pointed at as men who are guilty of unprofessional conduct in holding appointments in an institution which is founded on lines condemned by the heads of our profession. It is this situation which has brought us before you to ask you to give your serious consideration to our requests ..... in the hope that we may be able to work harmoniously with you in the conduct of this institution in the future and with the approval of our profession." The tenour of the answer returned by the dispensary committee can be read above and we can only advise the gentlemen composing the dispensary staff that the sooner they accede to the invitation of the Coventry Public Medical Service and resign their present positions the better it will be for every one concerned.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

We have received the May number of the *Magazine* published by this society containing a letter from the Incorporated Medical Practitioners' Association to the society and an answer from the secretary of the society with regard to the question of imposing a wage limit. The secretary denies the need for a wage limit because no one can join the society for medical aid alone but must also subscribe for funeral and sick pay; also because there are no "club doctors," but any medical man may attend a member of the society at his own pleasure if he is willing to accept the scale of fees drawn up by the society. This scale includes attendance, medicine, and certificates. If the medical man and the patient like to come to an arrangement between themselves on another scale they are quite at liberty to do so, but the society provides a means for medical attendance at small rates which we must allow are better than the usual club rates. Although we cannot approve of any society taking upon itself to fix the emoluments of medical men, if medical men like to agree to the society's conditions there is no more to be said.

Dr. Alfred Cox, the secretary of the Gateshead Medical Association, has forwarded us a letter explanatory of the position taken up by that association with regard to the National Deposit Friendly Society. The reasons for the stand made by the Gateshead practitioners will appear in the National Deposit Friendly Society's *Magazine* for June. We are glad to see that the Gateshead practitioners are thoroughly united and earnestly hope that the practitioners of other centres where the club question rages will follow their example.

[1] A reprint of the previous articles on the above subject has been published in book form entitled, "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1*s.*

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Coventry Urban District.—The water-supply of Coventry has been matter for the special consideration of Dr. Hugh Snell during the past year, and he reports that the water from the deep wells which supply almost the whole of the city has been shown by chemical analysis to have been of exceptional purity; it is, however, very hard. He thinks, too, that from the view-point of risk of pollution it would have been preferable had the Whitley source been situated on the higher side of the city. The water from what is known as the Barley Brook, a small source of supply only, is apparently open to suspicion and its use has been suspended pending a thorough examination of its opportunities of pollution. The growth of certain algæ in the Coventry water has given rise to trouble and objection from time to time. The growth in question takes place in one reservoir only and Dr. Snell is certainly giving sound advice when he recommends that the reservoir in which it occurs should be covered over to exclude the light. The population of Coventry was enumerated by a special census taken in March, 1897, and was found to be 60,991. During the last six years the remarkable prosperity in the trades of the district has resulted in an increase of population by some 8000, and this increase has naturally led to overcrowding and a need for additional accommodation. The isolation hospital of the district is about to be enlarged and a separate small-pox hospital is being erected.

Cardiff Port District.—The value of our port sanitary organisation received apt illustration at Cardiff during 1897. A vessel arrived in the Penarth Dock from Valencia, and on the sanitary inspector boarding her he found one of the crew suffering from a well-marked attack of small-pox, and he forthwith had the case removed to the small-pox hospital. In commending the action of the inspector, Dr. Walford observes that had it not been for the officer's promptitude Penarth might have suffered from an outbreak of variola. This is the more likely inasmuch as the master of the vessel, instead of bringing up outside the harbour, according to the regulations in force, came direct into dock. We are glad to see that he was summoned and convicted. Another vessel from Valencia brought two cases of small-pox, and by the removal of the patients and the revaccination of the remainder of the crew further cases were probably prevented. Large quantities of frozen meat are imported annually into Cardiff and the inspector of nuisances of the urban sanitary authority is informed by the port sanitary inspector of the destination of the cargo, by which means the meat is kept under careful supervision.

The Vital Statistics of the Leeward Islands, St. Kitts and Nevis. — Although these islands are not, perhaps, very familiar to some of our readers their statistics (especially at the present time) are not without interest. St. Kitts has an estimated population of 32,000, Nevis of 13,700, the birth-rate of the former for 1897 being as much as 42 and of the latter 46 per 1000; the percentage of illegitimate births to total births was in St. Kitts 61·32 and in Nevis 53·84. The still-births amounted in the two islands to 4·05 per cent. among the legitimate and 7·20 among the illegitimate births, the chief cause of these still-births being, it appears, the prevalence of syphilis due to the polyandrous and polygamous habits of the black people. The low price of sugar, too, renders the earnings of the men but small and they are thus unable to support their wives or concubines for the necessary period of rest prior to their confinement. As regards vaccination Dr. W. J. Branch, the analyser of the vital statistics of the islands, reports that during 1897 as many as 1445 successful vaccinations were performed; in St. Kitts debtors are authorised to refuse payment to unvaccinated creditors. The general death-rate of St. Kitts for 1897 was 37·3 and that of Nevis 46·1 per 1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6193 births and 3533 deaths were registered during the week ending May 21st. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 18·4 to 16·6 per 1000, further fell last week to 16·4. In London the rate was 15·7 per 1000, while it averaged 16·9 in the thirty-two provincial towns. The lowest rates in these towns were 8·8 in Cardiff, 9·2 in Croydon, 9·8 in West Ham, and 10·7 in Brighton; the highest rates were 22·6 in Liverpool, 23·6 in Newcastle-upon-Tyne, 23·7 in Wolverhampton, and 24·3 in Sutherland. The 3533 deaths included 380 which were referred to the principal zymotic diseases, against 408 and 383 in the two preceding weeks; of these, 126 resulted from measles, 109 from whooping-cough, 50 from diphtheria, 42 from diarrhœa, 38 from scarlet fever, and 15 from "fever" (principally enteric). No death from any of these diseases was recorded last week in Brighton, Portsmouth, or Blackburn; in the other towns they caused the lowest death-rates in Burnley, Huddersfield, and Halifax; and the highest rates in Wolverhampton, Liverpool, Bolton, and Salford. The greatest mortality from measles occurred in London, Cardiff, and Derby; and from whooping-cough in Plymouth, Salford, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria included 31 in London, 3 in Birmingham, and 3 in Leeds. No fatal case of small-pox was registered during the week under notice in any of the thirty-three large towns, and no small-pox patients were under treatment in the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last was 2241, against 2302, 2271, and 2247 at the end of the three preceding weeks; 223 new cases were admitted during the week, against 205, 209 and 229 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 226 and 232 in the two preceding weeks, declined again last week to 177, and were 134 below the corrected average. The causes of 40, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leeds, Bradford, Hull, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the six preceding weeks from 24·2 to 19·8 per 1000, rose again to 19·9 during the week ending May 21st, and exceeded by 3·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 10·9 in Leith to 21·8 in Glasgow and 22·0 in Paisley. The 599 deaths in these towns included 31 which were referred to whooping-cough, 27 to measles, 22 to diarrhœa, 14 to scarlet fever, 6 to diphtheria and 4 to "fever." In all, 104 deaths resulted from these principal zymotic diseases, against 90 and 83 in the two preceding weeks. These 104 deaths were equal to an annual rate of 3·4 per 1000, which was 1·6 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 34 to 26 in the three preceding weeks, rose again to 31 last week, and included 22 in Glasgow. The deaths referred to measles, which had been 27 and 32 in the two preceding weeks, declined to 27 last week, of which 15 occurred in Glasgow, 5 in Paisley, 4 in Dundee, and 3 in Edinburgh. The 14 fatal cases of scarlet fever considerably exceeded the number recorded in any recent week, and included 4 in Edinburgh, 4 in Dundee, and 3 in Glasgow. The deaths from diphtheria, which had been 1 and 3 in the two preceding weeks, further rose to 6 last week, of which 3 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 129 and 109 in the two preceding weeks, rose again to 119 last week, but were 16 below the number in the corresponding period of last year. The causes of 34, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 25·4 to 22·5 per 1000, rose again to

24·0 during the week ending May 21st. During the past four weeks the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 16·4 in London and 18·1 in Edinburgh. The 161 deaths registered in Dublin during the week under notice showed an increase of 10 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 9 and 7 in the two preceding weeks; of these, 4 resulted from "fever," 3 from diarrhœa, 2 from diphtheria, 1 from whooping-cough, and not one either from small-pox, measles, or scarlet fever. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 2·2 in London and 2·1 in Edinburgh. The deaths referred to different forms of "fever," which had been 3 and 2 in the two preceding weeks, rose again to 4 last week. The 2 fatal cases of diphtheria exceeded the number recorded in any recent week, while the mortality from whooping-cough showed a decline. The 161 deaths in Dublin last week included 21 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants were below those recorded in any recent week, while those of elderly persons showed a further increase. 10 inquest cases and 5 deaths from violence were registered; and 58, or more than a third, of the deaths occurred in public institutions. The causes of 14, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN JAMESON joins at Woolwich for duty and Surgeon-Lieutenants Archer and Gaine are held in readiness for service in Egypt. Surgeon-Major Battersby is placed under orders for service in Egypt and Surgeon-Major Barefoot has assumed Medical Charge of the Station Hospital, Western Heights, Dover. Surgeon-Major Geoghegan and Surgeon-Captain Clapham have been sent from Cairo to the front for duty in the field hospital at Luxor.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Brigade-Surgeon-Lieutenant-Colonel A. M. Branfoot (Madras) are replaced at the disposal of the Military Department. The services of Surgeon-Captain T. Jackson (Bombay) are placed temporarily at the disposal of the Government of Bombay.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain T. Philip, M.B. Aberd., to be Surgeon-Major.

THE MILITIA MEDICAL STAFF CORPS.

The Militia Medical Staff Corps will train this year during July under the command of Surgeon-Lieutenant-Colonel W. Collingridge, M.D. Cantab. The Hants Company will be attached to the Royal Victoria Hospital, Netley; the Surrey Company to the Cambridge Hospital, Aldershot; and the Middlesex Company to the Herbert Hospital, Woolwich. The Eastern Counties, Kent, and Berkshire Companies will be encamped at Aldershot.

VOLUNTEER CORPS.

Rifle: 1st Sutherland (Sutherland Highlanders): John Kay Tomory to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Manchester Regiment: Frederic Hibbert Westmacott to be Surgeon-Lieutenant. 1st Surrey (South London): Surgeon-Captain C. S. Smith to be Surgeon-Major. 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: Arthur Russell Rendle to be Surgeon-Lieutenant. 1st Volunteer Battalion the Suffolk Regiment: Francis Ward to be Surgeon-Lieutenant. 1st Volunteer Battalion the Northamptonshire Regiment: John Allison to be Surgeon-Lieutenant.

MILITARY SERVICE IN NORTH-WESTERN ALGERIA.

According to an essay by Surgeon-Major P. A. Cassedebat, which obtained honourable mention at the Académie de Médecine and is published in Duplay's Archives for May, 1898, a visitor taking ship for the province of Oran at Port Vendres, Cette, or Marseilles will scarcely find any difference in his surroundings when he arrives at his destination. The sky of Algeria is not more blue than that of South Eastern France, while on either side of the Mediterranean the flora is equally varied and luxuriant. The cliffs, promontories, and bays likewise bear a general resemblance to each other and in both districts a similar style of architecture characterises the massively constructed public buildings and dwelling-houses. The voyager suddenly disembarking at Mers-el-Kebir or Nemours, with their primitive harbours, might readily fancy himself at one or other of the smaller anchorages between Toulon and the Spanish frontier. With regard to climate the parallel is also for the most part maintainable. It is true that on the Oranian littoral the winters are somewhat milder and that the summers are not only longer but considerably hotter, still owing to the night breezes which almost invariably prevail throughout the latter season, rendering refreshing sleep practicable, it is a question whether life is not more enjoyable in this part of Africa than in Southern France. At Tlemcen, an ancient Arab town situated close to the borders of Morocco at an elevation of 2750 feet above sea level and about forty miles from the coast, the climate is said to be not unlike that of Central France. Every winter snow falls in abundance and remains for a long time unmelted. The æstival heat is much less intense than in the lower regions near the sea; cascades of limpid water are to be seen on all sides, the streams which they feed being utilised for irrigation as in Touraine; and throughout the year the fields present a mass of luxuriant verdure most refreshing to gaze upon. And yet in spite of all these natural advantages; in spite of constant and judicious changes of station from coast to upland, and *vice versâ;* in spite of good food, excellent barracks, admirable arrangements for washing and bathing, perfect scavenging and ventilation; and in spite of the fact that the men are specially selected for their good physique, "there is no European army so forcibly affected by death" as the 2nd Regiment of Zouaves. During the fourteen years from 1883 to 1896 the aggregate strength of the corps was 51,972 men and the deaths amounted to 438. According to Surgeon-Major Cassedebat the average annual mortality came to 8·57 per 1000, whereas in the Home Army the deaths fell from 8·15 per 1000 in 1883 to 6·19 per 1000 in 1893. In France the troops benefited by improved sanitation, but notwithstanding similar measures in Oran the Zouave death-rate has not diminished. Surgeon-Major Cassedebat ascribes the unhealthiness of his regiment to four chief causes: 1. Military duty in a hot dusty climate together with aggregation of the soldiers in barrack-rooms where undisturbed rest is difficult if not impossible. 2. A highly insalubrious vicinity, the manners and customs of the Spanish and native inhabitants, which the author vividly describes, being filthy beyond measure. The atmosphere is not only saturated with the vilest odours, but also laden with noxious germs imperceptible to the unaided sense and therefore trebly dangerous. 3. Exposure to sudden changes of temperature which the soldier cannot always guard against by an appropriate alteration of clothing. 4. Malaria. When first the French occupied Oran, a principal station was at Marnia the hottest spot in the whole province, standing in a damp basin and surrounded by marshy ground. So unhealthy was the place that the garrison had to be relieved every second month. Cultivation and drainage have vastly improved matters, but still the poison exacts victims. Out of the 438 deaths in Surgeon-Major Cassedebat's list 21 were due to paludism.

THE CAMPAIGN IN THE SOUDAN.

IT is fairly certain that if any expedition to Khartoum is to be undertaken it should start in July or August and that the business should be done thoroughly. Not only must the defeat of the Khalifa's forces be secured but precautions will also have to be taken against the retreat and escape of any large portion of them in order to prevent the Dervishes from renewing their opposition and fighting at later dates. The Khalifa's army will probably make a stout defence of their stronghold at Khartoum and a larger contingent of British troops will have to be added to the Anglo-Egyptian expeditionary force in the Soudan than is with it at present. The interval between the date of the advance, when the Nile will be available for transport purposes, and the present time will be occupied in making the necessary arrangements. The provision for sick transport and for the hospital and medical requirements of the force will, of course, have to be finally settled before the advance takes place. With the experience which the medical service and its officers have already had there is but little doubt that these provisions

will be very successfully carried out. There is some prevalence of typhoid fever and dysentery among the troops in the Soudan at the present time.

The following extract from a private letter, dated Cairo, May 12th, will be of interest:—"Two convoys of sick from the front have already arrived and the hospital ship *Mena* is expected here to-day with 12 officers and 120 men. ..... The rest of the wounded Egyptian officers and some British invalids leave for Netley by the *Anubis* from Alexandria on the 14th and should get home about the end of the month. From what we hear enteric fever is beginning to make itself felt up at the front, and considering the intense heat (140°) and the age of some of the men I fancy it will kill many more than the Dervishes will. Dysentery is also prevalent. The Royal Engineers have sent up a lot of the latest pattern filters but there was some hitch about their getting up. The ice machines have also been stopped. A great number of officers and men are coming down on leave and, considering there is no earthly chance of the Khalifa doing anything except 'sitting tight' in Omdurman, it would have been, I think, wiser to have brought down the weakly men of the British Brigade, which might easily have been done, instead of letting them bear the terrible heat and utter weariness of two months' inactive life under defective sanitary conditions. All the branches of the service excepting the Army Medical Staff are getting leave of absence till June 30th. The latter are so short-handed that there is little margin either for casualties or leave, and the men down here are working quite as hard as are those at the front—in fact, there is not a single man who could be sent up without letting some one else in for his work. Of course, this is a state of things that ought not to be and one that tells very hardly on the medical staff. I hear there are 16 more A.M.S. officers to come out, as it is pretty certain that two more brigades are to go up. I have just been told on what should be good authority that the Khalifa has 60,000 men in Omdurman and a number of Krupp guns."

THE BIRTHDAY, MASHONALAND, AND NORTH-WEST FRONTIER HONOURS.

The Queen has been graciously pleased to give orders for the following appointments:—To be Ordinary Member of the Second Class or Knight Commander of the Most Distinguished Order of St. Michael and St. George: Surgeon-Lieutenant Rogers, D S O., head of the Egyptian Sanitary Department. To be Ordinary Member of the Third Class or Companion of the Most Distinguished Order: Andrew Milroy Fleming, M.B. Edin., Medical Director of the British South Africa Company and Principal Medical Officer of the British South Africa Police, in recognition of services rendered by him in connexion with operations in Mashonaland last year. To be an Ordinary Member of the Military Division of the Third Class or Companion of the Most Honourable Order of the Bath: Surgeon-Major-General Robert Harvey, D.S.O. To be a Member of the Third Class or Companion of the Most Eminent Order of the Indian Empire: Brigade-Surgeon-Lieutenant-Colonel A. M. Branfoot. To be Ordinary Member of the Military Division of the Second Class, or Knight Commander of the Most Honourable Order of the Bath, in recognition of services during the recent operations on the North-West Frontier of India: Surgeon-Colonel George Thomson, C.B, Indian Medical Service. Also to be Ordinary Members of the Military Division of the Third Class, or Companions of the said Most Honourable Order—viz.: Surgeon-Colonel Edmond Townsend, Army Medical Staff, and Surgeon-Colonel George McBride Davis, D.S.O., Indian Medical Service. To be Companions of the Distinguished Service Order: Brigade-Surgeon-Lieutenant-Colonel Charles Henry Swayne, Army Medical Staff; Surgeon-Major Johnston Shearer, Indian Medical Service; Surgeon-Captain Thomas Herbert John Chapman Goodwin, Army Medical Staff; Surgeon-Captain John Fisher, Indian Medical Service; Surgeon-Captain William Selby, Indian Medical Service; and Surgeon-Lieutenant James Henry Hugo, Indian Medical Service. To be Surgeon-Lieutenant-Colonel: Surgeon-Major Hayward Reader Whitehead, A.M.S. To be Surgeon-Majors: Surgeon-Captain Charles Henry Burtchaell, M.B. Dub., A.M.S., and Surgeon-Captain John Joseph Gerrard, M.B. Dub. To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Henry Hamilton, M.D. R.U.I., I.M.S. To be Surgeon-Lieutenant-Colonel: Surgeon-Major Thomas Grainger, M.D. R.U.I., I.M.S.

THE SPANISH-AMERICAN WAR.

The hospital ship *Solace* is at Key West awaiting orders from the United States Government. The ship was some time ago ordered to be made ready for service, which was accordingly done, but no official notice has yet been received for her sailing. The *Solace* is stated to be well equipped with all needful appliances, surgical and otherwise, and to have an ample surgical staff. There is at the present moment no really reliable news about the war and what appears one day is contradicted or altered the next. This is attributable to the fact that little or no intelligence is obtainable from the United States Government and quite rightly so under the circumstances. The general belief, nevertheless, is that a big naval engagement cannot be delayed much longer, notwithstanding that the Spanish naval authorities will probably seek to avoid it. Admiral Cervera is alleged to be at Santiago, blockaded by the American fleet. The accounts that have appeared regarding the losses of the Spanish troops in Cuba during the past year are appalling if they are to be believed. In addition to a total of upwards of 32,000 men having died in the Spanish hospitals about 30,000 soldiers are alleged to have been invalided to Spain during the year. The diseases from which the troops in Cuba suffered were chiefly fevers (typhoid, malarial, and yellow fever), dysentery, and small-pox.

BRIGADE-SURGEON-LIEUTENANT-COLONEL FRANKLIN, I.M.S.

If what our Service contemporary the *Army and Navy Gazette* says be correct, this officer may be congratulated on his good fortune in having been appointed surgeon to the Viceroy of India. "For his personal services, of less than five years on the staff, he will have obtained a C.I.E., Q.H.S., a special promotion to surgeon-colonel's rank (seconded, to allow of his remaining Surgeon to His Excellency the Viceroy), and there are rumours of a further rainfall in the shape of a good service pension, also the crowning triumph later on of a K.C.I.E., and the coveted post of Inspector-General of Civil Hospitals in the Punjab." Brigade-Surgeon-Lieutenant-Colonel Franklin has acted as honorary secretary to the Countess of Dufferin's Fund Association. We do not know, of course, whether our contemporary's prophecy regarding this officer's future is founded upon knowledge, but we wonder whether amid the many good medical officers who have done hard and excellent service of late in India there is no other name to be found with at least equal claims to consideration?

ADMIRAL DEWEY.

A correspondent of the *Birmingham Daily Post* calls attention to the fact that Admiral Dewey, of the United States Navy, whose recent naval exploit at Manila involving the destruction of the Spanish fleet at that station is in everyone's recollection, was a patient in 1883 in the Royal Naval Hospital at Malta when Inspector-General of Hospitals Sir J. N. Dick, R.N. (late Director-General of the Naval Medical Department), was at the head of that institution. Admiral Dewey (who was then in command of the United States corvette *Juniata*) was suffering from abscess of the liver from which he made a successful recovery after surgical operation. The correspondent alludes to the pluck and fortitude exhibited by the patient during his severe illness on that occasion.

THE ROYAL MILITARY TOURNAMENT.

In consequence of the funeral of Mr. Gladstone to-day (Saturday) there will be no performance at the Agricultural Hall. The season will, however, be extended till June 4th and tickets issued for Saturday, May 28th, will be available on the 4th prox., when the prizes will be distributed by H.R.H. the Princess Christian.

DEATHS IN THE SERVICES.

Surgeon Opie Smith, late of the 7th Dragoon Guards (of Hereford), at Clifton, on May 13th, aged seventy years.

RHONDDA DISTRICT COUNCIL.—At a meeting of the Rhondda District Council held on May 20th a letter was read from a Newport firm of solicitors claiming £550 damages from the council for having allowed their medical officer of health to visit the slaughter-house of a client at Porth and seize a quantity of meat. The prosecution fell through, hence the claim. The clerk said the claim was an absurd one.

Correspondence.

"Audi alteram partem."

"THE DIPLOMA OF THE APOTHECARIES' SOCIETY."

To the Editors of THE LANCET.

SIRS,—The Medical Act of 1886 did not create an inferior order of practitioners, but, on the contrary, compelled all those who applied to be placed on the Medical Register to produce satisfactory evidence of having qualified for the efficient practice of medicine, surgery, and midwifery, and thereby every registered medical practitioner is on an equality in the eye of the law and logically must be a Physician and Surgeon. The ordinary and common-sense definition of a Physician and Surgeon is that person who is qualified by law to prescribe treatment for injuries and diseases, and the Medical Council never having placed any restrictions over the heads of those who hold the diploma of L.S.A., passed under the Act of 1886, from carrying this out to the fullest extent it follows that we are legally and morally qualified to practise our profession as much as anybody with the M.D. Lond. and F.R.C.S. Eng., and this right we cannot be deprived of until the Medical Council repeals its own Acts. We have been examined by distinguished professors of the various London medical schools and hospitals and have been found efficient to practise the three branches of the profession, and if the Medical Council deny us the right of calling ourselves Physicians and Surgeons because through an oversight on their part they forgot to grant us the use of additional letters with the L.S.A. in order to signify that we are fully qualified medical practitioners I demand that they rectify their mistake and allow us to be designated by the letters R.P., R.S., signifying Registered Physician and Registered Surgeon, these letters being, of course, an addition to L.S.A., as no L.S.A. worth his salt would care to part with such a time-honoured and respectable title as L.S.A. London. Mr. Percy Pope scolds the general practitioners for not electing one of themselves as Direct Representative on the Council and he evidently thinks that the one who was elected—viz., Mr. Victor Horsley—has little sympathy for the general practitioner and none whatever for the L.S.A. portion of that community. If this is correct I am sorry that I voted for him. I don't think it probable that a man gifted with such brilliant attainments and liberality of mind as Mr. Victor Horsley intends to single out the holders of the L.S.A. for special venom when he professes to pose as the staunch advocate of the registered medical practitioner as against the unqualified. Everybody on the British Medical Register owes a debt of gratitude to the Society of Apothecaries for the good work accomplished in proportion to its financial power in prosecuting unqualified and illegitimate medical practice, and not so long ago it had the distinction of being the only corporation who defended the dignity and material welfare of the medical profession; and now, forsooth, in return for these creditable services the Medical Council is apparently going to attempt to pour contempt on the holders of its Licence. Why did the Medical Council allure us to become registered and pay 5 guineas for it if they intended afterwards to bully us for calling ourselves what we practically are? It is a pity the Council does not devote its superfluous funds to the suppression of the prescribing chemist, the brazen quack, and the procurer of abortion, who are rampant in our midst, instead of prosecuting Mr. Hunter, a registered medical man. Surely there are enough external foes to combat without destroying one another. I thank Mr. Percy Pope—and all the more heartily as he is not a L.S.A.—for his fair and sympathetic expressions in his letter in THE LANCET of May 7th. I hope Mr. Carter, the representative of the Apothecaries' Society on the Medical Council, will defend the Licentiates from the unjust attack made on them, and I trust he will vigorously urge the necessity of granting us an additional title to L.S.A., describing us by letters as Physician and Surgeon, which we already are for all practical purposes, and then perhaps we shall be free from further vexatious interference of the Medical Council.

I am, Sirs, yours faithfully,
ARTHUR G. BATEMAN LOBY, L.S.A. Lond. (1889).
Fairhoe, Chudleigh, S. Devon.

To the Editors of THE LANCET.

SIRS,—I should really be most obliged if your correspondent, "M.R.C.S., L.R.C.P. Edin.," would explain his letter. I had always imagined that a L.R.C.P. was really and truly a Physician and I cannot for the life of me see why "superior persons" should call him a snob for so-describing himself. After all I suppose that the only reason why one puts a brass plate on one's front-door is that the public may know that a duly qualified practitioner is to be found behind it. The plate certainly ought to describe its owner as accurately as possible. It seems to me that the very great majority of general practitioners have no right (other than one merely academic) to describe themselves as "Surgeons." How many have ever performed one single major operation? The great bulk of our work is medical, obstetric, and gynæcological, and "Physician" seems to me to describe us far more accurately than "Surgeon."

I am, Sirs, yours faithfully,
May 23rd, 1898. G.P. AND PHYSICIAN.

"THE VACCINATION BILL."

To the Editors of THE LANCET.

SIRS,—Your able leading article in THE LANCET of May 21st on the Bill now before Parliament suggests thoughts as to certain ready remedies which might just now be seasonably applied to the case of the contumacious cranks who pose before the public as anti-vaccinationists, without bringing to bear upon them that sort of pressure of the law which has hitherto done little more than convert them into a small army of martyrs. The case for vaccination and revaccination may be considered closed. No right-minded person can possibly any longer doubt the security which they give to all who submit to the simple operation. The evidence for the practice has been accumulating for a century, and the arguments for it become more and more cogent as time goes on. To restate them would consume your valuable space as well as the advocate's time. The question, it seems to me, is "how and by what measures can small-pox be stamped out." Not by fines and imprisonment, not by distraints. These have hitherto done harm to the cause. It is confidently predicted that the muzzle will in no long time completely stamp out rabies in the dog and society will be thereby safeguarded against a horrible malady. There should be no more difficulty in stamping out small-pox than rabies with a variation in the application of the muzzle. To state the case briefly—thus an unvaccinated person is in constant danger of contracting small-pox. To that extent he is a standing menace to the well-being of the people with whom he may come in contact. Does it not follow, then, that the freedom of such a person should be in some way restricted? The Mosaic law would have cast such an one without the camp as unclean. It becomes thus a question whether the right of public assembly should not be denied him—whether, in fact, his movements should not be muzzled.

The education law provides that every child in the land shall be educated; but an unvaccinated child *ipso facto* being deprived of the right of assembly would be thrown back into the clutches of the law which regulates the education of our children, and would be dealt with as a misdemeanant *quâ* the education law. In the second place, the Bill now before the House provides that when the child leaves school it "may" be revaccinated. But it seems that there should be no "may" about it, for revaccination should be made the passport and the very condition of its entry on public employment. Thirdly, it should be *penal* for an employer to engage unvaccinated labour. Four well-defined cicatrices in primary vaccination should be considered sufficient testimony for the child, but in adolescence the revaccinated should be armed with a certificate from a properly qualified man as a guarantee that he may mix with his fellows without endangering the safety of the community. The vaccination "lines" of a child might thus come to be regarded somewhat as in later life

this or her "marriage lines" are considered. Thus beyond dogging through life the footsteps of the unvaccinated with sundry disabilities, no penalties or pains would be necessary.

I am, Sirs, yours faithfully.

South Godstone, Surrey, May 23rd, 1898. F. W. WRIGHT.

"THE MEDICO-LEGAL ASPECT OF CREMATION."

To the Editors of THE LANCET.

SIRS,—Engrossing matters at a distance from home have prevented my seeing the leading article on the above subject in THE LANCET of May 14th till to-day, when it is, of course, too late to offer you any observations on it of a nature to be available for your issue of May 21st. Nor, to say the truth, is it at the present moment very clear to me how, without a greater expenditure of time and energy than have been left to me, I can hope to add anything very material to the three letters which within the last few months I have addressed to the editor of the *Times*. At the same time there is something which I cannot—or rather which I will not—say to the editor of the *Times* which I can and which I will, if you will only give me room for it, say to you. In the whole course of a long life I have held and doubtless shall continue to hold that a public newspaper is not the place in which to discuss matters of a purely professional and technical nature—matters of which neither the editor nor his readers can be competent judges, and whose influence therefore it is only possible to purchase by highly-coloured statements or by arguments which appeal rather to their prejudices than their judgment. For the moment I will say no more.

I am, Sirs, yours faithfully,

F. SEYMOUR HADEN.

Woodcote Manor, Alresford, May 18th, 1898.

BUBONIC PLAGUE AND CATTLE DISEASE.

To the Editors of THE LANCET.

SIRS,—In the following brief statement of facts I should like to call attention to some coincidences which seem to me to show that diseased meat is one of the factors in the dissemination and causation of plague. Previously to the epidemics of plague in Hong-Kong in 1894 and 1896 an outbreak of rinderpest occurred amongst the cattle at the Hong-Kong dairy farm. In like manner this year an outbreak of rinderpest occurred at the dairy farm, following an epidemic of foot-and-mouth disease, which prevailed in November and December last in all the dairy farms of the colony, native and European. In connexion with this see Brigade-Surgeon-Lieutenant-Colonel Weir's report on the epidemic of plague in Bombay, quoted in THE LANCET of Feb. 26th, page 602.

In 1896 an epidemic occurred amongst the pigs which arrived here from Pakhoi. Pork, it should be explained (sun-dried pork), is one of the staple foods of the Chinese. Dr. Wilson and myself examined several pigs that died from the epidemic and the symptoms were almost identical with those of rinderpest in cattle. We obtained a diplococcus from the spleen, mesenteric glands, and blood of these pigs almost identical with the pest bacillus in man. Similarly this year I have found a like bacillus in the nasal mucus, spleen, and mesenteric glands of cattle that were killed on account of rinderpest. Of course, I know that this theory at present is not proven sufficiently, but any facts that present themselves, like these I now adduce, appear to me to bear forcibly on the etiology of this prevalent disease. Next mail I will forward you specimens of the original bacillus obtained from the rinderpest carcasses and cultures to the third generation of this bacillus in agar bouillon.

There are many cases of rinderpest in Canton just now. At a dairy kept in the Shameen (the European settlement of Canton), where there are 32 head of cattle (Alderneys, Guernseys, and half-breeds), an outbreak of rinderpest has occurred within the last two weeks, the result being that up to the present time 13 animals have been attacked and 4 have died.—I am, Sirs, yours faithfully,

J. M. ATKINSON, M.B. Lond., M.R.C.S. Eng.,
Principal Civil Medical Officer and President of the Sanitary Board.

Hong-Kong, April 9th, 1898.

MEDICAL QUALIFICATIONS AND TITLES IN GERMANY.

(FROM OUR BERLIN CORRESPONDENT.)

IN THE LANCET of April 16th, p. 1069, there was an annotation to the effect that after the commencement of next winter session the German Universities would only confer the degree of M.D. on candidates who had already passed the State examination and thereby become legally qualified to practise medicine. As the laws on medical qualification and examination in Germany are quite different from those in England a few particulars on the subject may be of interest to the readers of THE LANCET. In 1867 the various laws and regulations concerning the practice of medicine which were in force in the different States of the then North German Confederation (Prussia, Saxony, &c.) were replaced by a uniform system applicable to the whole Confederation, the provisions of which were included in the *Gewerbe-Ordnung* (trade-law). In 1871, when the German Empire was founded, this law was extended also to the southern States (Bavaria, &c.) and is now an Imperial law for the whole of Germany. Since this time unqualified practice has not been illegal, anybody being at liberty to give medical advice; but in order that the public might be able to distinguish between practitioners who had received a medical education and those who had not the State instituted a system of examinations of its own, the successful candidates at which receive certificates of "approbation," as they are termed, and thereby become legally qualified medical practitioners. Candidates for this certificate must for their ordinary school education spend nine years in a German *gymnasium* and must pass the *Abiturienten-examen* in general science, after which they study medicine for four and a half years at a university. After the end of the curriculum, in the course of which there is a preliminary examination in anatomy, physiology, botany, &c.—the so-called *tentamen physicum*—the candidate may apply for "approbation," and is thereupon examined by the commissioners appointed by the Government. These commissioners, although they hold examinations in university towns, are not necessarily university professors, but may be any other medical men, such as hospital physicians and surgeons, Government medical officers, &c., whom the Government sees fit to appoint for the purpose. They are, in fact, Government officials and in their capacity of examiners they are quite independent of the universities. After the candidate has passed the State examination, a description of which would make the present article unduly long, he receives the certificate of "approbation" from that state of the empire to which the university belongs. This certificate is valid throughout the whole Empire and confers on its owner the title of *praktischer Arzt*, which he makes use of for his visiting-cards, for his door-plate, and when he signs a medical certificate. This title enables him to hold appointments, to enter the services, and to practise wherever he likes. A certificate of "approbation" may be revoked if it has been obtained by fraudulent means, but this is the only ground for withdrawing it, and a medical man retains it during his whole life even though he may be convicted of a crime and punished. There is no statutory limit of age for medical practice in Germany, there is no annual sum to be paid as a licence or tax, and the only formality which a man beginning practice has to attend to is that he must personally call on the medical officer of the district, show him his "approbation," and write his signature, which is then communicated to all the licensed chemists and to the police officials of the district. It is a penal offence for any unauthorised person to use the title of *praktischer Arzt* or any other title or description by which the public may be induced to believe that he is a duly qualified medical man. The courts of law have to decide in each individual case whether a description used by an unqualified person is one by which the public may be deceived, and the police are authorised to remove door-plates which are held to be infringements of the statute. It is, of course, very easy to secure the conviction of unqualified practitioners in cases of gross imposture, but many of these individuals are very ingenious in evading the law. It results thus from the above that unqualified practice is not in itself an offence, but only

unqualified practice under an assumed title. This is a matter of special interest for foreign medical men who would like to practise under their foreign qualification. If they do so they must understand that they are regarded as unqualified and that when their foreign title is similar to a German one they are liable to be punished. Foreigners desiring to become duly qualified in Germany have to pass all the examinations even if they have already studied medicine and taken diplomas at home. This subject was dealt with in THE LANCET of Sept. 5th, 1896, p. 666 (Students' Number). Exemption from the examination is only allowed by law in cases when the Government desires to appoint foreign medical men of scientific renown as university professors, hospital physicians, &c.; but this provision has come into force only in a few cases of professors of foreign nationality—Austrians, Swiss, Dutch, &c.—who obtained their qualifications by a special order of the Federal Council.

Altogether apart from and independent of the State examination the universities have preserved their old-established right of conferring on medical men the degree of M.D. (Doctor of Medicine), but this is a mere academic title and not a legal qualification to practise medicine. The examination for M.D. differs greatly in the various universities according to their respective statutes and by-laws. As a rule a four years' course of study, an oral examination, and a written thesis are required; at some universities a certain number of printed copies of the thesis must be provided at the expense of the candidate. After the examination has been passed a formal, old-fashioned "disputation" is held between the candidate and the "opponents," whom he may choose among his friends, and after the disputation the dean, in full academical costume, hands the diploma to the candidate. This examination is in several universities made so easy that it is little more than a formality. It is a common joke of German students to say that at some universities the degree may be taken while the train is waiting at the railway station. Graduation expenses also vary very much and the poorer students naturally prefer to take their degrees where there is least to pay, for there is no objection to studying at one university and graduating at another. Although the title of M.D. is not necessary for practice the great majority of medical men nevertheless take it and it is indispensable for those who desire to become *privat docenten* at a university. The degree, being quite independent of the State examination, could hitherto be taken either before or after the "approbation," but as was explained in THE LANCET of April 16th this state of things will now come to an end, for the degree will only be given to those who have previously passed the State examination. This reform originated in the fact that in a few instances candidates who had passed the university examination were rejected at the State examination and when they engaged in practice it was very difficult to make out a case for prosecution because they had legally taken their degree and avoided calling themselves *praktischer Arzt*. The public call every medical man a "doctor" even if he has only passed the State examination.

Although it is almost impossible for foreigners to pass the State examination every facility is afforded them for taking the degree of M.D. They are put at an advantage in comparison with Germans as they may begin to study at a university without the certificate of a German *gymnasium*. They are only bound to prove that they are qualified for medical study according to the laws of their respective countries. They can present themselves for the M.D. examination after a much shorter time of study than is required of Germans who intend to pass the State examination and the time spent at foreign universities is counted in a liberal manner. A great number of foreign medical men, especially Americans, take the German M.D. under this condition, a system which is not without drawbacks. For instance, Germans of deficient general education have gone to America and after becoming American citizens have returned to Germany for the purpose of taking the M.D. degree as foreigners and have then entered on practice in America as German medical men. As the public abroad know little about German qualifications this fact has undoubtedly lowered the credit of the German medical profession. The above described reform, however, will not refer to foreigners, as they will in future be entitled to take the degree without having previously passed the State examination. The whole question of practice and of qualification is a rather complicated one. It would certainly be the best plan to confer the title of Doctor *eo ipso* on every duly qualified man, as in Austria, but this reform is not yet in sight, as it would interfere with the ancient privileges of the universities.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Training of Feeble-minded Children.

THE best mode of educating and training feeble-minded children, of enabling them—generally, perhaps, with a little kindly help—to earn their own living, and of saving them from pauperism and crime, is a problem which has long been forcing itself on the attention of the Manchester School Board. So far the board has been collecting information only, but there is some hope of action being taken before long. Miss Dendy, a lady who was previously to the last election a member of the school board, has voluntarily undertaken an enormous amount of labour in order to ascertain the mental condition of such children and the proportion they bear to the whole number. On May 19th she gave an address on the subject of Dull and Defective Children in Elementary Schools and their Treatment, in which she acknowledged the aid she had received from Dr. Ashby and Dr. Shuttleworth. Her inquiries showed that some 500 children in Manchester board schools were unequal, as Dr. Woodcock said, "to the ordinary strain of school life and had not the capacity to be benefited by the ordinary teaching which obtained in the elementary schools." He considered that there were 1000 children who had claims for special help. They are not imbeciles, or idiots, or lunatics, but are more or less feeble in mind, over whom the guardians have no jurisdiction unless they are paupers, and even then they cannot be sent to asylums unless certified as lunatics. If a working-man has a child mentally below the normal standard he cannot get instruction for the same while at home, and the few institutions for such children are far beyond his means. At present Manchester has no provision for such children. As Miss Dendy stated the school boards in London, Leicester, Birmingham, Bradford, Bristol, and Brighton have already provided special classes for such children and it is strange to find that Manchester, which sometimes thinks itself advanced, should lag so far behind. It must not be forgotten that the facts ascertained as to board school children will obtain equally in all probability with those attending voluntary schools, and it will be equally incumbent on those responsible for their management to provide for the training of their feeble-minded children.

The Present Stage of the Sewage Question.

On May 11th the adjourned summons at the instance of the Mersey and Irwell Joint Committee against the Corporation of Manchester for pollution of the River Irwell and the Manchester Ship Canal came on for hearing at the county police-court before Mr. J. M. Yates, Q.C., the stipendiary, and other magistrates. The Corporation applied for an extension of time. The decision was given on the 14th and the application was dismissed with costs. Mr. Yates reviewed the history of Manchester, dealing with its sewage, its unwillingness to purchase the 200 acres of land required by the Local Government Board, and its inability to persuade the Board to alter their views. He concluded by saying: "The bare facts are that the sewage of an ever-increasing population, now amounting to 600,000, is being turned into an almost stationary body of water unpurified; that this has been going on to a greater or lesser degree for at least five years; and that the corporation are no nearer a final settlement of the question than they were in 1893. If the court were still to prolong this period it would, we think, be stultifying itself and the order made by it by consent of the parties in 1896. We therefore unanimously and unhesitatingly refuse the application." On the 17th the stipendiary granted an application for summonses which were made returnable for June 8th. The Rivers Committee on the 16th resolved to recommend the City Council to appeal at the Salford Hundred Quarter Sessions against this decision, and further recommended the Council to call in three experts to give evidence as to the condition of affairs at the Davyhulme Sewage Works—viz., a civil engineer to speak as to the fitness of the land for the construction

thereon of bacterial filters; a chemist to speak as to the nature and quality of Manchester sewage; and a biologist to state his views as to whether the bacteria can live and perform their functions in the city sewage.

Salford and its Sewage.

On May 23rd the Salford Corporation were brought before Judge Parry at the Salford county court for failing to carry out an order of the court made in July last. The corporation then promised to get rid of the accumulation of sludge which had taken place; to borrow £50,000, the estimated cost of the sewage works; and to let all the contracts and to complete the same, none of which things had been done. On July 22nd last his honour gave the corporation eight months in which to let their contracts and that time expired on March 22nd, since which date the corporation had been liable to a fine of £50 per day. The judge made some severe remarks and gave the corporation to understand that though he would then only impose a penalty of two days' fine of £50 each day, if any further laxity were shown he would impose the maximum penalty of £50 each day.

Manchester Volunteer Medical Staff Corps.

A fund is being started on behalf of the Manchester Volunteer Medical Staff Corps to provide a suitable head-quarters and drill-hall, which they have now a chance of building in Chester-road. So far they have been dependent on the generosity of chief officers of various regiments, who have where possible kindly provided them with accommodation. It will, however, be a great advantage to have head-quarters of their own. It is to be hoped that the services of the corps will never be required in actual war, but while the civilised quite as much as the uncivilised nations of the world are in an ominous condition of unrest it is a sensible thing to be prepared for contingencies, and even in times of peace, reviews and manœuvres generally afford opportunities of showing the importance of promptly obtaining medical aid. The sum required is about £5000, a large amount, but the district is wealthy, so a generous response to Surgeon-Captain Coates' appeal may be expected. So far about £116 have been promised, and among the subscribers are the Lord Mayor of Manchester and Sir W. H. Houldsworth, M.P., while seven members of the Volunteer Medical Staff Corps are giving the sum of £77 12*s*.

May 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Medical Appointments.

MR. JOHN KNIGHT, M.B., C.M. Glasg., has been appointed Assistant to the Professor of Forensic Medicine in the University of Glasgow. The position of Additional Examiner in Physics for degrees in Medicine and Science in the University is vacant. The directors of the Glasgow Central Dispensary have elected Mr. J. Lindley Carstairs, M.A., M.B., C.M. Glasg., Physician for Diseases of Women, vice Dr. Archibald Sloan, resigned; they have also agreed to appoint an extra dispensary physician as well as surgeon.

The Medico-Chirurgical Society of Glasgow.

The following gentlemen were elected at the annual general meeting of the society to be the office-bearers for the session 1898–99:—President: Dr. Geo. S. Middleton. Section of Medicine: vice-president, Dr. W. G. Dun; councillors, Dr. John Love and Dr. Barclay Ness; secretary, Dr. Hinshelwood. Section of Surgery: vice-president, Dr. J. Barlow; councillors, Dr. Robert Kennedy and Dr. Henry Rutherford; secretary, Dr. J. H. Nicoll. Section of Pathology: vice-president, Dr. Walker Downie; councillors, Dr. W. R. Jack and Dr. Workman; secretary, Dr. R. M. Buchanan. Section of Obstetrics: vice-president, Dr. George Halket; councillors, Dr. Munro Kerr and Dr. J. K. Kelly; secretary, Dr. Balfour Marshall; treasurer, Mr. Henry E. Clark; general secretary, Dr. Walker K. Hunter.

Glasgow Eastern Medical Society.

The following gentlemen were elected office bearers at the annual general meeting of the society for the session 1898–99:—President: Dr. Malcolm Black. Vice-president: Mr. W. L. Muir. Secretary: Dr. John McDonald, Dennistoun. Treasurer: Dr. William Buchanan. Reporting Secretary: Dr. John Patrick. Seal-keeper: Dr. James Dunlop. Council: Mr. J. R. Buchanan, Dr. Robert Wilson, Dr. David Young, Dr. A. Munro, Dr. John Knight, and Dr. Daniel McNicol.

May 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Public Health Congress in Dublin.

THE Executive Committee met on May 16th at the Offices of Public Health, Dublin, Dr. Grimshaw, C.B., the Registrar-General, being in the chair. Numerous subscriptions were announced, including £50 from the Royal Academy of Medicine and £20 from Messrs. Guinness, Son, and Co. It was stated that Sir H. Cochrane and Sir Christopher Nixon proposed to give garden parties in connexion with the Congress.

Vicegal Entertainment to the Hospital Nurses of Dublin.

Their Excellencies the Lord-Lieutenant and Countess Cadogan gave an entertainment at the Vicegal Lodge on the afternoon of May 19th to the staff nurses of the Dublin hospitals. The lady superintendents and the resident medical officers of the various hospitals were also invited, and had the honour of being specially presented to her Excellency by Sir William Thomson, the President of the Royal College of Surgeons in Ireland, who was one of the guests. The weather was favourable and the garden party and hospitable entertainment by their Excellencies were most thoroughly enjoyed.

The Royal College of Surgeons in Ireland.

The half-yearly examination for the Fellowship came to a conclusion by a conference on May 21st. The number of candidates was unusually large and included a lady graduate in medicine of the University of Calcutta Miss Cohen passed and was entered on the roll as a Fellow of the College, she being the third lady who has received such honour.

The Belfast Royal Hospital.

From the report presented at the quarterly meeting on May 23rd I find that from Feb. 1st until April 30th of this year there were 567 intern and 5907 extern patients. Special reference was made to the loss which the charity has sustained by the death of the Countess of Shaftesbury. To the end of April there was an increase of £113 15*s*. in general subscriptions and £103 0*s* 8*d*. in contributions from the working classes. There is also a slight increase in church collections. The entire receipts for the eight months ending April 30th amounted to £5125 13*s*. 11*d*. and the expenditure to £6321 10*s*. 11*d*., which is a deficiency of £1195 17*s*., and if the deficit of £349 1*s*. 11*d*. carried forward from the previous year's accounts are added to this it will be seen that on April 30th the hospital was in debt to the extent of £1544 18*s*. 11*d*. The general condition as well as the working of the hospital continue satisfactory. Saturday, May 28th, is fixed for the street collections, when it is hoped that there will be a liberal response.

The Summer Medical Session.

The number of students attending the Belfast Royal Hospital this summer session shows an increase of twelve over that of last year. The feeling is growing among the teachers that more work should be done in the summer so as to prevent the present tendency to overload the students with classes during the winter.

Nursing Arrangements in Larne Workhouse.

At a specially summoned meeting of guardians held on May 15th a correspondence was read from the Local Government Board to the effect that they were satisfied that the arrangements made for the nursing of the sick poor in the workhouse were inadequate and unsatisfactory, and they trusted that the guardians of Larne Union would not bring discredit upon their administration by allowing the standard of comfort and treatment in their workhouse to be behind that of other workhouses. A resolution was passed, declining at the present juncture, when Irish local government is under consideration in the British House of Commons, to make any radical changes respecting night nursing arrangements in Larne Workhouse, and more especially as the medical officer had expressed his approval of existing arrangements, and as no guardian or ratepayer has taken exception thereto.

Belfast Branch of the Royal Medical Benevolent Fund.

At the annual meeting held in Belfast on May 19th, when the President, Dr. Whitaker, took the chair, it was reported that of the 175 members of the medical profession in Belfast only 57 were subscribers, to the extent of

£43 6s., and of the 120 country members only 7 were subscribers, the amount being £4 16s. It thus seems that there are 118 practitioners in Belfast and 113 in the adjoining country who give nothing to the society. It is hoped that these facts will cause our brethren to recognise their responsibilities and that they will join the association. The following officers were elected for the year:—President: Dr. Whitaker. Members of Committee: Professor Cuming, Professor Whitla, Professor Byers, Dr. Brice Smyth, Mr. McDonnell, J.P. (Randalstown), Dr. Merrick, Dr. McKeown, Alderman Graham, M.D.R.U.I., Dr. Gibson (Mount Pottinger), Dr. Bolton, J.P. (Bangor), Mr. James Smith, Councillor O'Neill, M.D.R.U.I., Dr. John McCaw, and Mr. J. C. C. Payne, J.P. Secretary and Treasurer: Dr. Richard Purdon. A special vote of thanks was passed to Dr. McCaw for his valuable services as secretary during the past six years.

May 24th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Syphilis of the Stomach.

AT the meeting of the Academy of Medicine held on May 17th M. Dieulafoy discussed the Nosology of Syphilitic Affections of the Stomach. His conclusions may be summed up as follows. Syphilis of the stomach is not so uncommon as is generally supposed. Syphilitic lesions of the stomach can and do take various forms, from hæmorrhagic erosion to a gummatous ulceration. Probably the action of the gastric juice is a factor in continuing the ulcerative process set up by the syphilis. The symptoms of syphilitic ulceration differ in no way from those of simple ulceration, so that the practitioner should always be on his guard and carefully interrogate any patient suffering from gastric ulcer as to the presence or the reverse of a syphilitic history. Treatment should be begun at once, for in this way a patient may often be relieved by medical measures in whom otherwise it would appear necessary to perform a surgical operation.

Craniectomy.

At the same meeting of the Academy M. Chipault communicated his results in twelve cases of craniectomy undertaken for various complaints. Cases of intracranial tumour, whether of the brain or the meninges, the extirpation of which is considered impossible, are much benefited by a simple craniectomy in the neighbourhood of the growth. The dura mater is left untouched but the operation removes the symptoms of cerebral compression. In the case of a growth which it is considered possible to remove everything should be risked to bring this operation to a successful conclusion. In the opinion of M. Chipault lacerations of the brain, digital exploration, or even resection of portions of the brain, always provided strict asepsis be observed, have marvellously little effect upon the functions of that organ. In cases of localised meningitis with cortical adhesions craniectomy has been known to cause the disappearance of epilepsy and even of paralysis. In infantile brain affections, traumatic or not, craniectomy relieves epileptic symptoms but has no effect upon the paralyses.

The Case of M. Heim.

Your readers have been kept well informed as to the various phases of the case of M. Heim, the assistant professor of the Faculty of Medicine, who was accused by the last elected professor, M. Blanchard, of having "annexed" (*accusé de détournement*) various pieces of apparatus belonging to the laboratory. M. Heim was summoned before the superior council of the University and was first of all sentenced to deprivation of office (*retrait d'emploi*). He then appealed to the superior council of public instruction, which after a searching inquiry acquitted him of the charge of "annexation," but agreed that he had committed certain errors during his tenure of the office and reduced the sentence to a provisional suspension for two years. The position taken up by M. Blanchard in this matter has caused great excitement amongst the students, so much so that the Faculty of Medicine determined to pospone M. Blanchard's course of lectures until the excitement had quieted down. Other riotous manifestations occurred at certain public proceedings of the Faculty of Medicine. These were said to have been caused not by real students but by strangers and measures have been taken to prevent the entrance of such in future, so that it is hoped that the excitement will gradually calm down.

The Congress on Tuberculosis.

The Congress for the Study of Tuberculosis, both human and animal, will hold its fourth session in Paris from July 27th to Aug. 2nd, 1898. The questions propounded for discussion are as follows:—1. Sanatoria as a Means of Prophylaxis and Treatment of Tuberculosis, the discussion to be opened by M. Legendre, M. Netter, and M. Thoinot. 2. The Treatment of Tuberculosis by Serums and Antitoxins, to be opened by Professor Landouzy and Professor Maragliano. 3*a*. X Rays in the Diagnosis of Tubercle, to be opened by M. Béclère, M. Claude, and M. Teissier. 3*b*. X Rays in the Treatment of Tuberculosis, Professor Bergonié of Bordeaux and Professor Lortet of Lyons. 4. The Fight against Animal Tuberculosis by Prophylaxis, Professor Bang of Copenhagen. 5. The Fight against Human Tuberculosis by Disinfection of the Places Inhabited by the Tuberculous, M. A. J. Martin. 6. The Spread of Tuberculosis in the Army and its Prophylaxis, Professor Vallin. It is left open to the members of the Congress to choose a certain number of questions other than the preceding, which will take priority in the orders of the day. The committee of organisation desire particularly to draw the attention of members to the following: the symptomatic and prognostic value of tachycardia in pulmonary tuberculosis, spread of tuberculosis by means of milk and the methods by which it may be avoided—in particular, practical methods of sterilising milk, with provisions for their introduction into general use, the various forms of the tubercle bacillus and their practical signification, the diseases of the solids and fluids of the body which provide a soil for the tubercle bacillus.

Hyperchlorhydria.

At the meeting of the Medical Hospitals Society held on April 25th M. Hayem drew the attention of the society to effects produced by prolonged or too frequent use of alkalines. A number of facts have shown him that the use of large doses of bicarbonate of soda continued for some time brings about in certain patients a most acute hyperchlorhydria. Other alkalies, but especially the bicarbonate of soda, appear to act powerfully in producing an oversecretion of hydrochloric acid. Alkalies act rather by absorption than by local effect and as a consequence mineral waters which assist their absorption are more hurtful than the bicarbonate of soda, although the dose of the latter taken by patients is generally very much larger than the amount which they take in mineral waters, though the latter may be taken in great quantity. Hyperchlorhydria appears to be the consequence of the elimination of the alkaline salt rather than the consequence of its direct action on the glandular apparatus. For alkalies to bring about hyperchlorhydria it is necessary that the mucous membrane of the stomach should contain both numerous and active glands and on this account the effect only appears in certain patients. In those patients whose gastric mucous membrane is degenerated or atrophied, and in consequence where the gastric juice is very deficient in digestive power, alkalies, far from producing relief of the chemical tendency to oversecretion of hydrochloric acid, bring about a great deal of depression and dyspepsia. To sum up, the use of alkalies invariably tends to aggravate the original disorder.

May 24th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrims and Quarantine.

WE are now in the midst of the Bairam holidays during which is celebrated the annual sacrifice of sheep at Mouna, and while I write the pilgrims must be hurrying back to Mecca as fast as they can, filled to the brim with religious fervour and—roasted mutton. A not very successful attempt was made this year to prevent Egyptian pilgrims from joining the Haj. Holy men agreed that the sacred writings prohibited the faithful from running into unnecessary danger such as the plague already reported from Jeddah and the

civil authority, by means of its mudirs and mamours, advised intending pilgrims to postpone their pious intentions till next year. At one time it looked as if the Egyptians would form no part of this year's pilgrimage and the Government naturally thought it could not do better than follow the example of France, who more than once has forbidden the pilgrimage from Tunis and Algiers in times of epidemic disease in the holy places. But religious custom proved too strong; the Khedive is said to have been bombarded with letters and petitions threatening him, his dynasty, and his country with certain ruin if the pilgrimage were interfered with. His Highness and the Ministers were obliged to bow before this outburst and they permitted the annual journey to Mecca, but they decided in March to make the return of the pilgrims much more difficult than usual. As a rule anyone rich or poor is allowed to go without question, but this year every Egyptian has been obliged to promise to remain in the Hedjaz until the complete disappearance of the plague if it should break out there and, moreover, he has had to prove that he has sufficient money for the return journey and for a stay of at least six months in the holy places. The following contract has been signed before the mudir or governor: "I, the undersigned, after having been well warned about the difficulty and risks to which I expose myself by making the pilgrimage this year, and having decided to go in spite of them, do engage to remain in the Hedjaz in case plague breaks out there and not to return to Egypt until the epidemic is all over. I also promise to provide for the expenses of myself and my family during my stay in the Hedjaz." This is certainly a move in the right direction, and we shall see how far it is practicable to carry it out and even to repeat it every year. One does not at first see what is to prevent any man from gambling away, or even being robbed of, his resources at the outset of this journey. It is difficult for the English officials here to counsel the absolute prohibition of pilgrims because of the bad example set by the Indian Government, which is, of course, well known to prominent Mussulmans here. For half a century England has allowed India to breed cholera at her ease and to distribute it at intervals over the European world. It is now logical to suppose that India, unless prevented, will do much the same with the plague. The pilgrimage was allowed this year to start from Karachi because there were at that time no plague patients reported from that port. But plague had only recently infected Karachi and now, when the pilgrims have been allowed to pass through it, we are officially told that the town has been reinfected with plague from Bombay. But what guarantee have we that the new outbreak is not a recrudescence of the Karachi plague lying dormant? Is India doing everything it can to prevent plague being scattered outside Indian territories?

The Health of Mecca.

The usual bulletins arrive from the sanitary officers of Turkey and Egypt and we are told that the general health is excellent. But it is to be hoped that the existence of plague at Jeddah will be enough to ensure the returning pilgrims being declared "infected." It is true that no plague has yet been reported from Mecca, but are there any medical men there competent to recognise sporadic cases? There is a large death return from "old age," "starvation," and, what is more suspicious still, "infectious fever" and "pneumonia." The annual pilgrimage will continue to be a menace to Egypt and to Europe until a railway is constructed from the coast towards Mecca and until well-trained medical inspectors provided with some authority accompany the pilgrims.

Plague at Jeddah.

It is satisfactory to know that there is no increase of general mortality in the town, and the cases of plague are sporadic rather than epidemic. All this is an additional reason for believing that the present plague is a recrudescence of the Jeddah plague of last year. The natives display much ingenuity in hiding their dead, their sick, and especially the clothing of the dead, so that no one can pretend that the official returns comprise all cases. Moreover, the returns themselves require to be carefully studied. In one house there was a death certified as "pneumonia," while closely following on its heels were in the same house 6 deaths from plague, making it fairly evident that the original death was due to the pneumonic form of plague. Epidemiologists are well acquainted with the premonitory diarrhœa of typhoid fever and cholera outbursts and with the sore throats which precede and accompany epidemics of diphtheria and scarlet fever. It may be interesting at this juncture to remember that a year ago during the height of the plague in Bombay 10 cases of pneumonic plague were found in the Jamsetjee Jejeebhoy Hospital there. Yet this was a hospital which did not admit plague patients, and the 10 cases had all found admission as simple pneumonia.

May 19th.

Obituary.

JOHN ALCOCK, M.R.C.S. ENG., L.S.A., J.P.

A GLOOM has been cast over the whole of the potteries district by the very sudden death of Mr. John Alcock of Burslem. He was in his usual health and left home to pay his ordinary visit as surgeon to the Burslem Haywood Hospital on May 7th, when, on returning, he fell suddenly near his own house and expired immediately. His friends were quite aware of the existence of heart mischief of a grave character and he had had previous warnings that the end might come suddenly, but these made his life none the less active, nor did his devotion to his professional and social duties diminish in consequence. He died literally in harness.

Mr. Alcock was the son of Mr. Samuel Alcock, a distinguished potter, who founded the Hill Pottery at Burslem. Born in 1833, he was educated at the Newcastle Grammar School and the City of London School, subsequently matriculating at London University. Commencing life at his father's manufactory, where he acquired business habits which were of much value to him in after years, his tastes were unsuited and, in consequence, he became the articled pupil of Mr. Samuel Mayer Turner of Newcastle-under-Lyme, at that time one of the surgeons to the North Staffordshire Infirmary. In this capacity young Alcock had the opportunity of acquiring that thorough and practical knowledge of surgical work which stood him in such good stead in after life and that experience in minor details which helps so much to develop the highest professional qualities of a man's character. After a very successful career at King's College Hospital Mr. Alcock was made an Associate and qualified in 1857. After holding the post of house surgeon to the North Staffordshire Infirmary he commenced practice in Burslem and in 1865 was elected honorary surgeon to the infirmary. With the utmost assiduity and unfailing conscientiousness he filled this position up to the day of his death. Mr. Alcock was the first honorary surgeon to the Burslem Haywood Hospital, which he was largely instrumental in securing for the town, and was soon afterwards made a governor with the sanction of the Charity Commissioners. In this capacity he lost no opportunity of maintaining the best interests of the profession, whilst he was ever keenly alive to the welfare of the patients. As a surgeon he was accurate in diagnosis and particularly skilful as an operator, while by his kind and sympathetic manner he won the confidence and esteem of his patients. In every benevolent scheme in his own district he took an active part and liberally supported the same. He was principal founder and chairman of the Burslem Nursing Institute and laboured indefatigably to promote its usefulness.

Mr. Alcock was an ardent Churchman and was for many years churchwarden of St. Paul's Church, Burslem. He was a Justice of the Peace for the county of Stafford. For many years he took an active part in the work of the Staffordshire Branch of the British Medical Association, being elected its President in 1890. His life was active, useful, and unostentatious and his loss will be keenly felt. He was laid to rest on May 11th in St. Paul's Churchyard, Burslem.

GEORGE HUNTSMAN SHAW, M.R.C.S. ENG., L.S.A.

THE death of Mr. Shaw of Attercliffe, Sheffield, who recently passed away at his residence, Carlton Hall, near Worksop, is announced. Mr. Shaw received his medical education at St. Bartholomew's Hospital and obtained the qualifications of M.R.C.S. Eng. and L.S.A. in 1864. Most of his life's work was done in Sheffield; he had practised for

many years in Attercliffe, where he made many friends and was generally respected. In 1884 he was appointed surgeon to the Sheffield General (now Royal) Infirmary, ultimately becoming senior surgeon. Mr. Shaw was fifty-six years of age at the time of his death; he leaves a widow and a married daughter.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Lopez Alonso, Professor of Clinical Medicine in the University of Salamanca.—Dr. G. Grube, Professor Emeritus of Clinical Surgery in the University of Kharkoff.—Dr. T. Halbertsma, Professor of Midwifery and Gynæcology in the University of Utrecht.—Dr. Georg Rosenbaum, whose name is known in connexion with researches on Locomotor Ataxy and Friedreich's disease. He was only forty years of age. His death occurred during his return journey from Italy to Berlin.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, MAY 24TH.

THE General Council of Medical Education and Registration opened its session to-day in the hall of the Council, Oxford-street, London. Sir WILLIAM TURNER, President of the Council, occupied the chair.

New Member.

The REGISTRAR (Mr. Allen) read the official notification of the appointment of Mr. CHARLES SISSMORE TOMES, F.R.S., F.R.C.S. Eng., L.D.S., for five years as a Crown member in succession to the late Sir Richard Quain.

Mr. TOMES was introduced to the President by Mr. BRYANT.

Sir John Batty Tuke.

The PRESIDENT intimated that Sir John Batty Tuke had written to say that owing to illness he was unable to be present at the beginning of the session but he hoped to join them before the session was at an end.

The President's Address.

The PRESIDENT then delivered his opening address. After announcing that he had received a letter from Miss Quain, in which, writing on behalf of her sisters and herself, she asked the Council to accept a marble bust of her late father in memory of his long association with the Council, he welcomed as a Crown representative for England in Sir Richard Quain's place Mr. Charles Sissmore Tomes, M.A., F.R.S., whom he described as "distinguished in scientific research, an eminent dental practitioner, and a Fellow of the Royal College of Surgeons of England." With regard to the Midwives Registration Bill Sir William Turner said: "The Bill was put down for second reading in the House of Commons on May 11th, but, as was generally anticipated, owing to the pressure of Government business, the second reading did not take place. From the reports in the public prints of an interview granted on May 2nd by the Lord President to a deputation consisting of the supporters of the Bill it would appear that his Grace the Duke of Devonshire intimated to the deputation that, owing to the small probability of the Bill proceeding during the present Session, the deputation should apply itself rather to the consideration of the terms of some future Bill than to the one now before Parliament. Also, that the promoters of the measure should come to a definite understanding with the medical profession, as represented by the General Medical Council, before they introduced a Bill in another Session. He referred to the objections taken by the Council in their observations on the present measure as well as to difficulties which might arise on the part of the Local Government Board, with which body, as well as with the General Medical Council, the Lord President suggested that the promoters of the measure should put themselves into communication. Should, however, the Bill pass its second reading the Lord President thought that the course which the Government would take would materially depend upon whether the promoters of the Bill were prepared to amend it in Committee so as to meet the suggestions of the General Medical Council. The action of the Lord President in this matter will, I am sure, commend itself to the Council." With regard to the action of the Council towards unqualified assistants the President said that numerous letters had been received from employers asking for an interpretation of questions raised by the Council's resolution and from unqualified assistants, some of whom were married men with families who, having been dismissed by their employers in consequence of the Council's resolution, had been deprived of the means of making a livelihood. A number of these assistants had obtained a partial training at medical schools and a few had finished the course but had not completed the final examination. Petitions had been received from a number of registered practitioners pleading for the institution of special examinations for those unqualified assistants who had gone through a complete medical curriculum and are over forty years of age, while a memorial signed by 138 practitioners in Leeds stated that a difficulty was now experienced in obtaining the services of a sufficient number of qualified assistants to replace those who are unqualified.

The President then continued: "Since the Council rose on April 6th I have, as your President, been called on to consider and give an opinion on an important matter, and as my action has been adversely criticised by a member of the Council and a charge of unconstitutional procedure has been brought against me I cannot pass this subject by in silence. It is due to the Council that I should give them a narrative of the facts. On April 7th our Registrar told me that he had been requested by Mr. Horsley to produce for his inspection and examination certain papers belonging to the Council and asked me what reply should be given to the request. The point was, as far as my experience went, a novel one, but after giving it consideration I instructed the Registrar to tell Mr. Horsley that, in my opinion, he would have to move either the Executive Committee or the Council for leave to have the papers placed at his disposal for purposes of examination. As I felt that the question raised was one which, on the one hand, affected the Council's position as regarded its property in its unpublished papers, and on the other the rights of an individual member to make use of that property before leave had first been granted by a proper authority and before any statement had been made to the Council of the object for which they were desired, I thought it necessary to take the opinion of our standing counsel, Mr. Muir Mackenzie, on the matter. I may remind the Council that although the Act of 1858 did not formally incorporate us, yet that by a subsequent Amendment Act passed in 1862 we became a body corporate and were deemed to be and to have been one since the date of our first establishment. Mr. Muir Mackenzie, in reply to my request for his advice on the question raised, intimated to me that I was absolutely correct in the opinion which I had directed Mr. Allen to communicate to Mr. Horsley, inasmuch as it was established law that the papers of a corporate body belonged to the body and not to its individual members. Accordingly, when later in the month of April the Registrar forwarded me a letter received by him, in which Mr. Horsley asked that certain papers which he specified should be produced for his inspection, I instructed Mr. Allen to reply as follows: 'That the Council's papers are the property of the corporate body and not of its individual members, and that the papers referred to cannot be produced for your inspection without leave being first granted by the Council or the Executive Committee. It is necessary therefore that you should move either the Council or the Executive Committee for an order to permit you to examine and to use them.' On April 27th Mr. Horsley wrote to me a letter, which I received on the following day, in which he asked me questions bearing on my right as President to debar him as a member of the Council from inspecting for the purposes of the work of the Council documents which are its property. In reply I repeated the above instructions which I had given to the Registrar regarding the rights of the Council in its own papers and the necessity of individual members first obtaining leave before they could be produced for inspection. I further stated that so important did I regard this question as one of constitutional procedure that as the Council's chief executive officer I considered that I was justified in giving to the Registrar these instructions. I also called Mr. Horsley's attention to the fact that as the Council would meet at an early date he could then make

application and at the same time explain the object which he had in view in requesting the Council's papers to be produced for his inspection. The Council will observe that throughout this correspondence I have consistently acted so as to preserve the rights of the Council as a corporate body in its own property and in my judgment I should have been guilty of a grave dereliction of duty as your President had I done otherwise. It now remains for Mr. Horsley, should he continue in his desire to examine and use the papers for which he applied, to specify to the Council the papers to which he desires access, to move that the necessary leave should be granted to him, and to state the definite object for which the use of the papers is required. It will then be for the Council to decide whether, having regard to the ground on which the application is based, it is one to which it would be right to accede."

Sir William Turner concluded his first presidential address by briefly stating that information had reached Her Majesty's Government that there was no present intention on the part of the Italian Government to modify the laws regarding the practice of foreign physicians; and that the Home Secretary had informed the Executive Committee that as there could be no legislation on the matter of the granting of death certificates by unregistered persons during the present session he was unable to receive a deputation from the Council, although the Minister had expressed the opinion that legislation was desirable.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the President was thanked for his address and requested to allow it to be entered on the minutes.

The late Sir Richard Quain.

The REGISTRAR read the following letter:—

67, Harley-street, W., April 16th, 1898.

DEAR SIR WM. TURNER,—As one of the sons-in-law of the late Sir Richard Quain I am requested by his family to express their deep appreciation and grateful thanks for the kind message of sympathy contained in your letter to Miss Quain of April 7th and in the resolution passed at the meeting of the General Medical Council.

The family also desire to convey to the Council their sincere gratification at the more than kindly terms in which Sir Richard's services on the Council are refered to in the resolution.

Believe me, dear Sir Wm. Turner, yours very faithfully,

Sir Wm. Turner, M.B. G. A. STE. CROIX ROSE.

He also read this letter:—

67, Harley-street, W., April 26th, 1898.

DEAR SIR WILLIAM,—On behalf of my sisters and myself I am writing to you as President to say that we hope the General Medical Council will accept a small token from us all in memory of our father, who was so long associated with, and so deeply interested in, the Council and its work.

We purpose offering you the marble bust of father which was executed by Mr. Brock, R.A., in 1896, and exhibited in last year's Academy and we should be grateful if you could let us know at your convenience, if acceptable, when it should be sent to the office.

Believe me, yours sincerely,

MARY M. QUAIN.

The PRESIDENT said he had hoped that the bust would have arrived by this time. If it had arrived he should have made a motion from the chair on the subject, but in the circumstances he thought it better to defer the motion.

Mr. Gladstone's Death.

The PRESIDENT said that a suggestion had been made to him by some of the members of the Council that they as a public body should join, he thought he might say all the other public bodies in the kingdom in recording their sense of the loss which had befallen the nation through the death of Mr. Gladstone. He proposed to put this from the chair:—

That this Council desires to place upon record its sense of the grievous loss which has befallen the nation by the death of the Right Hon. William Ewart Gladstone, whose interest in the profession of medicine was ever warm and sympathetic, and under whose administration the Medical Act of 1886 was passed into law. The Council further requests the President to transmit to the widow and family of the deceased statesman a suitable expression of the Council's heartfelt participation in the national sorrow.

He should like to state with reference to this motion that he thought the last time he saw Mr. Gladstone was at a dinner given by one of his predecessors, Sir Henry Acland, to the Council. Mr. Gladstone was the honoured guest upon the occasion. His health, naturally, was proposed and in his reply he took for his text the profession of politics and the profession of medicine and he drew a most eloquent comparison between the two, and the conclusion to which he came was this, that the profession of medicine took a higher place than the profession of politics. Now after the expression of Mr. Gladstone's opinion as to the sense which he entertained of their profession they had another reason for sending this expression of sympathy.

The motion was at once agreed to.

The PRESIDENT said it had been pointed out to him that the funeral was to take place on Saturday and the tickets admitting persons to Westminster Abbey were to be given out by the Earl Marshal. If the Council wished it he would write to the Earl Marshal and ask for 30 tickets.

The Council expressed approval of this course.

The Business Committee.

This committee was constituted as follows: Dr. MacAlister (chairman), Mr. Bryant, Sir Philip Smyly, and Dr. Bruce.

Service Examination Results.

The REGISTRAR presented the following tables, viz.:—

(*a*) Table showing Results of Professional Medical Examinations during 1897; (*b*) Table showing Results of Professional Examinations for Qualifications in Sanitary Science, Public Health, or State Medicine during 1897; (*c*) Table showing Results of Professional Dental Examinations during 1897; (*d*) Table showing Results of Preliminary Examinations during 1897; (*e*) Table showing Exceptional Cases in regard to Length of Course of Study during 1897; (*f*) Table showing Results of Competition held on Nov. 22nd, 1897, for Commissions in the Medical Staff of the Royal Navy; (*g*) Table showing Results of Competition held in February, 1898, for Commissions in the Medical Staff of the Army; and (*h*) Table showing Results of Competition held in February, 1898, for Commissions in the Indian Medical Staff.

Dr. HERON WATSON moved that the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, the Director-General of the Army Medical Department and the Examining Board of the Medical Department of the Indian Medical Service for the information they had furnished. He explained that the Director-General of the Army Medical Department had on this occasion furnished the information the Council desired with regard to defects in spelling and composition.

Sir RICHARD THORNE seconded the motion.

Sir PHILIP SMYLY suggested that the bodies should have some means of testing the accuracy of the information as to defects of education.

Sir DYCE DUCKWORTH said that the candidates themselves were responsible for notifying the particular examination in arts they had passed and surely the candidate himself ought to know the examination.

Dr. BENNETT complained that there was no means afforded of identifying the delinquents.

Dr. REID made a similar complaint.

Sir DYCE DUCKWORTH said that many of the candidates who showed defects in general education went into the service because the examiners could not pluck them, and he thought it only right that without giving the names of the candidates they should point out the bodies through whose portals they had passed.

Sir WILLIAM THOMSON insisted that the bodies ought to have some means of testing the accuracy of the statements made. Licentiates did not like to have a slur cast upon the body whose Licence they held and what they asked was that they should be satisfied that the thing had been done upon reasonable evidence.

Dr. GLOVER said he wished to call attention to the enormous proportion of rejected candidates and he would single out a few instances. In the case of the Examining Board in England by the Royal Colleges of Physicians of London and Surgeons of England he found that in the second examination there were 318 rejected and 342 passed. In the case of the Apothecaries' Society of London in the second examination the rejected were 98 and the passed 88. The University of Cambridge in the first examination had 100 rejected and 116 passed, and in the second examination the rejected were 97 and the passed 87, while in the final examination they had in the first part of it 62 rejected and 45 passed. The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow in the first examination had rejected 120 candidates and passed 111; in the second examination 158 were rejected and 139 passed; and in the final examinations 261 were rejected and 205 passed. The University of Edinburgh had in the first examination 201 rejected and 227 passed. These figures were to his mind very appalling.

Dr. MACALISTER said that the figures did not quite represent the facts, for in a single year the same man might be rejected several times and he could only be passed once.

Dr. ATTHILL said he thought the tables very creditable to the examiners.

Mr. TEALE thought they showed that their teaching was practically a failure because the more they examined the more they plucked.

After some further discussion the motion was adopted by the Council.

Mr. Horsley and the President.

Mr. HORSLEY asked leave to call the attention of the Council to the infringement of the rights and privileges of the members of the Council by the recent action of the President in compelling the Registrar to refuse a member the exercise of his right of inspection of documents the property of the Council.

Dr. MACALISTER took exception to the word "compelling" in the notice.

The word "directing" was thereupon substituted and the leave craved was given.

Mr. HORSLEY said that the matter which he desired to bring to the notice of the Council had in it novel principles in one sense, but not quite in the sense which the President in his address meant them to have. According to the President's statement it would appear that in all conditions no member of Council, even when seeking to instruct himself in the work of the Council by the study of documents in possession of the officials, had a right to inspect these documents. It had been suggested that no member of Council had taken sufficient trouble to investigate for his own instruction documents which had been obtained at great trouble for the benefit of the Council. He did not know that that was so as regards others, but in his own case it was not so. From November, 1897, until April of this year he had entered the Council's office, requisitioned documents from the Registrar, and received them without the slightest let or hindrance and examined them at his leisure. On April 7th he was refused by the Registrar the privileges that he had been enjoying for the previous months. He was on that day informed by the Registrar that in refusing inspection of the documents asked for he was acting under the President's order. This order he (Mr. Horsley) considered to constitute an encroachment on the rights and privileges of members of corporate bodies such as the General Medical Council and from what had been heard, Mr. Muir Mackenzie's opinion on the subject did not in the least degree alter his views of this matter. It was novel, he thought, for members to learn that they were not to be allowed the privilege of inspecting documents belonging to the Council. The President's direction did seek to deprive them of rights and, moreover, claimed for the office of President a certain power of dictatorship for which he thought neither title nor justification existed. In drawing up his notice he used the word "compelling" because he understood from Mr. Allen that but for the order he would not have given a refusal, but as it was the President's order he had no other course open to him. He did not think the Registrar was legally entitled to give a refusal, but he (Mr. Horsley) accepted the Registrar's statement that the refusal was given in accordance with the President's order. Leaving that matter meantime he would return to the historical. From November till April he was engaged in reading the various counsel's opinions with the view of bringing before the Council the very extraordinary cost of the legal work. He acquired by that research a number of very important facts and when his work was suddenly arrested by the President's order he wrote the following letter:—

25, Cavendish-square, London, W., April 27th, 1893.

DEAR MR PRESIDENT,—

I am informed by the Registrar of the General Medical Council that you have instructed him to refuse me the opportunity of inspecting certain specified documents belonging to the Council and in his custody. Will you kindly inform me:—

1. By what regulation of the Council or legal enactment do you claim the right to debar me, a member of the Council, from inspecting for the purposes of the work of the Council documents which are its property and open to the inspection of the Registrar?

2. Do you claim the right to refuse me access (for the purposes of the work of the Council) to all unpublished documents of the Council as well as to those specified in my application to the Registrar?

3. Do you consider that you yourself are similarly debarred from inspecting the documents of the Council except with the special leave of the Executive Committee or Council, which you assert I must obtain?

Inasmuch as your instructions to the Registrar if correct will preclude any member of the Council from making any adequate inquiry into the destination of the funds of the Council, which are public moneys, the importance of the question of constitutional procedure involved compels me to ask you for the courtesy of a prompt reply.

Yours faithfully,
(Signed) V. HORSLEY.

Sir William Turner, President of the General Medical Council.

He (Mr. Horsley) was sorry to say that he received no specific answer to any of the three questions. To the second he received no reply at all. He therefore concluded that the President's ruling was intended to apply to all documents of all kinds whatsoever. He should like to have some information on the subject now. With regard to the third question, he did think it was very important that the Council should be informed as to whether the President of the Council possessed certain rights and privileges above other members of the Council when the work of the Council was involved. The only reply he received to this question was that his juniority in the Council was probably the reason of his asking such a question. He ventured to hope that the Council would receive a different reply. The first of the three questions involved a matter of principle. The only reply to it that he had received was that which had been given in the President's address—namely, that the documents of the Council were the property of the Council, and for that reason any inspection of them by a member of the Council could only be carried on after leave had been obtained from the Executive Committee or the Council itself. They were all agreed that the documents were the property of the Council, but the members of Council for the time being were part proprietors of them, and as far as inspection went he conceived that they were entitled to inspection of the Council's property. They were co-trustees not only of the work but also of the property of the Council, and as a co-trustee he held that he had a perfect right to inspect the documents belonging to the Council. No evidence or order of Council or legal enactment in support of the President's position had been given him. In fact, he had received no answer to his point at all. He quite agreed with Mr. Muir Mackenzie that it was established law that all the documents of a corporate body were the property of that body, but he took issue with him when he went on to say that the President was quite right in refusing access to the Council's documents. He should like to see the case on which Mr. Muir Mackenzie's opinion was given. He was surprised that Mr. Muir Mackenzie should have given such an opinion. It was totally at variance with the opinion given to the Council in July, 1882, by Mr. Farrer, their solicitor. Therefore he asked them to approach this case from the point of view of common sense, and that the Council should do as other public bodies, and so far as he could learn from inquiries the documents belonging to these were open to the inspection of members. It was not his object to raise discussion and therefore he did not conclude with a motion. His object was to report to the members of the Council as his co-trustees what had happened, and what steps they should take it was for them to decide.

At the request of the PRESIDENT the Registrar read the opinion given by Mr. Muir Mackenzie.

The PRESIDENT considered that the opinion just read supported his action and the answers he gave to Mr. Horsley.

Mr. HORSLEY wished to make some remarks on the opinion.

Dr. MACALISTER took the view that Mr. Horsley should have the courage of his opinion and make a motion.

The PRESIDENT was quite willing that Mr. Horsley should be heard, even though there was no motion before them. He had nothing to hide and so long as he had the honour to sit in that chair he hoped his action would be perfectly open and that he should never do anything of which he would need to be ashamed.

Mr. HORSLEY pointed out that counsel's opinion was not parallel with his position. Independent examination by an individual member was much stronger than he contemplated. He had simply stated that he wanted to see certain documents for the purpose of the work of the Council.

Sir C. NIXON proposed to move that Mr. Horsley should be granted the use of the documents of the Council for the purpose of carrying on an investigation in connexion with the legal expenses of the Council extending over a number of years. He had not the slightest doubt that the President acted to the best of his judgment in the matter and he expressed no judgment as to whether the ruling was right or wrong; but as it had come to the knowledge of the Council that an allegation had been made as to the way in which they conducted their legal affairs it was their duty to have the allegation investigated to the fullest degree. It was for that reason he would urge it upon the Council that they give Mr. Horsley the very fullest facilities for carrying out his investigation. That was a different question from the question as to whether every member had the right to investigate the secret documents of the Council.

The PRESIDENT ruled that this was not the time to receive such a motion as Sir Christopher Nixon had indicated. It was not in order with regard to the manner in which an application for the inspection of documents should be made. Mr. Muir Mackenzie advised that not only should the application be made to the Council, but that the documents asked for should be specifically stated and that the objects for which these documents were required should also be distinctly stated. He should consider himself precluded from putting a motion that did not observe all these points.

Mr. BRUDENELL CARTER thought the only course they should now pursue should be to get Mr. Horsley to move for permission to examine the documents he wished to see. If any such permission were granted it should be in very specific terms.

Dr. MACALISTER contended that there was a preliminary matter to be disposed of first. They ought to declare that their President had fully vindicated his course of action, and to give effect to that view he had to move:—

That the Council, having heard the President's statement as to the legal ground of his action in reference to Mr. Horsley's applications expresses its complete satisfaction therewith and passes to the next business on the programme.

Dr. PETTIGREW formally seconded the motion.

Mr. TEALE, in supporting the motion, pointed out that the methods which had been followed out by Mr. Horsley in connexion with this subject formed a new departure in the proceedings of a member in relation to the Council. He felt that the whole Council had been injured by its adoption and particularly by its being first of all made public through the columns of the medical press. It would lower the character of the Council if they pursued methods of the kind in question.

Mr. HORSLEY said he had responsibility which Mr. Teale as a Crown representative did not have. He had responsibility to those who had sent him to the Council and he should always conceive it to be his duty when the interests of those persons were seriously concerned to report the fact to them.

Dr. GLOVER considered that the only use they could make of the painful discussion which had taken place was to see that another of the kind did not occur. While he gave Mr. Horsley full credit in trying to get the best possible terms for work done for the Council he must point out that there was a right way and a wrong way of raising the question and in his judgment it was not the right way for a member between sessions to make *ex-parte* statements and charges against persons who were not in a position to make answer. If in a general way this was true as regards individual members in their fair stand-up fight as between themselves it was true in a more acute sense as respects members and their dealings with the President, who certainly desired to maintain the dignity and efficiency of the Council. They had elected Sir William Turner to the chair unanimously and he had scarcely taken his seat in it when he was charged with a deliberate attack on the rights of individual members and a new and very serious infringement of constitutional conduct. As a Direct Representative sincerely desirous of meeting the views of the profession he said that he did not see where was the obligation to publish the charge against the President six weeks before the meeting of the Council. They should endeavour to see if they could not conduct charges against each other in such a way as would prevent a recurrence of such a discussion as they were having. So far as the right to use Council documents was involved he would have something to say later if any debate arose, but this was not a question of principles but one of methods. It would be his duty unhesitatingly to support the motion.

Mr. BRUDENELL CARTER said Mr. Horsley in the notice on the programme had entirely failed to draw a very important distinction between opinions—probably erroneous—and fact. He used the word "infringement," but they had it from their legal adviser that there was no infringement. He also referred to members' right to inspection of documents, but that right existed only under specified conditions. He therefore wished to call attention to the lightheartedness with which Mr. Horsley put on the paper statements which according to their legal adviser were not true.

Sir WILLIAM GAIRDNER argued that it would be a mistake if the public formed the impression that Mr. Horsley had been hardly dealt with. It was very important in such a body as theirs that there should be loyalty in connexion with secret documents and he thought that they should not only at once say that they approved of the action which the President had taken in this instance, but should go further and completely and thoroughly relieve the President from the innuendoes contained in Mr. Horsley's statement and in the letter to THE LANCET. He thought it atrocious that the President should be the subject of such insinuations.

Dr. PETTIGREW, as the seconder of the motion, wished in justice to the President to homologate the action which he had taken. Everyone knew that Sir William Turner had the honour of the Council at heart and that he proceeded with the greatest deliberation and caution. He (Dr. Pettigrew) could not see how the President could have acted otherwise, as he had shown nothing but a desire to have everything done orderly. It was a matter of the gravest importance that the President should have their support and sympathy on the present occasion. If this thing were carried against him it would simply mean that they had no confidence in him.

Mr. GEORGE BROWN regretted very much the turn the discussion had taken and that there should have been this personal attack on the President.

Mr. HORSLEY: It is not a personal attack.

Mr. BROWN considered that it bore the appearance and he could not but regret that the discussion had developed the personal tone it had assumed. He did not feel that he could vote against the motion, but he hoped that no obstruction would be placed in the way either of Mr. Horsley or other members of inspecting documents which came into the hands of the Council and which it was thought desirable or necessary to scrutinise.

Dr. MACALISTER pointed out that a member for the first time claimed a legal right and it was necessary that that should be determined. So far as he was concerned he could express complete satisfaction with the legal grounds on which the President had acted.

The motion was then put to the Council and was carried without dissent.

Dr. PETTIGREW asked that the names should be taken.

Sir CHRISTOPHER NIXON appealed to Dr. Pettigrew not to press his request.

Mr. HOBSLEY wanted to know whether it was possible to make a speech when a request of the kind in question was made to the Council.

The PRESIDENT said he thought not.

Dr. LOMBE ATTHILL hoped it would be felt that there was no necessity to call the roll. They all knew that the adoption of the motion was unanimous.

Dr. PETTIGREW: Well, if there is such a strong feeling I will not insist.

The PRESIDENT: Then this closes the matter. The next motion is a very important one, and we may as well have the 4 o'clock cup of tea before proceeding with it.

This was, our reporter states, an unusual course to adopt. It had hitherto been the custom for the Council to adjourn at 4 o'clock on the opening day of each session in order to enable the committees to complete work for subsequent sittings, but on being questioned in regard to this new departure Dr. MACALISTER, the new chairman of the Business Committee, explained that "the next motion" was "all of a piece" with the subject which had been discussed and it ought to be dealt with before the Council adjourned for the day. On the Council's return, and because of its having been carried that they should proceed to the next business, Mr. Horsley went on with a motion of which he had given notice to the effect that there should be an alteration in the conduct of the legal business of the Council.

The Legal Business of the Council.

Mr. HORSLEY moved:—

That a committee be appointed to inquire into, firstly, the conduct of the legal business of the Council in the past and at present, and secondly, the cost to the Council incurred thereby; the committee to report to the Council during the present session.

In supporting this proposal Mr. Horsley said that before he became a Member of the Council he had taken great interest in its legal work, and in an appointment which he held he had become acquainted with a great deal of the detail of the work. On becoming a Member of Council he had applied that knowledge to what he conceived to be the financial position of the Council. It had appeared to him that while their income was decreasing the general expenditure was increasing, and it seemed to him expedient to study the conduct of the Council's legal business to see whether they could not introduce into that certain amendments

and alterations which would secure efficiency on certain points and at the same time economy in expenditure. An investigation into the subject had been carried on in the way he had indicated, and in now asking for the appointment of a special committee he did not know that it was necessary to go into detail. At present the conduct of the legal business of the Council was left very much to the solicitor of the Council, and he had found that that had led to the solicitor's dealing with matters which he (Mr. Horsley) considered came within the professional purview and should be dealt with by the Council as a whole. If that were altered there would be, he conceived, very considerable saving. But behind it there were certain questions relating to the Council's work: first, that portion of the work which might be spoken of as administrative and, secondly, that portion of it which was generally referred to as penal. He admitted that he had no experience in regard to the first, but he claimed that he had had considerable experience in connexion with the penal procedure of the Council, and from that experience he had no hesitation in saying that up till 1897, at any rate, the penal work of the Council had been carried on in a very extravagant way. He had extracted cases from the documents he had seen in which the money, as he thought, had been absolutely wasted. A committee such as he asked for could see whether he was right or not in this and could report to the Council as to what steps could be taken to diminish the expenditure in which their procedure apparently now involved them. He had found that there had been extra expenses incurred in the way of taking counsel's opinion on matters which ought to be decided by professional medical means rather than legal means. In that direction he thought great saving could be effected. He had further found that the Council had been advised to proceed in some particular direction and that some months later they had been told to go in exactly the contrary direction, the expenditure in getting legal advice being thereby wasted. As to the way in which the legal accounts were presented to the Council that was not satisfactory. Details were not given in these where they should be given. Sometimes at the end of an account a lump sum of 100 or 150 guineas appeared in place of a detailed statement. The Council obviously could not control expenditure when the accounts were presented in that way. Again, the accounts were not presented to the Council in time for criticism. They had to be presented to Parliament, and the time at which they had to be submitted to Parliament was a time when the Council could not examine them. It was his view therefore that the financial circumstances of the legal work of the Council had not received examination, and because of that he had put his proposal on the paper with a view to the conduct of the legal work being examined into and its method altered so far as might seem advisable. As to the mode in which the legal business had been conducted, he personally thought that the method had not been so efficient as it should have been, and therefore he should like to lay before a special committee facts pointing in that direction in the hope that these facts would receive investigation.

Dr. GLOVER formally seconded the motion.

Mr. BROWN said that he did not wish to say anything disrespectful of the Council's legal advisers, but he could not help coming to the conclusion that if they had law officers to advise them in some cases the advice would be different from that on which they had now to act. It was because he thought so that he had placed on the paper the following notice of motion:—

That a special committee be appointed to consider and report as to the advisability of appointing special law officers to conduct such prosecutions as may be ordered by the Council to be taken under the Penal Clauses of the Medical Act of 1858.

Mr. HORSLEY said that the subject of this proposed motion was included in his proposal.

Mr. BROWN: It seems to pretty much cover it.

The PRESIDENT: Then you withdraw it?

Mr. BROWN: If it is understood that it is included.

Dr. LOMBE ATTHILL asked Mr. Horsley to depart from the idea that there could be any report from a committee during the present session. The subject was important and it was impossible that any committee could report on it in a few days.

Mr. HORSLEY willingly withdrew the words "during the present session."

Dr. MACALISTER said he should like to know what case there was for a committee on the subject in question. Certainly none had been made out. The Council had two treasurers, a finance committee, and an executive committee, all of whom were bound to inquire into the very question raised by the motion, and he could see no reason why in addition there should be a special committee to make inquiry on the subject.

Dr. GLOVER was of opinion that the very fact of the question having been so sharply raised was a sufficient answer to Dr. MacAlister. He himself was a member of the executive committee but he must admit that the details of the accounts in question had not been adequately brought before the committee. In the circumstances he thought the motion was a reasonable one.

Mr. BRYANT did not think the proposal to investigate the legal accounts was other than a reasonable one. At the same time he could not see that a special committee should be appointed. As one of the Council's treasurers it was his duty to look into these accounts and if the matter were remitted to the finance committee they should look into it in the course of the next few months, report to the executive committee their conclusions, and the executive committee could then report to the Council.

Mr. HORSLEY said that would not meet his view. He wanted a direct report to the Council without the intervention of the executive committee. The special committee he had in prospect would consist of the finance committee, which included the two treasurers, with Sir William Thomson and Dr. Bruce and, he hoped, himself added.

Mr. BROWN trusted Mr. Horsley's motion would be accepted. A very large question was involved. Legal work had increased very much of late, and owing to the amendment of the penal procedure it would go on increasing. There certainly should be this special committee of inquiry from which they might hope to receive suggestions for a valuable alteration in their procedure, and Mr. Horsley ought as certainly to be a member of it. Mr. Horsley certainly had had facilities for making himself acquainted with this particular branch of the work of the Council and he (Mr. Brown) thought that Mr. Horsley must have satisfied the Council that there was a case for a special committee whose investigation might result in increased efficiency and economy as well.

Mr. BRYANT remarked that it was in the power of a committee to ask the help of any member of the Council, and he could see no reason why they should not get help from Mr. Horsley in this case. He moved as an amendment:—

That the finance committee be instructed to inquire into the conduct of the legal business of the Council and into the cost incurred thereby, and to report to Council.

Sir DYCE DUCKWORTH seconded the amendment but said that he conceived the whole discussion which had taken place to be a purely academic one and he had no reason to think that were the proposal adopted they would save a five-pound note in a twelvemonth. He was sorry to hear that the Council had no confidence in its finance committee or its treasurers. They might say "No, no," but he repeated what he had said because it was what the motion and discussion on it amounted to. He, however, would remind the Council that all the acts of the executive were constantly guided by legal advice. They were not lawyers, and he, who saw all the accounts, thought the charges of their legal advisers extremely moderate for high-class lawyers. There was no doubt the Council's expenditure in recent years had been on the increase, but that was due partly to exceptional circumstances which would not arise every year and partly to greater activity on the part of the Council in prosecuting cases of misbehaviour, and activity always meant expense. But he could not conceive that there would be any material saving by any alteration in the legal procedure of the Council. He had no more confidence in cheap law than in cheap physic.

Mr. BRUDENELL CARTER said the Council had to show confidence in their legal advisers, and for his part he thought that their work had been conducted in the most efficient and satisfactory manner. He should hesitate to support either of the proposals before the Council, and in the circumstances what he intended to do was to vote for the amendment, and if that were carried vote against it when it became the substantive motion.

Dr. MACALISTER was prepared to proceed in somewhat the same lines. Supposing, however, a committee were appointed Mr. Horsley should not be a member of it because he had published innuendoes and attacks on the legal advisers, and it was much more fitting that he should make

his charges against them to a committee of which he should not be a member or, as he would be, a judge.

Dr. LEECH looked upon the matter as more than a financial one. He thought that there should not only be an inquiry by a special committee, but that Mr. Horsley should be a member of that committee.

Dr. PETTIGREW, who declared himself in favour of the amendment, did not take the view that the motion reflected on either the finance committee or the treasurers. He should have liked if Mr. Horsley had brought forward a specific case, but instead of doing so he had been very general and wished the Council to pass a vote of want of confidence in their legal advisers. It was a very serious matter to cast grave reflections on the conduct of the legal advisers in this way. In the absence of specific facts he should support the amendment.

Sir C. NIXON was of opinion that the amendment simply meant a direction to the finance committee to report to the executive committee a justification of what they had done. Seeing that Mr. Horsley had special knowledge why should not the committee he asked for be appointed with him as a member of it.

Dr. LOMBE ATTHILL was also of opinion that Mr. Horsley should be a member of any special committee on the subject.

Dr. MCVAIL asked if the committee wanted was really going to decide whether Mr. Muir Mackenzie had given the Council good or bad legal advice, whether he was a good or bad lawyer. That was what the motion meant. He was sorry. His experience was that Mr. Muir Mackenzie had advised the Council admirably. In every case in which they had followed his advice they had been right. In one case they did not follow Mr. Muir Mackenzie's advice and they were wrong. Their expenditure just now was something like £10,000 a year, but last year, though they had a great number of cases, the law expenses were only £769. One thing the Council must make certain about was that they were right before proceeding with a case. In that respect they differed from a society, which might get law cheap as they had a special responsibility. Supposing Mr. Horsley said that he had looked into particular documents, that would not be sufficient for them. They ought also to see the documents and form their own opinion on them. He did not think the expenses for their legal advice had been excessive and he could not support anything whatever that reflected upon Mr. Muir Mackenzie. He should not vote for either the motion or the amendment. It was rather a serious thing indeed for the amendment to have been put before the Council, particularly by its two treasurers.

Mr. TEALE agreed with Dr. McVail that they had been well advised. His recollection was that of the cases they had taken into court on the advice of Mr. Muir Mackenzie they had not lost a single one. Were they now to say that they had lost confidence in their legal advisers and were they at the same time going to say that they were to throw away all the experience which Mr. Muir Mackenzie had acquired of the Council's work and procedure? It would require more extraordinary reasons for making a change than any that had been suggested to cause him to do other than object to the motion.

Sir RICHARD THORNE reminded the Council that in addition to its having been pointed out that practically there was an unbroken record of successes in favour of their legal advisers the Council had not heard a single syllable of reflection upon them.

On an appeal by Mr. CARTER Mr. BRYANT consented, with the leave of the Council, to withdraw the amendment.

The PRESIDENT said that he thought Dr. McVail had made a very wise speech and that no case had been made out for the motion. The Council had heard certain statements of a more or less vague kind in its support, but nothing beyond that; and undoubtedly it was a vote of censure on their legal advisers—in his judgment an ill-advised vote of censure which would make him depart from the presidential rule on this occasion by giving his vote against the motion.

Mr. HORSLEY, in replying on the debate, declared that an innocent motion had been gradually twisted into what was called a vote of censure. His proposal was no vote of censure. Had he intended to move a vote of censure he would have framed his motion in terms to unmistakeably show what it was. What he contended was that the legal business of the Council was managed at present in regard to its technical and medical aspects at an extravagant cost. If they took the outside penal cases as an example they would find that they were paying more than they might do, for in paying their solicitor and some one else instructed by him they were paying more than they would need to disburse if the cases were entirely undertaken in the one hand. As to Mr. Muir Mackenzie he did not think they paid that gentleman a farthing too much. His fees as assessor and also for opinions were remarkably moderate. At the same time he knew that Mr. Muir Mackenzie had been asked for counsel's opinion when it was not necessary.

The PRESIDENT: Who requisitioned the opinion? Was it not the Council?

Mr. HORSLEY could not say. He thought the general citing of opinion unnecessarily asked on medical matters was a specific case that might satisfy the Council there was some need for inquiry. To him it certainly showed there was a defect in the conduct of their legal business. Then there was the Whitefoord case. Facts which came out *in camerâ* in regard to that were just the kind of facts he should want the committee to report upon. He was satisfied that amendments in their legal procedure could be introduced with advantage to the Council and its funds.

On a division the motion was rejected by 18 votes to 9, two members declining to vote and one being absent.

The Council adjourned.

WEDNESDAY, MAY 25TH.

The Council met again to-day, when all the members were present except Sir John Batty Tuke. Sir William Turner occupied the chair.

In revising the minutes the Council decided to speak of the "alleged" infringement of the rights and privileges of the members in connexion with Mr. Horsley's statement about access to documents.

Reciprocity of Medical Practice.

Mr. HORSLEY moved:—

That the late President's letter of July 1st, 1897, addressed to the Privy Council on the matter of medical practice in Italy and the publication advertised by the Council, entitled "Reciprocity of Medical Practice in Relation to Foreign Countries," be and are hereby rescinded and withdrawn.

His object in putting this motion on the paper was, he said, that the profession should have a distinct statement from the Council on this very important question of reciprocity of practice between ourselves and foreign countries. There was practically only one country between which and the United Kingdom reciprocity could be said to exist—and that was Italy. It was therefore with considerable feeling that the English practitioners in Italy wrote to this Council last year and asked their help practically to oppose a measure which had been put forward by the Italian Government. This appeal led to a letter being sent to the Privy Council by the President in accordance with a resolution of the Council. In a letter which he addressed to the President he pointed out that a passage in it was not correct. That passage stated that in accordance with the Reciprocity Report "foreign practitioners can practise medicine in Great Britain without restriction. But such foreign practitioners must not take any name or title implying that they are registered." He believed that this statement was not correct as regards the Medical Act, and it was certainly not correct as regards the Apothecaries Act. Further, he would like to point out in relation to the legal question of what liberties were enjoyed by foreigners that the clause of the Act upon which Section 3 of the Reciprocity Report was based clearly indicated that it was not intended that foreigners should have unrestricted practice in this country. If they referred to the Act of 1858 they would find it set forth in Section 56 that "nothing in the said Act contained shall prevent any person not a British subject who shall have obtained from any foreign university a degree or diploma of doctor in medicine, and who shall have passed the regular examinations entitling him to practise medicine in his own country, from being and acting as the resident physician or medical officer of any hospital established exclusively for the relief of foreigners in sickness, provided always that such person is engaged in no medical practice except as such resident physician or medical officer." It was quite clear that the person who drafted that section intended that foreign practitioners were quite at liberty to come here and to occupy positions in certain charitable institutions but they were not to engage in other practice. That was borne out by Section 3 of the Reciprocity Report, which said: "Hospitals established for foreigners may be attended by

foreign practitioners who are entitled to practise in their own country and who are not engaged in other medical practice." He would like to say a word on the general question because there had been a good deal of misapprehension on the part of their friends both at home and abroad. No one would for a moment object to any distinguished foreign practitioner coming to this country and engaging in consultation with British colleagues and exercising the practice of his profession in that way. Many of them had enjoyed the assistance of their foreign colleagues. But there was a great difference between that and practising habitually. Until other countries gave full reciprocity to this country their graduates ought not to be able to come here and practise habitually for gain. This Council had already attempted in a liberal spirit to introduce reciprocity, but its attempts had not been very successful. The reciprocity that the Council extended to America in relation to medical practice had to be withdrawn. Returning to his motion he would say that this Reciprocity Report of the Council was not clear and was not absolutely in accordance with the facts, and he submitted that the best course would be to withdraw the report and also the too wide statements in the letter of July 1st, 1897.

Sir WILLIAM THOMSON formally seconded the motion.

Dr. MACALISTER said he did not see very well how they could withdraw and rescind what had already been sent to the Privy Council and to foreign Governments and what appeared in the minutes of their proceedings. There were numerous instances of entries in their minutes in regard to subjects upon which the opinion of the Council had progressed and in connexion with which the early reports came to be deemed insufficient, but nobody had suggested that these reports should be rescinded and withdrawn. They were simply succeeded by something which was considered more effective. His second objection to the proposal was much stronger and it was this, that it was a roundabout and tortuous method of getting the support of this Council for a contention which Mr. Horsley made and which he had urged in the public prints regarding an opinion of his own. In more than one letter to the public prints he had put forward the opinion, in which he stood in splendid isolation from all legal authorities, that the Medical Acts protect practice and not merely registration. The whole of his argument was directed towards that and by means of this motion he meant to try to get the support of the General Medical Council for argumentative purposes. Without making any pretence to legal knowledge he (Dr. MacAlister) claimed that the statement in the memorandum or treatise was perfectly correct. Foreigners were free to practise medicine in this country and the Medical Acts did nothing to prevent them. They could not practise as apothecaries in England and Wales without being subject to certain penalties—penalties, however, which since 1815 had never been enforced, and which, so far as he was aware, were never likely to be enforced by the Apothecaries' Society.

Mr. CARTER said he was practically the author of the letter objected to and he could explain its history. In drafting it he had before him the statement in the Reciprocity Report to which exception was taken. This statement had been submitted to the President of the Privy Council and had been approved by him. He apprehended that the President of the Privy Council would not approve of anything of this kind without bringing it under the notice of the officials of his department, who would if necessary take legal advice, and having approved the statement the President of the Privy Council undertook to bring it before the notice of the different European Governments through the Secretary of State for Foreign Affairs. To ask the Council to rescind a letter resting upon such authority seemed to him puerile. As to the Apothecaries Act he had the information from Mr. Upton, the solicitor of the Society, that although the Act had been put in force against the owners of bogus diplomas who were practising as notorious quacks it had never been put in force—and he (Mr. Upton) believed no attempt would be made to put it in force—against respectable men holding legitimate qualifications entitling them to practise in their own country and who might settle in this country. He (Mr. Carter) trusted that the Council would not listen to the proposal which had been made.

Dr. GLOVER said he could not quite agree with Dr. MacAlister and Mr. Carter in their representation on this subject, though he hoped Mr. Horsley would not refuse to withdraw his motion. He considered this statement in the Reciprocity treatise very defective and very lax and he thought the Council and the profession were indebted to Mr. Horsley for emphasising the need for greater care as regards definitions. To say that foreign practitioners might practise medicine in Great Britain without restrictions was not correct. The Apothecaries Act might be enforced against them at any moment and whether enforced or not it represented the state of the law.

Mr. TICHBORNE said that the Apothecaries' Hall of Dublin held the same power in Ireland as the Apothecaries' Society of London did in England. Every apothecary who practised in Ireland without the authority of the Hall was liable to a penalty of £20.

Mr. BROWN said there was nothing in the Apothecaries' Act which could interfere with foreign practitioners so long as they did not give out medicine. He regretted much that this should be the state of things, but of course the only thing to do was to alter the law.

Sir RICHARD THORNE pointed out that the treatise simply stated the conditions under which the foreign practitioners were allowed to practise in this country and there could not be the slightest doubt that they were allowed to practise under those conditions. He would gladly see the greatest stringency of reciprocity if he could, but that was not the question now before the Council. The whole question was what was allowed in England and Wales, and it was perfectly clear that all that was named in this document was allowed, was deliberately allowed, and was continued to be allowed. Therefore there was nothing to rescind and absolutely nothing to withdraw.

Dr. BRUCE contended that the 56th Section of the Medical Act of 1858 quoted by Mr. Horsley pointed to this—that the Act recognised no right of a foreigner to practise except in the class of hospital there described.

Dr. MACALISTER said that Section 56 must be read with reference to Section 36 which said that no person could hold certain hospital and other appointments who was not registered under the Act. Section 36 barred the foreigner from acting in a hospital and Section 56 removed the bar so far as a certain class of hospital was concerned.

Sir WILLIAM THOMSON said he did not think that the observations of Dr. MacAlister and Mr. Carter had advanced matters much, and he still felt that Mr. Horsley had made a *primâ facie* case. Whether technically or legally Mr. Horsley's view was right he was not prepared to say, but it appeared to him that he had made out his case that this Council had held two totally different attitudes with regard to this question.

Sir CHRISTOPHER NIXON said it seemed to him an extraordinary thing that whilst this Council was taking such trouble to bring the profession under their control and to exercise a very wise surveillance over its practice they should have foreigners practising in this country absolutely outside their control and surveillance. It occurred to him that the best thing for the unqualified assistants who were calling for a special qualification to do was to go to the continent and get a degree there and come back and practise.

Dr. MCVAIL, discussing the treatise, said that those who drew it up had evidently done so with a desire to induce our Government to do their best to induce foreign Governments to admit all British practitioners practising abroad, and in doing that it appeared to him that they had strained the case. Anybody could practise medicine in this country so long as he did not use any title or name which would lead a person of common sense and ordinary judgment to suppose that he was registered, and to say that "foreign practitioners can practise medicine in Great Britain without restriction" was simply to put them on the same footing as a quack with no qualification whatsoever. Therefore he asserted that the statement was misleading and likely to mislead the foreign Governments to whom it was sent. If Mr. Horsley left out the reference to the late President's letter he would be prepared to support him.

Sir WILLIAM GAIRDNER said that in his opinion a good deal of confusion had arisen from not distinguishing between the legal interpretation of the Medical Acts and the spirit in which they were administered. Members of this Council knew that the hospital to which Mr. Horsley was attached in Queen's-square was mainly got up and floated upon the reputation of a great foreign physician who was invited by THE LANCET to come over to this country in order to take his place in the hospital and nobody showed the slightest jealousy about the gentleman settling in London. There was not even a whisper of

objection to the idea of this great man coming and taking up a London consulting practice and, as he told him himself, earning £4000 in the first year. That was an illustration of the state of feeling in this country. No one ever thought for a moment of objecting to the presence of Dr. Brown-Séquard. Dealing with the spirit of the matter, he had no hesitation in saying that the letter of the late President was a perfectly right representation of things in this country. Further, he asserted that he was morally convinced that if there had been at the time of the passing of the Medical Act a whisper of such an interpretation as Mr. Horsley wished to put on Section 40 they would never have got that section or, indeed, the Act at all.

Dr. LEECH said he objected most emphatically to foreigners having a power in this matter which was not possessed by the natives of this country.

At this stage Mr. HORSLEY announced that he was prepared to amend his motion so that it might read, "That the publication advertised by the Council entitled 'Reciprocity of Medical Practice in Relation to Foreign Countries' be referred to the executive committee for revision." He would leave out the reference to the President's letter and with regard to the Reciprocity Report, he said, his only desire was to have it correct.

Dr. MACALISTER, seconded by Dr. HEBON WATSON, moved as an amendment, "That the memorandum on reciprocity be not reprinted."

This amendment was carried by a large majority and was then put as a substantive motion and adopted with the addition of the words, "without further order of the Council."

Mr. HORSLEY moved the further addition of the words, "and that it be withdrawn from among the publications issued by the Council."

Sir DYCE DUCKWORTH said it might simplify things if he told the Council that the Registrar was not aware of a single copy of the memorandum ever having been sold.

Dr. LITTLE defended the memorandum as a correct statement of the facts of the case.

Mr. HORSLEY, replying to some of the speeches, said he repudiated altogether that this proposal of his was a round-about way of getting support for his views about the Medical Acts. Not only so, but it was well known that this question depended on the Apothecaries Act more than it did upon any interpretation of Section 40 of the Medical Act. It was true that there were certain limitations in putting the Apothecaries Act in force, but it was put in force, and most successfully put in force as might be seen from the newspapers. As to Dr. Brown-Séquard, nobody dreamt of objecting to the presence of so distinguished a man amongst them. This, however, was a question of reciprocity, and in 1892 the French Government introduced a law by which English practitioners could not go to practise in Paris.

When a show of hands was taken the PRESIDENT announced that 10 members had declared in favour of Mr. Horsley's rider and 15 had declared against it. Mr. HORSLEY, however, asked that the votes might be recorded, and on this being done it was found that there was a tie—that 14 members had voted for and an equal number against the rider.

The PRESIDENT said this was the first time he had been called upon to give a casting vote, and it was just as well that he should now announce the principle he intended to follow in the matter. He intended to follow the principle followed by the Speaker in the House of Commons, of giving the vote in favour of the existing state of things because there was no majority in favour of a change. In these circumstances his vote would be against Mr. Horsley's rider.

After some further discussion the motion was finally passed in this form:—

That the memorandum on reciprocity be not reprinted without further order of the Council, and that the memorandum be referred to the executive committee for consideration and report.

The Dublin Apothecaries' Hall.

Attention was directed by Dr. MACALISTER to the following order of business:—

Appointment of Assistant Examiner to the Apothecaries' Hall, Dublin, rendered necessary by the resignation of Mr. Chance as set forth in the following communications referred by the Executive Committee to the General Council.

90, Merrion-square, W., Dublin, April 18th, 1898.

SIR,—I beg to resign the office of assistant examiner in surgery in the Apothecaries' Hall of Ireland as I find that the dates on which the final examinations in surgery are to be held clash with my engagements as examiner to the College of Surgeons.

I desire to return my sincere thanks to the Council for the honour which they have done me by appointing me one of their representatives.

I am, Sir, your obedient servant,
ARTHUR CHANCE.

The Registrar of the General Medical Council.

On the receipt of this letter the Registrar, in view of the fact that it was dated on the day that the examination had been announced by the Hall to begin, wrote asking Mr. Chance, for the information of the committee, if he would state whether he officiated at that examination, or intended his resignation to take effect prior to its commencement. The following reply was received:—

90, Merrion-square, W., Dublin, April 21st, 1898.

Dear Sir,—Until I received your letter of the 20th, I had no knowledge that an examination was in progress at the Apothecaries' Hall. I called there to-day and was informed that the next surgical examination would be held in July, and that as yet no candidate had entered for it.

I would be most unwilling to inconvenience the Council.

Yours faithfully,
ARTHUR CHANCE.

Dr. MacAlister said it was hoped that Mr. Chance would reconsider his decision to resign, but after negociations with him he had received a telegram indicating that reconsideration was impossible. In these circumstances the Council had to deal with a matter of urgency and he hoped they would consent to his motion to appoint a committee to consider the appointment of an assistant-examiner in the room of Mr. Chance.

Mr. TICHBORNE seconded, and a committee, including Mr. Brudenell Carter, Dr. Little, Dr. Heron Watson, and Mr. Tichborne, was agreed to.

Council Documents.

The REGISTRAR (Mr. Allen) read the following notice of motion by Dr. Glover:—

That members of the Council who desire access to documents which are the property of the Council be required to obtain leave for inspection either (1) from the Council, (2) from the Executive Committee, or (3) when neither body is in session from the President. The application for leave to be in writing and to state the nature of the documents to which access is desired and also the purpose for which the inspection is to be made.

Dr. GLOVER, in moving in accordance with the foregoing notice, expressed the opinion that enough had already been said on this subject to show that there was necessity for some regulation and at the same time to show that it was the universal wish of the members of the Council to have an opportunity when necessary to consult documents which came into the hands of the Council. It was right that the members should have the means of referring to such documents and he hoped that the modifications and conditions he proposed would be accepted by the Council, and that the working would be such as to give satisfaction to all parties concerned.

Dr. BRUCE seconded the motion.

After some suggestions and alteration of the phraseology of the proposal by the President, Dr. Pettigrew, and Sir Richard Thorne,

Mr. BROWN moved as an amendment:—

That the Registrar be instructed to place, on the first day of each month, on the table in one of the committee-rooms, all petitions, memorials, letters, and documents relating to the business of the Council—communications relating to purely registration business excepted—which may have been addressed to the Council during the previous month, and that they may be open to the inspection of members of the Council during business hours for the first three days in each month.

As this amendment did not find a seconder, the Council proceeded to amend Dr. Glover's motion.

The PRESIDENT suggested that "(3)" should read thus, "When neither body is in session, or about to be in session, from the President."

Mr. TOMES thought the "about to be in session" would operate adversely just at the very time members would consider it was desirable to inspect Council documents. He wished to know how many days "about to be" might mean?

The PRESIDENT did not know that he should be confined to a day or two in his definition. Supposing, however, there was an application made to him on the Friday and the executive committee was to meet on the following Monday, he should certainly say that he would refer the application to the executive committee rather than give a decision in regard to it himself on the Friday.

The alteration was accepted.

The PRESIDENT further suggested that the phrase "to state the nature of the documents to which access is desired" was too narrow. He thought it might be "to specify as far as possible the nature of the documents."

This suggestion was also agreed to.

Dr. PETTIGREW thought that if access to Council documents was obtainable it should be only for the purposes of the Council. The information that might be gleaned from inspection of those documents should not be given to the public before it was made known to the Council. He suggested the amendment of the motion by the addition of the words "no information so obtained shall be made public without the leave of the Council."

Sir RICHARD THORNE felt the need of some such words as these, seeing that many of the documents must contain matter affecting the character of individuals.

Ultimately Dr. PETTIGREW consented to adopt the following words: "All information so obtained shall be regarded as strictly confidential."

Some discussion also took place in regard to documents in penal cases.

Dr. MCVAIL was of opinion that in no case should these be open to inspection.

The PRESIDENT, while agreeing, wished to have the chair protected.

Dr. MACALISTER thereupon suggested that leave to inspect documents relating to penal cases should not be obtained except from the Council.

This suggestion met the final difficulty, and Dr. Glover's motion was unanimously passed in the following form:

That members of the Council who desire access to documents which are the property of the Council be required to obtain leave for inspection either (1) from the Council, (2) from the Executive Committee, or (3) when neither body is in session or about to be in session from the President. The application for leave to be in writing and to specify as far as possible the nature of the documents to which access is desired and also the purpose for which the inspection is to be made. Leave to inspect documents relating to penal cases not to be obtained except from the Council. All information so obtained shall be regarded as strictly confidential.

The PRESIDENT suggested that this would be a Standing Order, but no motion to the effect was made.

Midwives Bill.

The REGISTRAR read the following letter from the secretary of the Midwives Bill Committee, remitted by the executive committee to the General Council:—

MIDWIVES BILL COMMITTEE.
Office: 12, Buckingham-street,
Strand, W.C., May 19th, 1898.

Regulation of the Practice of Midwives.

SIR,—On May 2nd the Lord President of the Privy Council received a deputation of the promoters of the Midwives Registration Bill now before Parliament. The Lord President entered fully into the subject and pressed on the promoters of the measure the extreme desirability of their coming to some definite understanding with the medical profession as represented by the General Medical Council.

As directed by the Lord President, the Midwives Bill Committee at their last meeting resolved to approach the General Medical Council with the view of making such alterations in the present Bill as would secure for it the support of the General Medical Council or of arriving at a clear understanding with regard to the lines upon which another Bill should, in their opinion, be framed. With this object the promoters of the Bill have appointed seven delegates, four of whom are members of the Midwives Bill Committee, one being Mr. J. B. Balfour, M.P., and the others medical members of that Committee; while the remaining three delegates are members of the Association for promoting Compulsory Registration of Midwives, a body representing a section of the general community in sympathy with the movement.

The promoters of the Bill have carefully studied the recent report of the General Medical Council to the Lord President, and are especially anxious to ascertain the precise bearing of some of the clauses of that report, as well as the opinion of the General Medical Council on some important points not explicitly mentioned in it.

I am therefore instructed by the Midwives Bill Committee to inquire whether the General Medical Council would be willing to receive the above referred to delegates of the promoters of the Bill, or to appoint a committee to confer with them.

I have the honour to be, Sir, your most obedient servant,
ROWLAND HUMPHREYS,
Honorary Secretary, Midwives Bill Committee.
To the President of the General Medical Council.

On the programme there was this notice of motion by Dr. BRUCE:—

That a committee consisting of Sir Richard Thorne, Dr. Glover, and Dr. MacAlister be appointed to confer with the delegates from the Midwives Bill Committee and to report to the Council.

Dr. MCVAIL objected to the form of this notice. He thought it was necessary that the Council should agree to the appointment of a committee before they named the committee.

Dr. BRUCE was quite willing to move for the appointment of the committee, and if his motion was agreed to to nominate the members of whom it should consist. He moved the motion according to notice.

Dr. LOMBE ATTHILL seconded the proposal.

Dr. MCVAIL objected. He said it was a very important step to take to appoint a committee to meet with this Committee on the Midwives Bill. It meant that the Council believed that so far as the two bodies were concerned they were now very near together, and that practically they had only to settle on details. The letter that had been read did not say whether the Midwives Bill Committee had accepted the resolutions on the subject which the Council passed at their special session seven weeks ago. It simply said that they were recommended by the Lord President of the Privy Council to come to terms with the General Medical Council and not by any means that they had accepted generally the conclusions that the Council had come to. If the letter had borne intimation of their acceptance of the Council's conclusions he could have no objection whatever to a committee being appointed to meet the promoters, but the letter did not say that, and considering the importance of the General Medical Council the full discussion on the subject which had taken place in April, and the very emphatic reply the Duke of Devonshire made to the deputation, the very least the promoters of the Bill could have done, if they wanted the General Medical Council to fall into line, was to have stated their general agreement or acceptance of the Council's April conclusions. He did not think they were in a position just then to appoint a committee of the kind proposed. At the same time he certainly would in no way stand against a deputation of that body coming to the Council, as, if it came to the Council, the whole Council would then hear whether the committee in question had decided to accept what the Council agreed to in April, and would be in a position to say that a committee might be appointed to see that a proper Bill was drawn up for the inspection of the Council. Taking the letter as they had it he did not think it justified them in appointing the committee moved for.

Mr. BRUDENELL CARTER pointed out that the letter contained the following passage:—"The Midwives Bill Committee resolved to approach the General Medical Council with the view of making such alterations in the present bill as would secure for it the support of the General Medical Council." He could not help thinking that that was what Dr. McVail wanted.

Dr. MCVAIL: I don't think that is at all full enough.

Mr. HORSLEY thought it was really due to the Council that the letter should have indicated an acceptance of the Council's conclusions on the subject. The Committee said they were anxious to ascertain the precise bearing of some of the clauses of the Council's findings. He could not see what more information could be granted to elucidate the bearing of the clauses in question. What were the clauses that seemed to the Midwives Bill Committee to be obscure? They were not told. He quite admitted that the position of the letter quoted by Mr. Carter did in a general way express the desire of the Midwives Bill Committee to fall into line with the General Medical Council, but it did not actually say that there was no other desire. He must vote against the proposal to appoint a committee.

Sir DYCE DUCKWORTH thought that as a matter of propriety and common sense this Midwives Bill Committee could come and meet the committee of the Council without the slightest fear that anything but good would result. The Committee could not express all they felt in a letter. The only thing he should be inclined to insist upon would be that the members of the Council's committee should be gentlemen who were very firm and knew their own minds, and who would not in any degree be inclined to whittle away the results that after long debate they had arrived at at the special session last April.

Dr. MACALISTER remarked that when he consented to his name being used in connexion with the motion he understood that all the proposed committee was to do was to hear the views of the Midwives Bill Committee and report to the Council. There were to be no negotiations with that Committee.

Dr. LOMBE ATTHILL explained that Dr. MacAlister's view of the position was his also. It would be wasting time if the Council itself received a deputation.

Mr. HORSLEY said that if such was the intention and if this proposed committee was only to hear what delegates had to say without negotiating with them he had no further objection to the motion.

Sir WILLIAM THOMSON remarked that the Midwives Bill

Committee obviously wanted a discussion on the principles of the Bill and that, he thought, passed a good deal beyond the mere reception of delegates and the hearing of what they might say.

Sir C. NIXON thought the Committee in question should state their case in writing to the Council. It would be a mistake to deal with any such body otherwise than by correspondence.

Mr. BRYANT said it had been his privilege to see three or four members of this Midwives Bill Committee, all of whom were extremely anxious to see how they could make a Bill that would embody the opinions of the General Medical Council. They were at present in doubt as to the bearings of some of the Council's April resolutions, and he thought it was only to have information in regard to that that they asked for the interview. Their desire certainly was to have a Bill which would be quite acceptable to the General Medical Council.

Sir WILLIAM GAIRDNER was afraid that the Committee in question wanted the interview with the General Medical Council in order to persuade them to alter as little as possible the old objectionable Bill. They must not have that old Bill again or any one that looked the least like it.

Dr. LEECH said that in the letter the Committee referred to "another Bill." It was very important that the Council should appoint a committee to meet them.

Dr. MCVAIL moved:—

That the Midwives Bill Committee be informed that the General Medical Council is willing to receive a deputation of the Committee during the present session.

It would be better to receive the Committee when and where reporters were present than to have a private meeting from which each member would gain a different impression and endeavour to make it public.

Mr. HORSLEY seconded.

Dr. CHURCH thought it would be more convenient if a committee of the Council received the Midwives Bill Committee.

The Council voted and, rejecting Dr. McVail's proposal by 16 votes to 9, accepted Dr. Bruce's motion by 17 votes to 6 It was consequently agreed that the Midwives Bill Committee should be heard by a committee of the Council.

Dr. BRUCE moved that the committee should consist of Dr. MacAlister, Dr. Glover, and Sir Richard Thorne, all of whom, he said, were intimately acquainted with the subject and were men whose opinions on it were known to be decided.

Dr. LOMBE ATTHILL seconded the motion.

Dr. MCVAIL proposed that Sir Christopher Nixon should also be a member of the committee. He would be an admirable counterpoise to Dr. Glover.

Sir C. NIXON did not want to be a counterpoise. He had no wish to serve on this committee.

Dr. BRUCE remarked that as the ability and influence of Dr. Glover had been given due weight to he had no objection to the proposed counterpoise.

After some conversation the committee of four was agreed to.

The Council adjourned.

THURSDAY, MAY 26TH.

The Council met again to-day and occupied its time mainly with the consideration of penal cases. The proceedings will be duly reported in THE LANCET next week.

DIPHTHERIA IN LONDON.—The deaths from diphtheria in London last week numbered 31, an advance on the preceding week which was to be looked for in view of past experience and of the subnormal total of the week immediately antecendent. Thus the number last week was 31, as compared with 39, 27, and 20 in the three previous weeks, the 31 being 7 below the corrected decennial average for the corresponding week of the period 1888–97. Four of the deaths were credited to Lewisham, whilst Islington, St. Luke, Poplar, and Battersea sanitary areas were each of them credited with 3 deaths. All but 1 of the 31 were of young persons aged under twenty years, 8 being of persons aged over five years. The admissions to hospital in the week were 130 in number, against 110, 133, and 131 in the three preceding weeks; and 953 cases remained under isolation on Saturday last. In the Outer Ring only 8 deaths were last week registered from diphtheria, and of these 4 occurred in the Hendon registration district.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Examiners:—

Wednesday, May 18th:

Thomas Henry Edwards, St. Thomas's Hospital; Walter Fedde Fedden, St. George's Hospital; William Francis Victor Bonney, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.S. Lond., Middlesex Hospital; and Henry Simpson Newland, M.R.C.S. Eng., L.R.C.P. Lond., M.B., Ch.B. Adel., Adelaide University and London Hospital.

Twelve gentlemen were referred for six months.

Thursday, May 19th:

Angelo Matteo Crabtree, M.R.C.S. Eng., L.R.C.P. Lond., Alfred Ernest John Lister, and Alexander Robert Tweedie, St. Bartholomew's Hospital; Norman Navarra, Middlesex Hospital; Hermann Balean, London Hospital; James Atkinson Bonnin, M.R.C.S. Eng., L.R.C.P. Lond., M.B., Ch.B. Adel., Adelaide University and London Hospital; and Fergus Menteith Ogilvie, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.C. Cantab., Cambridge University and St. George's Hospital.

Thirteen gentlemen were referred for six months.

Friday, May 20th:

Tom Pettey, M.R.C.S. Eng., L.R.C.P. Lond., M.D., C.M. Edin., Edinburgh University and Charing-cross Hospital; John Law Adam, M.B., C.M. Aberd., Aberdeen University, Middlesex Hospital, and King's College, London; Leethem Reynolds, B.A. Cantab., Cambridge University and St. Mary's Hospital; John Campin Newman, St. Bartholomew's Hospital; Robert Cyril Turnbull, London Hospital; Richard Warren, B.A. Oxon., Oxford University and London Hospital; and Dudley George Greenfield, Guy's Hospital.

Thirteen gentlemen were referred for six months.

Monday, May 23rd:

Hugh McDowall Parrott, Francis George Cross, and Percy William Leopold Camps, Guy's Hospital; William Henville Lowman, King's College, London; Alfred Bertram Soltau and Benjamin Charles Broomhall, London Hospital; and Thomas Crisp English, St. George's Hospital.

Thirteen gentlemen were referred for six months.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the subjects indicated:—

Surgery.—F. Atthill (Section II.), Charing-cross Hospital; D. Davies, London Hospital; M. Paine (Section I.), Royal Free Hospital; and H. Spinks, Manchester.

Medicine.—E. Fryer and W. J. Henson, Guy's Hospital; F. A. Leete (Section II.) and M. Paine (Section I.), Royal Free Hospital; and C. C. Pratt, St. George's Hospital and Bristol.

Forensic Medicine.—M. Paine, Royal Free Hospital; C. C. Pratt, St. George's Hospital and Bristol; and H. J. Watts, Manchester.

Midwifery.—J. Ash, St. Thomas's Hospital; L. D. B. Cogan, E. Fryer, and W. J. Henson, Guy's Hospital; F. A. Leete, Royal Free Hospital; S. J. Meredith, Birmingham and London Hospital; G. H. Proctor, London Hospital; and H. Spinks, Manchester.

The diploma of the Society was granted to the following candidates: Messrs. J. Ash, W. J. Henson, and H. Spinks.

UNIVERSITY OF LONDON.—At the M.B. examination in May the following candidates passed in the divisions indicated:—

First Division.—Percy Edward Adams, St. Bartholomew's Hospital; Arthur John Cleveland, Guy's Hospital; William Joshua Harding, St. Bartholomew's Hospital; and Aubrey Alfred Montague, St. Thomas's Hospital.

Second Division.—Frederick Holgate Atkinson, Charing Cross Hospital; Joseph Faulkner Dobson, Yorkshire College and General Infirmary, Leeds; William Norwood East, Guy's Hospital; Richard Cullingworth Field, School of Medicine and General Infirmary, Leeds; Richard Truman FitzHugh, Guy's Hospital; Lucy Elizabeth Harris, Royal Free Hospital; Ronald Hatfield, St. Bartholomew's Hospital; William James Hirst, Yorkshire College and General Infirmary, Leeds; Robert Hughes, St. Thomas's Hospital; Frank Harwood Jacob, King's College; John David Jenkins, London Hospital; Richard Kay, Guy's Hospital; William Douglas Knocker, St. Thomas's Hospital; Marian Sanford Linton, B.A., London School of Medicine and Royal Free Hospital; Ethilda Budgt. Meakin Meakin, Royal Free Hospital; Frederic Archibald Hope Michôd, St. Mary's Hospital; Egbert Coleby Morland, B.Sc., St. Bartholomew's Hospital; John Basil Page and Alfred Ernest Payne, St. Mary's Hospital; Clive Rivière, St. Bartholomew's Hospital; Edward Lionel Macpherson Rusby and Justus Martin Schaub, King's College; Reginald Oliver Sibley, St. Mary's Hospital; and Daniel Lloyd Smith, Guy's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Fellowship Examination.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—Mr. A. J. M'A. Blaney, M.B., B.Ch. R.U.I.; Miss R. Cohen, M.B., Univ. Calcutta; Mr. W. J. Corbett, L.R.C.P. & S. Irel.; Mr. J. Dundon, M.B., B.Ch. R.U.I.; Mr. H. S. Jackson, L.R.C.S. Irel.; and Mr. W. Taylor, L.R.C.P. & S. Irel.

PLYMOUTH BOROUGH ASYLUM.—The report of the Plymouth Borough Asylum has just been issued. It states that on Jan. 1st, 1897, there were 243 patients. During the year 98 cases had been admitted, the largest number of any admissions in any previous similar period.

LITERARY INTELLIGENCE.—Messrs. Whittaker and Co. announce that immediately following the publication of the new edition of the British Pharmacopœia they will issue a new and enlarged edition of the "Chemist's Compendium," by Mr. C. J. S. Thompson, which will be entirely revised and brought up to date, with the addition of much new matter and many important features. The additions will include: a complete synopsis of the new edition of the British Pharmacopœia (with essential details); a synopsis of the United States Pharmacopœia; a synopsis of the French Codex; modern remedies, brought up to date of publication; new photographic formulæ; formulæ for preparing medicated wools and surgical dressings; miscellaneous formulæ, including recipes for all well-known unofficial preparations.

BRISTOL ROYAL INFIRMARY.—The case of the Bristol Royal Infirmary *v.* Arlett was heard on May 18th before Mr. Justice Barnes. The governors of the infirmary propounded a will of June 3rd, 1891, by which the late Mr. Charles Jones, M.R.C.S. Eng., L.S.A., of Bristol, had left the whole of his property, between £3000 and £4000, to that institution. The defendant, a widowed sister of the deceased, opposed the will, alleging that her brother was not of sound mind at the time and she set up an earlier will by which she was sole legatee of the property. A verdict was given for the defendant.—The annual distribution of prizes to the students of the Bristol Royal Infirmary took place on May 10th. Sir Charles Cave, Bart., president and treasurer, presided, and after a few words of congratulation to the successful students distributed the prizes and certificates as follows:—Suple medical prize and gold medal, Mr. J. J. S. Lucas; ditto, extra, Mr. S. V. Stock; Suple surgical prize and gold medal, Mr. James Phillips; Clark prize, Mr. J. R. Frost; Tibbits memorial prize, Mr. J. Phillips; Crosby Leonard prize, Mr. M. H. Phillips; ophthalmic prize, Mr. A. B. Cridland; midwifery prize, Mr. F. A. Coates; special midwifery certificates, Mr. F. Cox, Mr. G. H. Irvine, Mr. C. M. Mitchell, Mr. C. Morgan, Mr. E. M. Pearse, and Mr. S. V. Stock.

BIRKENHEAD MEDICAL SOCIETY.—The annual dinner of this society was held on April 30th in the Masonic Hall, the President (Dr. R. Sydney Marsden) being in the chair. There was a large attendance, the three vice-chairs being occupied by Dr. A. C. E. Harris, J.P., Mr. W. C. Cornwall, J.P., and Mr. A. Stewart. Amongst those present were the Rev. Dr. Knox, the President of the Liverpool Medical Institution (Dr. Macfie Campbell), the President of the Literary and Scientific Society (Mr. Nazeby Harrington), Professor Boyce, Professor Carter, Professor Glynn, Professor Rushton Parker, Professor Wallace, and Professor Mitchell Banks of University College, Liverpool; Dr. Barr, Dr. Briggs, Dr. Blood, Dr. Brien, Mr. Butcher, Dr. Caton, Dr. P. Davidson, Dr. W. R. Floyd, Dr. Stanley Hill, Dr. Grimsdale, Dr. Gemmell, Dr. Gorringe, Dr. Hamilton, Mr. Hunt, Dr. F. Johnston, Dr. Lambert, Mr. Marsh, Dr. Murray, Dr. Tawse-Nesbitt, Dr. Permewan, Mr. T. L. Pearson, Dr. Pinkerton, Mr. Shears, and Mr. Vacher, the Borough Coroner, and Mr. Thomas Mansell, L.D.S., and Mr. F. Griffin. After the loyal toast Mr. Vacher proposed "University College, Liverpool," which was responded to by Professor Glynn and Professor Boyce. "The Birkenhead Medical Society" was given by Professor Carter and responded to by Dr. Marsden; and "Kindred Societies" was proposed by Dr. Johnston and replied to by Dr. Macfie Campbell, Mr. Harrington, and Dr. Barr.—The annual meeting of the society was held on May 13th, Dr. R. Sydney Marsden (President) being in the chair. The following gentlemen were elected office-bearers for the ensuing year 1898-99: President: Francis Johnston, M.D., C.M.Glasg. Vice-President: H. Nazeby Harrington, M.R.C.S. Eng. Treasurer: James Pinkerton, M.D. R.U.I. Secretary: William Leask, M.B., C.M. Edin. Librarian: S. Wilkinson, M.R.C.S. Eng. Council: Francis Vacher, M.R.C.P., F.R.C.S. Edin.; W. R. Floyd, B.A., M.B., Ch.B. Cantab.; J. H. Jardon, M.R.C.S. Eng.; A. Herbert Butcher, L.R.C.P. Irel., M.R.C.S. Edin.; and Ellis Pearson, L.R.C.P. & S. Edin. Editor: H. H. Preece, L.R.C.P. & S. Edin. A valedictory address was given by the retiring President, Dr. Marsden.

ON the occasion of the recent visit of the Prince of Wales to Southport the following medical gentlemen were presented to His Royal Highness: Alderman Sir G. Pilkington, Dr. G. H. Pollard (ex-Mayor of Southport), Councillor Thos. Hammond Fisher, and Councillor J. J. Weaver.

PRESENTATION TO A MEDICAL MAN.—Mr. Richard Greene, F.R.C.P. Edin., who has resigned the post of medical superintendent of the Berry Wood County Asylum, Northampton, owing to ill health, is to be the recipient of an illuminated address signed by the members of the committees of visitors of the institution with which he has been connected as medical superintendent for the past twenty years.

THE ROYAL AQUARIUM.—During the Whitsuntide holidays an Art Metal Exhibition, of which his Grace the Duke of Westminster is Hon. President, will be held at the Royal Aquarium. This is the first Art Metal Exhibition yet held in London; it will be complete in every detail. The loan collections will be of immense value and interest and include armour from almost every known collection. Her Most Gracious Majesty the Queen is sending a collection valued at many thousands of pounds.

FALMOUTH.—Sir Joseph Fayrer, now a resident at Falmouth, laid the foundation-stone of an extension of the Falmouth Hotel on May 20th, and in alluding to the climate said that subtropical plants flourished throughout the year there, and rhododendrons and camellias flowered throughout the winter in the open air. Mr. E. Kitto, superintendent of the Falmouth Observatory, submitted returns extending over a period of twenty-five years to prove the equality of the climate with that of the south of France.

WELL WATER IN BRISTOL.—At the meeting of the Bristol Health Committee held on May 17th the medical officer of health (Dr. D. S. Davies) reported that since the extension of the city boundary in November last he had examined 48 samples of the well water-supplies in the extended area of Bristol. Of this number 2 showed no evidence of pollution and one other well required cleansing only; the remaining 45 showed evidence of sewage pollution, in many instances of the grossest possible kind. Steps were immediately taken to close the wells.

MRS. MOLYNEUX, the Australian actress, who has been playing Renée in Mr. Abud's Under the Red Robe Company, is arranging a *matinée* on June 9th in aid of the Convalescent Home for Children in connexion with Charing-cross Hospital. Mr. Gatti has kindly given the Vaudeville Theatre for the occasion; the stage hands are also giving their services. Among those who have generously offered assistance are: Miss Dorothea Baird, Miss Ethel Haydon, Miss Marguerite Cornille, Miss Bessie Wentworth, Mr. Dan Leno, Mr. George Robey, Mr. Harry Randall, Mr. Arthur Roberts, Mr. Dawson Millivans, Mr. Laurence Irving and Mr. Eugene Stratton.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The twenty-second annual meeting of this association was held on May 23rd, at the Conjoint Examination Hall, Victoria Embankment, Dr. G. Sims Woodhead presiding. The annual report stated that there had been enrolled during the year 24 new members, 136 student associates, and 1 lay associate, making a total of 486 members, 424 student associates, and 3 lay associates. The names of the successful competitors for prizes for essays on Alcohol and the Nervous System by fourth-years' students were announced, the first being that of Mr. E. A. Boxer, of Edinburgh University, and the second that of Miss L. Beatty, of Queen's College, Belfast. After the meeting a conference was held with medical officers of metropolitan workhouse infirmaries and Poor-law unions, at which a paper on Alcohol in Relation to Sick and Healthy Paupers was read by Mr. W. C. Amery, and discussed by Mr. Spurrell, Dr. Evans, Dr. Potter, Dr. Burton, Dr. Webster, Dr. Ridge, Dr. Stewart, Dr. Morton, and Dr. Poole, and the following resolution was carried unanimously: "That this conference of medical officers of infirmaries with members of the British Medical Temperance Association declares its opinion that medical officers of infirmaries, workhouses and Poor-law districts should reduce the prescription of alcoholic liquors both to

sick and healthy paupers to the lowest possible limits, while feeling that it must leave the matter in the hands of those who are responsible for the medical treatment."

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

THIS measure has been relegated to the twenty-sixth place in the orders for Wednesday, June 8th, when there is not the slightest chance of it being discussed. On Friday, May 20th, Mr. Heywood Johnstone, one of the leading supporters of the Bill, presented in the House of Commons 263 petitions, signed by nearly 12,000 persons, asking the House to act upon the recommendations of the two select committees which have inquired into the question.

New Prison Rules.

The Home Secretary has presented to the Grand Committee of the House of Commons which is engaged in the consideration of the Prisons Bill his new set of rules for prison management. Among other things the new rules reduce the period of solitary confinement to six months and free from this form of punishment altogether the prisoner whose mental or physical condition is in the opinion of the medical officer such as to render it advisable that he should be employed in associated labour. They also provide for open-air exercise in certain cases and they abolish the crank and the treadmill.

The Lunacy Bill.

This Bill has passed through Committee of the whole House of the House of Lords without amendment, and now falls to be considered by the Standing Committee of that chamber.

HOUSE OF COMMONS.

MONDAY, MAY 23RD.

Contaminated Shell-fish.

Mr. Chaplin, in reply to a question by Mr. Loder, said that whenever the state of public business permitted he would introduce the promised measure with regard to sewage-contaminated shell-fish.

Medical Service in Maryborough Prison.

Mr. Arthur O'Connor asked the Secretary to the Treasury whether the note appended to vote 20, of Class 3, of the Civil Service Estimates, to the effect that the post of visiting medical officer of Maryborough Prison was to be abolished on vacancy might be accepted as correct; and whether, if the post was not abolished, it was to be kept for some particular person or would be open for the appointment of the best qualified candidate.—Mr. Hanbury replied that the note to which the hon. Member referred was added to the estimate in connexion with a revision of the salary of the resident medical officer at Maryborough Prison in 1896. That officer's salary was sanctioned by the Treasury on condition that the office of visiting physician should be abolished on a vacancy and that the resident medical officer should then be required to undertake whatever extra duty there might be. He was not aware of any intention to depart from that arrangement.

A Parish Medical Officer and his Appointment.

Sir Leonard Lyell asked the Lord Advocate whether he was aware that the parish council of Stronsay had given notice of dismissal to the parish medical officer, although no grounds of complaint had been made; whether a parish council was within its right in dismissing its doctor without making specific charges; and whether the doctor had any right of appeal to the Local Government Board for an inquiry into the case.—The Lord Advocate replied: I am informed by the Local Government Board for Scotland that it is the case that the Parish Council have given notice of dismissal to their medical officer and that they decline to furnish him with their reasons. They are within their rights in doing so and although I am informed that the Local Government Board have in this case asked the parish council for their reasons I am not aware that the medical officer has any right of appeal in the matter.

Adulteration of Food Products.

Mr. Chaplin announced, in reply to three questions on the subject, that he hoped very shortly to be able to introduce his Bill dealing with the adulteration of food products.

Lead Poisoning in the Potteries.

Sir Matthew White Ridley, replying to questions on this subject, said that he had appointed two experts, one of them a chemist, Dr. Thorpe, the head of the Government laboratory, the other a medical man, Dr. Oliver, who had served already on several dangerous trades committees. He had left the scope of the inquiry to some extent to the discretion of the experts who would be able to follow up any line of inquiry which seemed likely to lead to useful results. The main point, however, would be to ascertain the extent to which various materials recommended as harmless substitutes for carbonate of lead were free from the dangers attending the latter. The suitability of these materials for the purposes of the trade was mainly a question for the manufacturers but it was possible on this point also that experts might render some assistance. Inquiries had been addressed to the chief foreign Governments on the subject but their replies had not yet been received.

Uncertified Deaths in Inverness-shire.

Mr. Weir asked the Lord Advocate whether he was aware that the medical officer of health of Inverness in his report for the year 1897, in calling attention to the numerous uncertified deaths, stated that in the case of six parishes in which the entire number of deaths during the year amounted to 367, as many as 225 of that number were uncertified by a medical practitioner; and would he say whether the Government proposed to take any steps in the matter.—The Lord Advocate replied: I am informed by the Local Government Board that they have observed the statement of the medical officer of health of Inverness-shire as to the excessive number of uncertified deaths in certain parishes. The question has, I understand, been frequently brought under the notice of the Board, but it is difficult to suggest a practical remedy. As the hon. Member is no doubt aware, the general question of death certification was fully reported on by a Select Committee of this House in 1893.

The Midwives Question.

Mr. Heywood Johnstone asked the First Lord of the Treasury if his attention had been drawn to the resolutions passed by the Council of the Royal College of Surgeons of England on May 4th, approving and adopting the report of the General Medical Council on the Midwives Registration Bill, brought in by the right honourable Member for Clackmannan and Kinross, in which it was stated that it was desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risk which they now incur from the unregulated practice of midwives, many of whom were ignorant and unskilful and most of whom pursue their calling without due medical supervision; if he was aware that the question of compulsory registration of midwives had been considered by select committees of this House in two sessions of Parliament, and that both committees had reported unanimously in favour of a system of registration; and whether, having regard to the reports of the select committees and to the opinions recently expressed by the General Medical Council and by the Royal College of Surgeons as to the need for legislation on this subject, he would either give facilities for the discussion of the Bill brought in by the right honourable Member or undertake to deal with it by a Government Bill in the present session of Parliament.—Sir Michael Hicks Beach, replying for Mr. Balfour, said: The facts are in the main as stated, but my hon. friend has omitted to point out that the report of the General Medical Council was far from endorsing the methods proposed in the Bill. I am afraid I cannot give a favourable answer to the last paragraph.

TUESDAY, MAY 24TH.

The Petroleum Inquiry.

Mr. Ascroft asked the Home Secretary whether, having regard to the large number of deaths which annually occur in the United Kingdom in connexion with the use of petroleum and to the great weight of evidence given before the Petroleum Committee in favour of raising the minimum flash point for petroleum, he would invite the Committee to immediately present an interim report upon this portion of the inquiry with a view to the introduction during the present session of a short Bill, with the object of at once checking the deplorable loss of life which now occurs.—Mr. Jesse Collings, who is chairman of the Select Committee, replied to the question as follows: The Committee have finished taking evidence and the report is being prepared and it will be sent to the Department at the earliest possible date.

Medical Practice in India.

Sir Walter Foster asked the Secretary of State for India whether he was aware that at present uneducated and unqualified persons have as much right to practise medicine in India as fully qualified practitioners; and whether in view of the danger to which the Indian people are thereby exposed he would consider the advisability of instituting a system of registration for medical practitioners similar to that which exists in Great Britain and Ireland.—Lord George Hamilton replied: The answer to the first branch of the question is in the affirmative and that to the second branch in the negative. It would be, in my judgment, impossible in the present condition of India to prevent the people of that country from resorting to native practitioners, even though they may be regarded by Europeans as not fully educated or qualified for the work they undertake.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDERSON, FREDERICK THOMAS, M.D. Brux., F.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for Atherington Parish by the Barnstaple Board of Guardians.

BARLING, A. S., M.R.C.S., L.R.C.P., has been appointed Surgeon to H.M. Prison in Lancaster Castle.

BARRETT, R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gedney Hill Sanitary District of the Holbeach Union.

BLACK, C., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Workhouse of the Sheffield Union.

BOWDEN, W. J., M.B., Ch.B. Vict., has been appointed a Medical Officer for the Glossop Union by the Glossop Board of Guardians.

BRABYN, G. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a District Medical Officer for South Wimbledon.

BRANNAN, F., M.B., B.Ch. Irel., has been appointed Medical Officer for the Castledermot (co. Kildare) Dispensary District.

CARRUTHERS, A. E., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Bath Union.

CHITALE, V. N., F.R.C.S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed an Assistant Medical Officer for the Workhouse of the Aston Union.

is constructed of glazed earthenware, holds about 5 litres and has a lid round the inside of the rim of which is placed an indiarubber collar. Attached to the centre of the lid and springing from it are three iron arms the ends of which fit into grooves in the rim of the pan. By means of a screw this three-way iron clamp can be made to hold down the lid tightly and the vessel is practically hermetically sealed until such time as the contents can be safely disposed of. The idea is a good one, but it seems to us that if it were found possible to substitute a band of asbestos for the rubber collar it would be an improvement. The band could then be placed in the fire and effectually cleansed should it become soiled.

"DR." BELL.

THE scoundrel who trades under this name still continues to distribute his filthy little "brochure." His name used to be Henry Walters, and on Jan. 28th, 1896, he was fined at Marlborough police court £20 and six guineas costs for calling himself Dr. Bell. In the 1898 edition of the "brochure" are two letters purporting to be signed by qualified medical men, but neither of their names appears in the Medical Register In our issue of Feb. 1st, 1896, we remarked that Henry Walters was a liar and a swindler and we continue to consider the author of the brochure the same type of character. He may or may not be Henry Walters, but whoever he is he deserves punishment.

"THE POSITION OF THE HOSPITAL MEDICAL OFFICER AS WITNESS AT AN INQUEST."

To the Editors of THE LANCET.

SIRS,—At a coroner's inquest in this hospital, having been ordered to make a post-mortem examination, I was allowed a fee of £1 2s.—one guinea for evidence and one guinea for making the necropsy. Two months later I am asked by the coroner to refund the money as objection has been raised by the county authorities. Am I liable for such a mistake on the part of the coroner and ought I in any case to comply with his request? Awaiting a reply in your next issue,

I am, Sirs, yours faithfully,

May 20th, 1898. HOUSE SURGEON.

*** The fee must be returned. Our correspondent will find a note in THE LANCET of May 21st, page 1415, dealing with the situation. The house surgeon's position is not so hard as that of the honorary staff in most cases.—ED. L.

NIGHT CALLS FROM THE METROPOLITAN POLICE.

To the Editors of THE LANCET.

SIRS,—At 1 A.M. on May 17th I was aroused by a constable of the Metropolitan Police and was requested to come and see a man in a fit. Although suffering from the effects of a chill I went with the constable to see the case. On my arrival I found another practitioner in attendance who came from exactly the opposite direction to that in which I live. I took the constable's number and receiving no further communication from the police after the lapse of a few days I wrote to the police-station and the same day in answer to my note an inspector called who stated that no fee could be paid to me as an order had been made for payment to the other practitioner and only one order was allowed for each case. I believe I have a perfect right to a fee. Can I recover from the police or only from the constable? or is it a fact that the police, although they sent for four different medical men (as I now learn), are only liable to pay one?

I am, Sirs, yours faithfully,

May 20th, 1898. H. C. D.

*** We should like to hear from other practitioners what their experience may be.—ED. L.

LINOLEUM FOR FLOORING IN HOSPITALS.

"F.R.C.S." writes to inquire about the use of linoleum as a flooring in hospitals. We have recently had to answer an exactly similar question. Where hospital floors have got rough, and the joints have shrunk, and the soft parts of the wood have worn away, leaving the knots protruding, the floors have been "jacked" off level and linoleum has been put down, and no doubt in itself it makes a very efficient floor covering. There is less noise from it in walking than from almost anything else and it is easily cleaned with a wet cloth and it does not require scrubbing. The objection to linoleum is that if it is stuck down imperfectly there are interstices between it and the floor and at the edges between the floor and the walls, so that it may be difficult to keep it perfectly clean and sanitary. Compared with the joint of a wood floor, however, it is obviously much more perfect, as there is only one joint in the linoleum as against dozens in the wood.

HOSPITAL DIET IN FRANCE.

IN Paris, the home of centralisation, all the hospitals and asylums are supplied with provisions, &c., under the auspices of a public body known as l'Assistance Publique. Among the articles that have been stocked in charge of this department for consumption during the current year are the following: potatoes, 1,000,000 kilos.; onions, leeks, carrots, and turnips, 425,000 kilos.; dried beans, 120,000 kilos.; lentils, 80,000 kilos.; prunes, 50,000 kilos.; currant jelly, 22,000 kilos.; apricot marmalade 22,000 kilos.; and plum jam, 22,000 kilos. Meat, bread, fresh vegetables, butter, and milk, being perishable, cannot be stocked. The quantity of preserves laid in will probably strike most English readers as very great. Fifty tons of prunes would probably suffice for all the hospitals in Great Britain during many years.

SEX PREDICTION MADE EASY.

THE sex question is so much on the *tapis* just now that the following, which we take from the *New York Medical Journal*, is worth recording:—

"Dr. X——, of Paris (*Medical Brief; Toledo Medical and Surgical Reporter*, May), has discovered an infallible method of determining the sex of the child *in utero*. After a conscientious auscultation and palpation of Madame Z—— he announces that it will be a boy and at the same time notes on his tablets: 'Madame Z——, a girl.' When the accouchement takes place, if the new-comer is a boy, well and good; if it is a girl he exhibits his tablets and assures the mother that she must have misunderstood him."

"PUERPERAL ECLAMPSIA."

IN answer to "R. C.'s" query in THE LANCET of May 21st Mr. Walter T. Colman, Consulting Surgeon to the Hospital for Women, Brighton, points out that he published a paper on One Form of Puerperal Eclampsia in THE LANCET of Sept. 28th, 1889, p. 640, and that he will be pleased to give our correspondent further information if required.

"THE LATE ARTHUR JEFFARES BARLOW."

	£	s.	d.
Per Dr. J. W. Moore, 40, Fitzwilliam-square West, Dublin:—			
Dr. Samuel A. Clarendon (Dublin)	1	1	0
"K" (Taunton)	0	5	0
Dr. Ch E. Cormack ...	1	1	0
"A. B."	1	1	0
Dr. Alexander Patton (Dublin)	1	1	0
Mr. A. H. Barlow (Dublin)	1	1	0
Per Dr. J. A. Matson:—			
Dr. H. F. N. Scott (London)	1	1	0
An Old Friend	5	0	0

Stoke.—The matter must be one for the individual to decide. If the lectures are not given in order to advance in any way the lecturer's professional position—and the fact that they are to be given away from his home is strong evidence that this is so—we think it would be censorious to raise any objections. With regard to advertisement, if it is correct to give the lectures (the answer to which depends upon the lecturer's motives) there can be no harm in announcing the course in the press.

P A.—Lewes, "Service Chemistry"; Mitchell Bruce, "Handbook of Materia Medica"; Foster, "Text-book of Physiology," 4 vols; Waller. "Introduction to Human Physiology"; Kirke, "Human Physiology"; J. R. Green, "Manual of Botany," 2 vols.; T. J. Arthur, "Outlines of Zoology" (Pentland); F. E. Beddard, "Zoology" (Longmans). This last book is elementary but very clear and good.

L.R.C.P., who writes to us concerning the M.D. Brux., is right in his facts but wrong in his deductions. The names of gentlemen who have received gifts are usually inserted as Mr. ——, with the qualifications following.

Engineer and *Confidential.*—Quack remedies will only make the condition worse. Electrolysis might be tried under medical advice.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Cheltenham Free Press, Newry Telegraph, South-Eastern Gazette, North British Daily Mail, Lancashire Express, Cheshire Observer, Manchester Guardian, Times of India, Pioneer Mail, Peterborough Times, Retford News, Builder, Jarrow Express, Batley News, Bridlington Free Press, Wolverhampton Chronicle, Architect, Bury Guardian, Liverpool Daily Post, Suffolk Chronicle, Cromer Post, Southampton Observer, Sussex Daily News, Wilts Standard, Bristol Mercury, Scotsman, Citizen, Bedford Times, Walsall Observer, Northampton Mercury, Alnwick Gazette, Leeds Mercury, Carlisle Express, Agricultural Gazette, Melton Mowbray Times, Surrey Advertiser, Southport Visitor, Sligo Champion, Southport Visitor, Yorkshire Post, Glasgow Herald, Manx Sun, Buxton Advertiser, Ampthill News, Merthyr Express, Dover Standard, Cheltenham Examiner, Western Times, Herald of Wales, Hampshire Advertiser, Newport Advertiser, North Wales Chronicle, Pembrokeshire Times, Shrewsbury Chronicle, Hereford Times, Cambridge Chronicle, Doncaster Gazette, Bexhill-on-Sea Observer, Mid-Devon Times, Isle of Wight Observer, Birmingham Gazette, Civil Service Gazette, Sanitary Record, Local Government Chronicle, Reading Mercury, Mining Journal, Hertfordshire Mercury, City Press, Hong-Kong Weekly Press, Hong-Kong Daily Press, Manchester Courier, Guy's Hospital Gazette, Local Government Journal, Redditch Indicator, West Middlesex Herald, Suffolk Chronicle, Rothesay Express, Hudderfield Examiner, Fraserburgh Herald, Express and Star, Brighton Gazette, Ayr Advertiser, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. J. T. Allbutt, Lond.; Dr. M. Atkinson, Hong-Kong; Mons. J. Astier, Paris; Messrs. Arnold and Sons, Lond.; Aston Manor Urban District Council, Clerk of; Messrs. Armour and Co., Lond.; Dr. C. Andrews, Lond.; Messrs. Aitken and Co., York; A. H. M.

B.—Dr. A. Bettencourt, Lisbon; Professor R. Boyce, Liverpool; British Dental Association, Lond., Secretary of; T. B. Browne, Ltd., Lond.; Belfast District Asylum, Clerk of; Mr. D. Balfour, Dundee; Bradford Children's Hospital, Secretary of; *Broad Arrow*, Lond.; Mr. J. P. Bush, Clifton; Mr. L. A. Bidwell, Lond.; Messrs. Bates, Hendy, and Co., Reading; Mr. A. Baker, Aysgarth; Birmingham City Asylum, Medical Superintendent of; Mr. Blackett, Lond.; British North Borneo Co., Lond., Secretary of; Messrs. C. Barker and Sons, Lond.; Bradford Royal Infirmary, Secretary of.

C.—Mr. W. T. Colman, Brighton; Messrs. Crossley, Moir, and Co., Lond.; City and General Press Agency, Lond.; Combined Wine Growers' and Distillers' Syndicate, Lond.; Cortland Wagon Co., Lond.; Mr. A. Chenery, Lond.; Messrs. J. and A. Churchill, Lond.

D.—Mr. C. Davis, Glossop; Messrs. Duncan, Flockhart, and Co., Edinburgh; Messrs. Down Bros., Lond.

E.—Examination Hall, Lond., Secretary of; E. H. G.; Mr. W. D. Edwards, Dorking.

F.—Mr. A. M. Fraser, Southsea; F.A.B.; Messrs. Ferris and Co., Bristol; Messrs. J. S. Fry and Son, Bristol.

G.—Mr. H. W. Gadd, Exeter; Mrs. Godet, Great Malvern; Guest Hospital, Dudley, Secretary of; Dr. W. W. Graves, St. Louis, Mo., U.S.A.; Great Eastern Railway, Lond., Continental Traffic Manager of.

H.—Mr. A. J. Hull, Lond.; Mr. C. T. Holland, Liverpool; Dr. M. Handfield-Jones, Lond.; J. F. Hill, New Eltham; Hastings, Town Clerk of; Hereford County, &c., Asylum, Medical Superintendent of; Dr. W. R. Hunter, Glasgow.

I.—Messrs. Ingram and Royle, Lond.; Messrs. Idris and Co., Lond.

J.—Mr. M. R. Jones, Cardiff; J. B. R.; Jenner Society, Lond., Secretary of.

K.—Mr. A. F. Stanley Kent, Lond.; Dr. Ernest Kromayer, Berlin.

L.—Mr. W. Lund, York; Mr. R. Lake, Lond.; Mr. L. G. B. Lory, Chudleigh; Mr. T. B. Luscombe, Teddington.

M.—Mr. J. A. Morgan, Llanwrtyd Wells; Mr. H. J. Marston, Lond.; Mr. S. Messulam, Constantinople; Medical Sickness Annuity and Life Assurance Friendly Society, Lond., Secretary of; Mr. C. G. Moor, Lond.; Dr. W. G. Mortimer, Barnstaple; Mrs. Molyneux, Lond.

N.—Messrs. Newton, Chambers, and Co., Thorncliffe.

O.—Mr. G. Owen, Caersws; *Optician*, Lond., Editor of.

P.—Mr. J. B. Pike, Loughborough; Mr. Y. J. Pentland, Edinburgh; *Physician and Surgeon*, Ann Arbor, U.S.A., Editor of; P. A., Wakefield; P. D. 40, Lond.; Mr. W. Patterson, Lond.

R.—Dr. W. Richardson Rice, Coventry; Messrs. H. Roberts and Son, Mold; Messrs. Robertson and Scott, Edinburgh.

S.—Mr. T. J. Savage, Lond.; Mr. H. Sands, Lond.; Society of Apothecaries of London, Secretary of; Sanitas Co., Lond.; Mr. H. Schloesser, Hove; Dr. J. Shaw, Lond.; Mr. R. R. Sleman, Lond.; Smith's Advertising Agency, Lond.; Dr. T. E. Sandall, Alford; Messrs. W. H. Smith and Son, Manchester; St. Mary Islington, Parish Clerk of; Mr. H. R. Salmon, Lond.; Dr. J. B. Spence, Lichfield.

T.—Mr. H. R. Tebboth, Lond.; Messrs. Teff and Co., Bristol; Mrs. E. Tyte, Pangbourne; T. H. A.

U.—University of London, Registrar of.

V.—Mr. J. W. Vickers, Lond.; Vinolia Co., Lond.

W.—Mr. J. Wallace, Bombay; Mr. F. W. Wright, South Godstone; Messrs. Wills, Lond.; W. H. H.; Wills, Ltd., Lond.; W. T. B.; Messrs. Wright, Layman, and Umney, Lond.; Messrs. Whittaker and Co., Lond.; Werner Co., Lond., Manager of; Dr. Hugh Woods, Lond.

Y.—Dr. Meredith Young, Crewe.

Z.—Messrs. A. and M. Zimmermann, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Fern Hill; A. H. W.; Dr. J. Adam, West Malling; A. R. H.

B.—Mr. S. A. Bruce, Aberdeen; Brin's Oxygen Co., Lond.; B. A.; Mr. F. Bauermeister, Glasgow; Messrs. Brady and Martin, Newcastle-on-Tyne; Mr. H. Baker, Birmingham; Mr. A. B. Barker, Lond.; Messrs. Brown, Gould, and Co., Lond.; Beech Hurst, Hanley; B.; B. N. M.; B. P. F., Hove.

C.—Dr. L. Cobbett, Cambridge; Messrs. J. W. Cooke and Co., Lond.; Mr. W. F. Clay, Edinburgh; Mr. K. Clarke, Huddersfield; Dr. C. Cochrane, Sheffield; Mr. J. B. Cornish, Manchester; Messrs. Condy and Mitchell, Lond.; Messrs. Cassell and Co., Lond.; Dr. J. B. Coleman, Dublin; Messrs. Cowley and Montford, Upton-on-Severn; Castle, Lond.; C. E. P.; Dr. W. Cromar, Wisbech; C. G. G.

D.—Mr. B. Dean, Slaithwaite; H. S. Deva, Porbandar; Dr. P. W. Diack, Freshwater; Dispenser, Sandwich; Dispenser, Lond.

E.—Dr. G. C. Elliott, Nantwich; E. L. M., Peterborough; E. M. C.

F.—Mr. F. C. Fitzgerald, Hanley.

G.—Mr. F. T. Grant, Maidstone; Mr. W. Galloway, Wrekenton; Miss J. A. Gellus, Easdale.

H.—Dr. J. Holmes, Whitefield; Mr. C. Hurford, Epping; Messrs. Hewlett and Son, Lond.; Mr. W. Hay, Hull; Mr. C. H. Hulsh, Lond.; Dr. F. S. T. Hutchison, Bedlinog; H. A.; H. B.; Mr. J. Heywood, Manchester; Mr. H. V. Halliday, Christiania, Jamaica.

I.—Mr. A. T. Ilott, Lond.

J.—Rev. R. Jerman, Wrexham; Mr. E. Jackling, Maidstone; Dr. C. H. L. Johnston, St. John, Canada; J. W. G.; J. H.; J. J. H.; J. F. S.; Mr. R. A. Jackson, Kirby Moorside; J. G.; J. P. S., Barnsley; J. A. G.; J. G. B.; N. Johnson, Liverpool.

K.—Mr. R. A. Keys, Castlefin; Kronthal Co., Lond.; Kilburn, &c., Dispensary, Secretary of.

L.—Mr. W. Latham, Ashton-in-Makerfield; London School of Pharmacy, Lond.; Mr. H. B. Long, Warwick; L. H. B.

M.—Mr. S. Mackey, Hodnet; Dr. A. A. McNab, Armley; Mr. A. L. MacLeroy, King's Teignton; Manchester Southern Hospital, Accountant of; Manchester Hospital for Consumption, Secretary of; Medicus, Huddersfield; M., Lond.; Medicus, Lond.; Messrs. MacDuff and Co., Liverpool; M.D., London; Medicus, Winfrith; Mr. H. Mackintosh, Chesterfield; Midland Colliery Owners Mutual Indemnity Co., Derby, Secretary of.

N.—Mr. J. S. Nolan, Lond.; Messrs. Neyroud and Son, Lond.

O.—Mr. C. Owen Scunthorpe; Mr. J. T. O'Connor, Carrigrohane; Mr. G. Oliver, Westcott.

P.—Mr. J. W. Parry, Pontyclun; Dr. F. C. Palmer, Woking; Mr. W. W. Peet, Constantinople; Mr. C. H. G. Prance, Launceston; Mr. J. W. Pratt, Wivelscombe; Mr. E. Perrott, Luppitt; P. D.; Mr. R. C. Potter, Maidstone; Mr. P. H. Power, Sandon, B.C., Canada.

R.—Mr. J. W. Rodgers, Bundoran; Messrs. W. A. Ross and Sons, Belfast; R. D.; R. W. J.; Messrs. H. and J. Reading, Lond.; R. Y.; Mr. L. W. Reynolds, High Wickham; Dr. A. Roche, Dublin.

S.—Mr. J. Steele, Kidsgrove; Mr. E. S. Sanderson, Otterburn; Dr. J. B. Spence, Burntwood; Dr. A. E. Sansom, Lond.; St. John Ambulance Association, Lond.; Springfield House Asylum, Bedford, Proprietors of; Suffolk General Hospital, Bury St. Edmunds, Secretary of; Dr. S., Salisbury; Mr. F. E. Scrase, Lond.; *Sheffield Independent Press*; Mr. E. M. Spencer, Tavistock; Sheffield Royal Hospital, Secretary of; St. John's Hospital for Diseases of the Skin, Lond., Superintendent of.

T.—Dr. W. A. Turner, Lond.; Tamar Indien Grillon, Lond.; Mr. J. Thin, Edinburgh; Dr. Thorp, Nottingham; T. F. C.

V.—Messrs. J. and J. Vice, Nottingham.

W.—Mr. A. Wheeler, Darlington; Messrs. Wenborn and Son, Lond.; Messrs. Wright, Dain, and Co., Birmingham; Mr. E. H. Worth, St. Day; W. S. B.; Dr. Weir, Brussels; W. S.; Wigmore Nurses' Coöperation, Lond., Lady Superintendent of.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

CORSER, F. R. S., M.B., C.M. Edin., has been re-appointed a District Medical Officer for the Stow-on-the-Wold Union.

CROMPTON, H. J., M.B., B.Ch. Vict., has been appointed a House Physician to the Manchester Royal Infirmary.

DENING, E., L.R.C.P. Edin., M.R.C.S., has been re-appointed a District Medical Officer for the Stow-on-the-Wold Union.

DIBBS, W. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Hedgerley Sanitary District of the Eton Union.

DURRAN, D., M.B., C.M. Glasg., has been appointed Joint Medical Officer and Vaccinator for the Parish of Thurso, vice J. Grant Smith, deceased.

FENELAND, E. HARDING, M.D., F.R.C.S., has been appointed Assistant Surgeon to the Hospital of St. Francis, 145, New Kent-road, London, S.E.

GARFIT, C. C., M.B., Ch.B. Vict., has been appointed Medical Officer for the Glenfield Sanitary District of the Blaby Union.

HEMINGWAY, J., L.R.C.P. Lond., M.R.C.S., has been appointed a District Medical Officer for South Wimbledon.

JENKINS, E. M., M.B., M.S. Glasg., has been appointed Medical Officer of Health by the Calverley Urban District Council.

KELSALL, R., M.B., B.Ch. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

LESLIE, WILLIAM MURRAY, M.D., M.Ch., F.R.C.S., has been appointed Assistant Physician to the Hospital of St. Francis, New Kent-road, London.

LONG, SYDNEY H., M.B. Cantab., L.S.A. Lond., has been appointed a Physician for the Norfolk and Norwich Hospital.

MACKENZIE, D. J., M.D. Aberd., has been appointed Medical Officer of Health for the Borough of Glossop.

MELLAND, CHARLES H., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer for the City of London Hospital for Diseases of the Chest, Victoria Park, London.

MILNER, E. A., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Lostwithiel Town Council.

PAYTON, J., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Hamsterley Sanitary District of the Auckland Union.

PERKINS, J. J., M.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to St. Thomas's Hospital, London.

PRESTWICH, J., M.B., Ch.B. Vict., has been appointed Assistant House Surgeon at the Nottingham General Hospital.

RODGERS, R. I. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Habergham Eaves Sanitary District of the Burnley Union.

SIDEBOTTOM, R. B., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed a District Medical Officer and Public Vaccinator by the Glossop Board of Guardians.

STOCKER, W. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Parish of Willesden.

STYES, LILIAN W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer in charge of the Dufferin Hospital, Lucknow, India.

TAYLOR, FRANK EDWARD, M.A., B.Sc., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Hospital for Women and Children at Leeds.

TURNER, W. P., M.D. Durh., M.R.C.S., has been appointed Medical Officer for the Workhouse and School of the West Ham Union.

TURTON, W. H., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Heanor Urban District Council.

WYLIE, D. S., M.B., B.Ch. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON MANOR URBAN DISTRICT COUNCIL.—Medical Officer of Health for the district. Salary £200 per annum; and Medical Attendant at the Infectious Hospital. Salary £125 per annum, for one year. Applications to the Clerk of the Council, Council Offices, Albert-road, Aston Manor, Birmingham.

BELFAST DISTRICT ASYLUM.—Assistant Medical Officer, unmarried. Salary £100 per annum, with £50 in lieu of rations, also furnished apartments, fuel, light, washing and attendance.

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Board, lodging, and washing provided.

BRADFORD ROYAL INFIRMARY.—Honorary Physician or Medical Officer.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress.

COUNTY ASYLUM, Whittingham, Lancs.—Locum Tenens for about five or six months. Two guineas a week.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—House Surgeon. Salary £50 per annum, with board and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided and an honorarium of £15 15s. will be granted on the completion of six months' approved service.

EGYPTIAN GOVERNMENT.—The School of Medicine and the Kasr-el-Ainy Hospital, Cairo. Medical Officers. Applications to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, The Examination Hall, Victoria Embankment, London.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Salary at the rate of £40 per annum with board, lodging, and washing in the hospital.

HEREFORD COUNTY AND CITY ASYLUM, Hereford.—Locum Tenens Assistant Medical Officer for ten or twelve weeks. Terms £2 2s., board, lodging, &c.

LONDON THROAT HOSPITAL, Great Portland-street, W.—House Surgeon (non-resident) for six months. Salary £25.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary £60 for that period, with rooms furnished.

RICCARTSBAR ASYLUM, Paisley.—Assistant Resident Medical Officer. Salary £70, with board and apartments. Applications to the Clerk, Parish Council Office, Paisley.

ROYAL EAR HOSPITAL, Soho, London.—House Surgeon (non-resident) for six months. Honorarium 12 guineas.

ROYAL BERKS HOSPITAL, Reading.—House Surgeon for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer for six months. Board, lodging, and washing provided, and an honorarium of 10 guineas given conditionally.

ST. MARY, Islington.—Second Resident Assistant Medical Officer, and to act as a Dispenser at the Workhouse and Infirmary, St. John's-road, Upper Holloway, and temporary Medical Officer at the Highgate-hill temporary Workhouse. Salary £80 per annum, and rations, apartments, and washing, subject to statutory deductions. Applications to the Clerk, Guardians' Offices, St. John's-road, Upper Holloway, N.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

UNIVERSITY COLLEGE, Sheffield.—Lecturer in Physiology.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE), Leeds.—Demonstrator of Physiology. Salary £150.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital. Gratuity £20.

WEST HAM UNION.—Dispenser. Salary £40 per annum.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL Wolverhampton.—House Surgeon, and to act as Surgical Registrar for one year. Salary £100 a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ALSTON.—On May 20th, at Wheathampstead, Herts, the wife of W. Evelyn Alston, B.A., M.B., B.C., of a daughter.

DAY.—On May 22nd, at Surrey-street, Norwich, the wife of Donald D. Day, F.R.C.S., of a daughter.

DIACK.—On May 24th, at Freshwater, Isle of Wight, the wife of Patrick W. Diack, M.A., M.B., of a daughter.

ELAM.—On May 24th, at Manor-road, Stoke Newington, the wife of G. Elam, M.D., of a daughter.

HARWOOD-HARDMAN.—On May 18th, at Kensington-gardens-square, W., the wife of Frederick Harwood-Hardman, M.B., of a daughter.

MICHELS.—On May 19th, at Belsize-grove, Hampstead, the wife of E. Michels, M.D., F.R.C.S., of a daughter.

PETERS.—On May 17th, at Cadogan-place, S.W., the wife of Edwin Arthur Peters, B.A., M.B., B.C. Cantab., of a daughter.

TURNER.—On May 23rd, at Weyhill, Andover, Hants, the wife of Philip Dymock Turner, M.D., M.R.C.P. Lond., of a daughter.

WILKINSON.—On May 17th, at Osborne-villas, Windsor, the wife of Clement J. Wilkinson, M.R.C.S., of a daughter.

MARRIAGES.

BURNEY—PINK.—On May 24th, at St. Mark's Church, Battersea-rise, by the Rev. E. G. Gordon, vicar, Charles Dudley Francis Burney, M.R.C.S., L.R.C.P., to Ethel Beatrice, second daughter of John Francis Pink, of Sisters-avenue, Clapham-common.

FRANCE—WILSON.—On May 24th, at St. Mark's Church, Regent's-park-road, London, James Mead France, Surgeon R.N., eldest son of William France, of Matamau, Hawke's Bay, New Zealand, to Amy, second daughter of Charles William Wilson, of St. George's-square, Regent's-park, N.W.

MADGE—BARTRAM.—On May 24th, at St. John's Church, Meads, Eastbourne, Arthur Ernest Madge, M.R.C.S., son of the late Dr. H. M. Madge, of London, to May, widow of the late Major G. W. Bartram, R.B.

WILLIAMS—CORNFORD.—On May 21st, at St. Nathanael's, Bristol, Ernest Graham Hamilton Williams, M.R.C.S. (late D.M.O. Jamaica), to Mary Frances Cornford, M.B., B.S., only daughter of the Rev. N. Cornford, M.A., of Cotham, Bristol.

DEATHS.

BOGLE.—On May 23rd, at his residence, Charles-road, St. Leonards-on-Sea, Alexander Laing Bogle, Deputy-Surgeon-General, M.D., H.M. Land Forces, retired, aged 75.

OLIVER—On May 22nd, at Westcott, Surrey, Alice Mary, wife of George Oliver, M.D., F.R.C.P., of Harrogate, aged 52.

SHAW.—On May 21st, at Carlton Hall, Worksop, George Huntsman Shaw, surgeon, of Attercliffe, aged 55. Interment at Carlton Church, Wednesday, 2.45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, May 26th, 1892.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
May 20	29·69	N.E.	0·25	57	53	46	50	51	Overcast
,, 21	29·71	S.W.		81	60	51	52	54	Overcast
,, 22	29·87	S.E.	0·02	109	70	50	55	59	Cloudy
,, 23	29·71	S.E.	0·14	115	76	51	57	62	Hazy
,, 24	29·77	S.E.	0·01	103	69	55	55	56	Raining
,, 25	29·78	N.E.	...	99	61	49	49	51	Overcast
,, 26	29·77	N.	...	84	56	47	46	50	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2 30 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (1st). — OBSTETRICAL SOCIETY OF LONDON. — 8 P.M. Specimens will be shown by Mr. Doran, Dr. Burton, Dr. Amand Routh, and others. Papers:—Dr. H. R. Spencer: "Two Cases of Fibromyoma of the Uterus removed by Operation from women under twenty-five years of age.—Dr. Roper: Note on some Difficult cases of Fronto-anterior Positions of the Fœtal Head.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (31st).—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lupus Erythematosus.

WEDNESDAY (1st). — LONDON POST-GRADUATE COURSE. — Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Sanitary Appliances.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Paget: Surgical Cases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Maguire: Dynamics of the Chest in Disease.

THURSDAY 2nd). — LONDON POST-GRADUATE COURSE. — Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. M. Bruce: Demonstration of Medical Cases (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Demonstration of Selected Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: Lecture.

ROYAL INSTITUTION.—3 P.M. Dr. E. E. Klein: Modern Methods and their Achievements in Bacteriology.

LONDON TEMPERANCE HOSPITAL.—2 P.M. Dr. S. Fenwick: Clinical and Lantern Demonstration to Senior Students—Liver Diseases.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr. D. Grant: Tinnitus Aurium and Vertigo.

FRIDAY (3rd). — LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Actinomycosis and Glanders.

SATURDAY (4th).—ROYAL INSTITUTION.—3 P.M. Dr. R. Caton: The Temples and Ritual of Asklepios at Epidaurus and Athens.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One year	£1 12 6	One Year	£1 14 8
Six Months...	0 16 3	Six Months...	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

A WARNING FOR THE NURSERY.

THE *Girl's Own Paper* for May, under the heading "Household Hints," contains a warning which we should like to see printed in every newspaper throughout the kingdom. "Celluloid balls and other toys, though very pretty to look at, should never be given to children, as they are highly inflammable and very dangerous."

A TYPHOID FEVER PAN.

THE excreta of patients suffering from enteric fever form a certain and dangerous source of infection if not properly disposed of. In private houses even the transference of contaminated vessels from the sick room is not infrequently attended with danger, but by the use of a pan such as is made by the Winton Pottery Company, Limited, of Stoke-on-Trent, this danger can be minimised if not actually prevented. The pan, which

The Ingleby Lectures

ON

EXTRA-UTERINE PREGNANCY.

Delivered at Mason College, Birmingham, on May 11th, 18th, and 25th, 1898,

BY JOHN W. TAYLOR, F.R.C.S. ENG,

PRESIDENT OF THE MIDLAND MEDICAL SOCIETY; SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN; CONSULTING SURGEON TO THE WOLVERHAMPTON HOSPITAL FOR WOMEN, ETC.

LECTURE II.[1]

Delivered on May 18th.

THE THREE INVASIONS OF TUBAL PREGNANCY—(1) TUBO-ABDOMINAL, (2) TUBO-LIGAMENTARY, AND (3) TUBO-UTERINE.

1. *Tubo-abdominal Pregnancy (syn., Abdominal or Ventral Pregnancy).*

MR. DEAN AND GENTLEMEN,—When a fœtus which has been already formed within the Fallopian tube escapes from the tube enclosed in its *unruptured membranes* into the abdomen of the mother the pregnancy becomes "abdominal" or "ventral." If the placenta retains its attachment to the tube and receives sufficient blood-supply from the maternal blood-vessels the pregnancy may pursue an uninterrupted course to term and both child and placenta attain mature development within the peritoneal cavity of the mother. The protection of the unruptured amnion, however, appears to be absolutely indispensable for this development. I am aware that in making the statement that a tubal pregnancy thus directly becomes abdominal I am running counter to the accepted teaching of such authorities as Mr. Lawson Tait and Mr. Bland Sutton. The difficulty in believing this lay in the fact that in most of the recorded cases the child has been described as lying naked and uncovered within the peritoneal cavity of the mother. Our leading authorities have argued, and probably argued rightly, that no fœtus at any early age could be so exposed to the peritoneal cavity and its secretion and yet survive. They have accordingly sought for some method of explaining how the facts established by observation—the intra-abdominal position of the child—could possibly arise. The theory advanced is that every extra-uterine pregnancy which has survived the primary rupture of the tube and has continued its development has done so beneath the peritoneum, sheltered within the folds of the broad ligament (see Broad Ligament Pregnancy), that here it has remained until the seventh or eighth month, and then a secondary rupture of the broad ligament cyst has taken place, and the child has escaped among the intestines, "its tissues having arrived at a period of development by that time, which enabled them to resist the efforts of digestion which doubtless would be directed towards them."[2]

Although those of us who had operated on cases of abdominal pregnancy at full term felt that this theory was far-fetched and mistaken, for no broad ligament pouch from which the infant had escaped could then be found, and although the theory was more or less disproved by isolated cases of abdominal pregnancy reported by Dr. Jessop, by Dr. Champneys, by myself, by Dr. Webster, by Dr. Cullingworth, by Dr. Aust Lawrence, and even by Mr. Tait himself, I do not think we could be said to have any good explanation of the mystery to offer until a case on which I operated at the Spark Hill Hospital for Women on Dec. 11th, 1896, brought further light and explained how the child could inhabit the peritoneal cavity of the mother and still survive. On careful examination of the abdominal cavity in this case conducted by myself and my colleagues, Mr. Martin and Mr. Jordan, it was found that a transparent membrane (the amniotic sac) surrounded the fœtus and protected it in every direction, and that this was invisible on the surface of the intestine, but could be demonstrated as a film passing from coil to coil and completing the sac in which the pregnancy had developed. The case was reported by me to the Obstetrical Society of London in 1897, and the following account of the operation and parts removed is copied from the Transactions of the society.

"*Operation.*—On Dec. 11th, 1896, assisted by my colleagues, Mr. Martin, Mr. Jordan, and Dr. Sturge, I opened the abdomen in the middle line and found that the peritoneum immediately below the incision was thickened and incorporated with some kind of sac containing a dead but non-putrid fœtus. On opening this the child was found lying in the abdomen bathed in a small quantity of dark blood fluid. In this some caseous particles were floating. The head of the child lay uppermost and formed the globular protuberance which had been noticed near the liver. The intestines were visibly covering the body of the child and the great omentum, forming in one part a thick fleshy body of considerable thickness, passed across the child to a broad attachment on the upper part of the placenta. The latter was situated at the lower pole of the pregnancy and covered the pelvis. The parts of the child nearest to the incision were the lower limbs and after pulling the feet outside and enlarging the incision to admit of the passage of shoulders and head the child was extracted. The cord was then divided and the child removed. On looking into the abdomen the peritoneal cavity appeared to be directly open as in an ordinary abdominal section. The coils of intestine, the lower part of the stomach, and the great omentum were all plainly visible and separate loops of intestine could be brought out of the incision and examined. On very close observation it was first noticed by Mr. Martin and afterwards confirmed by myself and Mr. Jordan that a very thin transparent pellicle or membrane was reflected over all, or nearly all, of these viscera and that notwithstanding the apparent free exposure of the peritoneal cavity there was in all probability a thin, filmy, transparent sac enclosing the pregnancy, not capable of separation or differentiation from the peritoneum of any viscus over which it was reflected except where passing from one to another, as from one coil of intestine to another or from intestine to placenta. Only under these circumstances was the membrane visible.

"*Removal of the placenta.*—The placenta was of ordinary size and covered the pelvic inlet 'like the lid of a saucepan' incompletely closed, the edge of the placenta being exposed and free on the left side of the pelvis but closely applied to the abdominal wall on the right side where the cord was situated. The attachments of the placenta were: (1) a thick band or rope of omentum which was firmly attached to the upper or serous edge of the placenta on the left side; (2) several thin attachments or adhesions of small intestine and cæcum to the same surface; these appeared to be possible of explanation as reflections of the thin sac layer (amnion) from the intestine to the placenta; and (3) the deep pelvic attachments of the under surface of the placenta, which at this stage were hidden from view by the placenta itself. The band of omentum was ligatured in sections and divided; then the adhesions to the bowel were separately tied and cut through. By tilting up the free (left) edge of the placenta it was now possible to discover a broad band of attachment below it in the pelvis. This was seized by a pair of Doyen's elastic forceps and divided. When this had been done a further part became accessible and it was found possible by gentle manipulation to secure either by forceps or ligature all pelvic attachments before separation, so that the placenta was finally removed without any loss of blood, and therefore with a clear field for deliberate operative work throughout. Below the placenta, in the pelvic portion of the sac, was found quite a collection of caseous masses (remains of the vernix caseosa), which was cleared out of the pelvis partly by the fingers and partly by a douche of warm water which was used for washing out the abdomen. The main attachments, which had been temporarily clamped by forceps, were found to come from the right broad ligament. These were ligatured in sections beneath the forceps and the forceps were then removed.

"On examination of the pelvis where the placenta had been it was evident that the same arrangement of sac existed here as in the upper abdomen—that is, a fine transparent membrane could be traced throughout and formed a limiting layer between the usual viscera of the abdomen, pelvis, and placenta on the one hand and the child on the other. On replacing the placenta in position this membrane

[1] Lecture I. was published in THE LANCET of May 28th, 1898.
[2] Tait: Lectures on Ectopic Pregnancy, p. 59.

could be traced below the placenta to the bottom of the pelvis on the right side; it was then reflected over the broad ligament and all its attachments to the under surface of the placenta. From this it could be traced all over the placenta except where intestine or omentum was adherent to its surface. Two-thirds (at least) of the placental margin was free, and this was consequently smooth, glistening, and everywhere covered by the thin membrane of the sac. Owing to this disposition of the sac within the pelvis the outline of the normal pelvic viscera, the uterus, tubes, and ovaries was considerably obscured, so much so that it was impossible to say whether the right ovary had been removed with the placenta or whether it had been left in the pelvis below the reflections of the sac.

"The abdomen was closed with silkworm-gut sutures and a drainage-tube left in the lower angle of the wound. The after-progress of the case was satisfactory and uneventful except for some chronic suppuration in the lower part of the wound. This appeared to be kept up by caseous remains which had been imperfectly removed, as on more than one occasion some caseous particles were observed in the discharges. The patient was discharged convalescent on Jan. 25th, 1897.

"*Description of parts removed.*—The child weighs 7 lb. and is a male fœtus which has undergone full development within the abdomen of the mother. The nails of the fingers extend some distance beyond the finger-tips and are firm and horny. The testes appear to be within the scrotum and the hair of the head is abundant but short. The trunk and limbs are perfectly developed; the head is rather large in proportion to the rest of the body and is bent or twisted to the right, so that the left (or extended) side of the neck and face appears to be permanently larger than the right, the head being fixed laterally towards the right shoulder. There are no signs of decomposition. Closely applied to the head of the child is a perfect cap of membrane and between this and the head of the child is a considerable quantity of caseous matter. This is the only part where any membranous covering or sac can be distinguished. The umbilical cord and its fœtal attachment are in every respect normal. The placenta weighs 3 lb.; it is thick and fleshy and of fairly normal consistence. On its upper service and edge it is marked by (1) the insertion of the cord excentrically placed; (2) by the attachment of a divided thick band of tissue, probably omental; and (3) by several large distended vessels almost unsupported by any tissue, but directly attached to the placental surface or edge. (These appear to be portions of adherent omentum which have been changed into congeries of dilated veins.) The shape of the placenta is peculiar; the bulk of it is circular, with an excentric cord inserted near one border (the right). Beyond this and separated from it by a deep sulcus is a crescentic mass of placental tissue attached to the main placenta by its horns and lower surface. On the surface of this crescentic part is a pale red fringed mucous patch, which appears to be the fimbriated end of a Fallopian tube. No further trace of tubal structure can be made out on microscopic examination and on section of the mass it appears to consist throughout of placental tissue. The under surface of the placenta is in many parts as smooth and free as its upper surface, but it is marked by a long strip of raw surface running across the placenta, with a bend or angle in its course. This marks the attachment of the placenta to the right broad ligament.

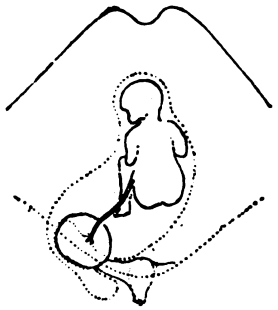
"*Remarks.*—The pregnancy may be regarded as originally one of the right Fallopian tube, which, by gradual erosion or giving way of the upper part of the tube, has passed with unruptured membranes into the abdominal cavity. The deep sulcus on the upper surface of the placenta probably marks the line of separation in the tube where the ovum escaped upwards into the abdomen. From the spread out internal surface of the (ruptured) tube the placenta has continued growing and has so altered or taken up its structure in process of growth as to render little but the fimbriated end recognisable. The placenta has derived its blood-supply from the vessels of the broad ligament and from the great omentum.

"The case is remarkable for possessing no history of any tubal rupture (or acute illness corresponding to this) throughout the whole course of the pregnancy. The conditions and opportunities for observation during the time of operation were unusually good, but in spite of this the exact state of the upper pole of the pregnancy and its relation to the abdominal viscera must be determined by circumstantial evidence as it could not be directly seen from the incision. From the fact that the head of the child is closely covered by a cap of membrane, between which and the scalp is a copious deposit of caseous material, while below this any evidence of a membranous sac is wanting (except the tear of separation around the forehead and occiput), it may be concluded, I think, that the upper part of the amniotic sac—the membrane forming the extreme upper pole of the pregnancy—has been removed with the fœtus; and that, so far as this is concerned, the abdominal cavity has been directly opened. Below this, towards the centre of the pregnancy, the sac has become incorporated with the peritoneum so that no separation could be made between the two and no indication of the presence of a sac could be seen except at its reflection from one viscus to another as already described. At a lower level still—at the 'lower pole' of the pregnancy—the sac was considerably thickened, forming, together with the peritoneum at the lower part of the abdominal incision, a membranous wall fully one-eighth of an inch in thickness. Even here, however, no definite dissection could be made between 'sac' on the one hand and 'peritoneum' on the other."

The importance of the case just quoted in the present state of our knowledge cannot be over-estimated. It effectually disposes of much of the theory now current on the subject of advanced extra-uterine gestation. On page 464 of Allbutt and Playfair's System of Gynæcology (1896) Mr. Bland Sutton writes: "Observation has demonstrated the fact that in all tubal pregnancies which survive the primary rupture and continue their development the gestation sac is formed in part by the expanded tube, but mainly by the layers of the mesometrium. The proper appreciation of this fact has done much to simplify our knowledge of tubal pregnancy and no one has more strongly insisted upon its correctness than Lawson Tait." That this is altogether mistaken is now, I believe, a certainty. The case of abdominal pregnancy here described is a tubal pregnancy which has survived the primary rupture and continued its development, in which the gestation sac is formed by the amnion alone or at most by the fœtal membranes and tube, the layers of the mesometrium are intact, and the expanded tube is entirely taken up and metamorphosed by the growth of the placenta.

A diagrammatic representation of the pregnancy (Fig. 19)

FIG. 19.



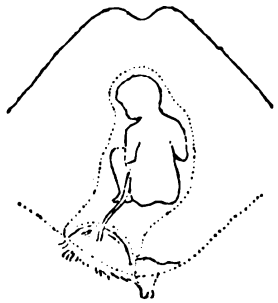
in which the omental attachments are omitted as non essential, may help to make this important variety of extra-uterine pregnancy clearer and to elucidate the relations of its sac. The essentials of the pregnancy are the fixed placenta growing mainly or entirely from the tube to which it was originally attached and the child enclosed simply in its amniotic sac, moving so far as the delicate sac permits it within the abdomen of the mother. The amniotic sac may be in some places separable from both mother and child, in other parts it may be quite inseparable from the peritoneal covering of the abdominal viscera within the maternal abdomen. The condition is produced in the most simple manner. The pregnancy begins within the tube and grows there until it can grow no longer. Then by rupture or by some slow separation of the tube equivalent to rupture the tube is opened up. The child within its amniotic sac escapes upwards into the abdomen, the placenta remains attached to the inner surface of the tube, and from this, spread out and flattened by the rupture, the placenta continues to grow.

But this case not only tends to disprove the broad ligament

theory as of universal or even general application. It serves another and more important purpose. If the cases of abdominal pregnancy be carefully considered in the light of the explanation here offered it will be found that most, indeed very nearly all, of the recorded cases in which no definite sac has been found admit of a similar interpretation. In Mr. Jessop's case it is stated that "the peritoneal lining, though natural on its free surface, appeared thick and velvety in section," and later we read: "A few bands of unorganised lymph of a very friable nature lying upon, but not adherent to, the intestines were readily removed by sponging and about an ounce of a clear serum was found in the peritoneal cavity." The definite amount of serum here mentioned is decidedly suggestive of some unrecognised limiting sac and not of free fluid welling up from the pouch of Douglas out of sight. In Bandl's case, quoted by Mr. Tait, the fœtus was enclosed in a "pocket formed by false membranes." In Dr. Champneys' case the references to some filmy kind of sac are still more obvious. We read: "The layer immediately covering the fœtus was a dull white membrane." Again: "On the child's vertex a patch of thin, sodden-looking membrane was seen and except a shred of similar material removed from the wound (probably torn from the head during delivery) no membranes were seen or felt." In the report of the dissection of the child we read: "There was a sort of cap of sodden membrane (amnion) on the vertex which was covered with dark hairs," and in the report of the necropsy of the mother: "The fœtal surface [of the placenta] was also marked by a remnant of membranes which hardly extended beyond the placenta." The similarity between this case and those which I have myself reported is, I think, clear and unmistakeable.

The lower pole of the pregnancy does not always take the form described in the case I have just reported and depicted in the illustration. In a case on which I operated at term, both mother and child surviving, the amniotic sac stopped short at the placental insertion as in normal intra-uterine pregnancy and the raw under-surface of the placenta had extended or grown beyond its tubal site and was attached to the posterior surface of the uterus, the sigmoid flexure and the pelvic wall as well as to the tube. But though I failed to fully understand it at the time I am now quite satisfied that the pathological relations of the fœtus were exactly similar to those I have described as present in the preceding case. The ragged margin of the amnion in this case may still be seen attached to the placenta and the rest of the sac was probably continued as a transparent covering or sheath over the small intestines and the under surface of the great omentum around the space from which I removed the child. The conditions met with in this case are diagrammatically represented in Fig. 20. The salient

FIG. 20.

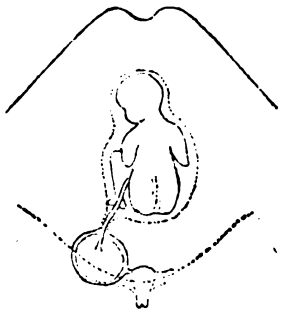


features which separate it from the preceding case will be recognised at once on comparing the accompanying diagrams.

There are two other conditions under which the placenta may be found in advanced abdominal pregnancy. In the first the tube, although excessively expanded, may retain its individuality and the placenta be found still lying within it. In one case of this kind, the case of Dr. Halliday Croom, minutely examined and described by Clarence Webster, he states, "A large, well-formed, recently dead fœtus was removed from a sac which extended nearly up to the liver and which had in the lower part of the abdomen a thick anterior wall. There was an excessive amount of amniotic fluid. The uterus was enlarged, elevated, and drawn towards the right side. The placenta was in a separate sac to the left side of the pelvis—a thick viscoid mass extending 2 in. above the brim. The gestation sac was double, one containing the fœtus, the other the placenta. The former was that part of the peritoneal cavity behind the stomach, transverse colon, and great omentum; the latter consisted of the enormously dilated Fallopian tube lying in front of the uterus and extending vertically from the utero-vesical pouch to the fourth lumbar vertebra. Though quite distinct from one another they were connected by means of the umbilical cord and amnion; this membrane lined the secondary (peritoneal) sac and passed into the substance of the primary (tubal) sac.

Another case very similar to this was reported by Mr. Tait to the Obstetrical Society in 1892 under the title of "A Case of Ectopic Pregnancy in which the Fœtus seems to have been Developed to the Full Time in the Peritoneal Cavity, still retaining its Amniotic Covering." In the report of this case we read: "The child was lying loose in the abdominal cavity except that all its upper surface had become adherent to the omentum and to the anterior parietal peritoneum. The child was still enclosed in its membranes, but the liquor amnii had entirely disappeared. The umbilical cord went straight down to a round, smooth, globular mass about the size of a cocoanut, which occupied the pelvic cavity and was adherent to the surrounding tissues. The question of the removal of the placenta, which this substance really was, occupied my mind for a few seconds. On making tentative efforts to separate the globular mass I found that it peeled out with considerable ease, much as a broad ligament cyst would, and after it was separated down to a pedicle which was the cornu of the uterus it became perfectly evident that the globular mass was the right Fallopian tube." Following the graphic method previously employed to illustrate the relations of the placenta this form may be diagrammatically represented as in the accompanying illustration (Fig. 21).

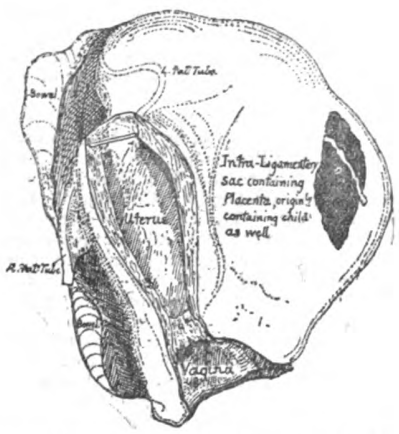
FIG. 21.



Finally, there is one specimen which shows that the abdominal position of the fœtus may be associated with an intra-ligamentary placenta. For a long time I failed to find any certain evidence that advanced abdominal pregnancy was ever the outcome or sequel of secondary rupture from the broad ligament into the abdomen. But in examining the various specimens to be met with in London I came across a most valuable one in the St. Thomas's Hospital Museum (No. 2491) which shows that this is a possible, though, I believe, a very rare, occurrence. The accompanying illustration (Fig. 22) is a drawing of my own made directly from the specimen itself. There is a large sac formed by the left broad ligament on one side of the uterus—the uterus, indeed, forms a kind of appendage to its wall—the left Fallopian tube courses over its summit and directly underneath this lies the attachment of the placenta. On the outer side of the sac is a rather large lacerated opening through which the fœtus passed into the abdominal cavity. The specimen is said to be taken from a woman who died at the full period of gestation. Although the sac is a large one it is scarcely of sufficient size to have contained a full-time fœtus, and therefore it is at all events highly probable that in the later months of pregnancy the fœtus surrounded by its amnion was strictly abdominal in position as in the other cases I have been describing. If so, we have a fourth position of the placenta in abdominal pregnancy. Strictly speaking this is "tubo-ligamentary-abdominal" and perhaps should be more correctly described under the next division of my subject, but it is more convenient to take its consideration

here. Incidentally, it is worthy of notice what a very marked and unmistakeable ligamentary sac is to be found when the fœtus has really become abdominal, after passing through an intra-ligamentary stage in its development.

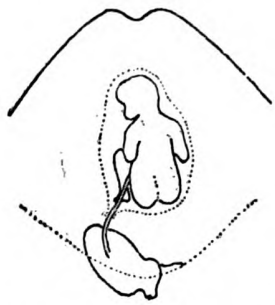
FIG. 22.



The accompanying illustration (Fig. 23), the last of the present series, will bring the preceding case in line with the others I have mentioned.

There are accordingly four different relations of the placenta to the main gestation-sac in abdominal pregnancy which need some differentiation. In the first group of cases the placenta is practically within the main gestation-sac and covered by reflexions of the amnion. In the second it has a fœtal and maternal surface of nearly equal dimensions as in normal pregnancy, the fœtal surface being covered by the amnion and in immediate relation to the sac, while the maternal surface is growing from the spread-out remnants of the tube and from the peri-tubal tissues also, the back of the uterus, the broad ligament and

FIG. 23.



the pelvic wall being favourite sites for such extensions of attachment. In the third, the placenta remains within the tube, the tube is still recognisable and the maternal attachments are confined to the tube itself. In this case there may be a double gestation sac, the one containing the fœtus, the other the placenta. In the fourth the placenta is attached to the upper wall of a broad ligament sac outside the peritoneum and the cord passes to the child through a hole in the ligament.

Before I leave this portion of my subject I want to finally enforce the point that these illustrations showing the different positions of the placenta in tubo-abdominal pregnancy are no mere imaginative figures showing simply possible relations of the pregnancy to surrounding structures. They are records of facts carefully observed and are each and all supported by extant specimens still available more or less for individual inspection and verification.

The sac in abdominal pregnancy evidently varies greatly in appearance and consistency. In many of the recorded cases it can hardly have consisted of anything more than the amniotic membrane. This has become attached to the peritoneum, "its epithelial lining becoming destroyed and its sub-epithelial layer (in some places) becoming dense and fibrous" (Webster). In other situations the sub-epithelial layer has been unaffected and the membrane is directly attached to the intestine or the abdominal viscera, is indistinguishable by sight from the proper peritoneal surface of such viscera, and only visible when reflected from one viscus to another as already described. The membranes are not, however, necessarily adherent in this way; sometimes they have a completely independent existence and probably all degrees are possible of partial peritoneal attachment. Sometimes their consistency and independence are such that they have been described as being extirpated (Tait) or sutured (Rosenmauer) at the operation for removal of the pregnancy. Cases so described are, however, sometimes open to the suspicion that an unrecognised broad ligament pregnancy has been mistaken for abdominal. In true tubo-abdominal pregnancy the sac, consisting at the best of amnion and chorion, and often perhaps of an amniotic layer only, must, if independent, always be extremely thin and easily broken. If completely independent it may admit of removal with the child, but it is extremely doubtful if it could ever possess sufficient independence and consistency to admit of any independent suture. The relations of the placenta to the sac are of chief importance and will need some reconsideration under the heading of Treatment.

The extra-uterine placenta at term is an object of considerable interest. Throughout the whole course of the pregnancy the placenta has marked the site of the original and main attachment of the pregnancy, and in its attachment has held, and still holds throughout, the key to much of its pathology and treatment. When the infant has arrived at term the placenta has also reached its fullest development, and, so far as my experience goes, the extra-uterine placenta at term, though often deformed in shape, keeps close to the normal standard both in size and weight. The method by which it has attained this development outside of the uterus may well demand our attention. Mr. Sutton states: "The fully developed uterine placenta is composed of parts derived from the maternal and fœtal tissues in nearly equal parts; a tubal placenta is mainly if not entirely derived from the fœtal tissues." It is true that there is no clear evidence of a tubal decidua, but the placenta as it increases in size (like a new growth in its progress) absorbs, takes up, and metamorphoses into its own tissue that of the Fallopian tube in which it was originally enclosed, and possibly the ovary of the same side also. In a considerable number of cases it is reported that neither ovary nor tube could be identified on the side of the pregnancy. So completely is this done that all traces of the tube may be lost at term or only the fimbriated end be found, as in the case I have described. When by the reflexion of the amnion this invasion of the placenta is limited to the tube and broad ligament only the matter is solely one of pathological importance; when there is no such limitation the consequences may be serious.

It will doubtless be noticed that what I have said regarding the pathology and operative history of tubo-abdominal pregnancy appears to explain and confirm in some degree the observations of many of the older writers and I am pleased to be able in any way to re-establish their credit and re-affirm in the main the correctness of their records. It is true that they considered that the peritoneum itself might discharge the functions of the fœtal membranes (Parry, p. 135) and that the impregnated ovum might from the outset implant itself on the peritoneum and in both of these guesses after truth they were mistaken. It is true also that in the abdominal or "ventral" pregnancy they thought they saw the child floating freely among the intestines within the peritoneal cavity and did not dream of the almost invisible sheath of the adhering amnion which formed a sac to the pregnancy, but in their observation of the fact that there was an extra-uterine pregnancy in which the child was abdominal or ventral in position and in their opinion that this form of pregnancy deserved to be considered as a distinct and special variety of extra-uterine gestation they were perfectly justified and modern research tends only to confirm their view.

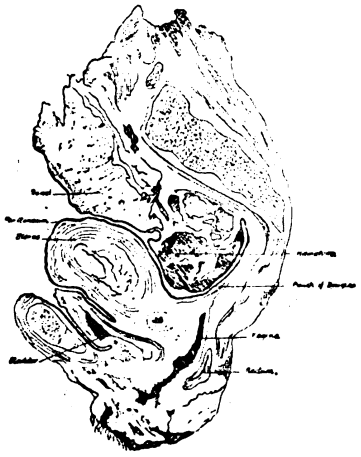
2. *Tubo-ligamentary Pregnancy (syn., Broad Ligament Pregnancy).*

A growing pregnancy situated in the middle of the Fallopian tube as it expands the tube instead of thinning and bursting the upper part of the tube may separate the layers of the mesosalpinx. The space between these layers, which in the normal state is non-existent or

represented by the merest line, becomes under these conditions a space of considerable extent. An increasing amount of the circumference of the tube is accordingly separated from its peritoneal covering and exposed to loose connective tissue only. As the tube expands still further it is only reasonable that it should occasionally give way in this direction and that the fœtus should be extruded into the connective tissue space below the peritoneum. This is, indeed, exactly what happens in "broad ligament pregnancy." The rupture of the tube and extrusion of the pregnancy into the broad ligament is usually accompanied by considerable hæmorrhage, which still further distends the space beneath the peritoneum and between its layers. An extra-peritoneal hæmatocele or broad ligament hæmatoma is the result and in some cases the pressure and disturbance caused by this is sufficient to stop the progress of the misplaced pregnancy. When this is the case the hæmorrhage is slowly absorbed and if the pregnancy be early and abortive it undergoes absorption also.

Broad ligament hæmatoma is of rather frequent occurrence as a sequel to any operation involving ligature of the broad ligament, and the hæmatoma is apt to occur at the first menstrual period subsequently to the operation. Every surgeon who practises operative gynæcology must accordingly be well acquainted with its leading features. It arises suddenly as a tumour or infiltration on one side of the uterus, it roofs the lateral vaginal fornix with a boggy or hard immoveable cement of blood-clot, and gradually extends upwards towards the groin of the affected side at Poupart's ligament. Sometimes its prolongations below are ill-defined and difficult to trace, at other times the tumour is defined and its border is abrupt. When the hæmorrhage is extensive and on the left side it may encircle and block the rectum, as Mr. Tait has shown. At other times, by burrowing in front of the rectum low down in the pouch of Douglas (as shown in the accompanying illustration taken from the work of Dr. Hart and Mr. Carter), it may produce a well-defined tumour behind the uterus that closely simulates the intra-peritoneal swelling of a distended and adherent tube. (Fig. 24). It

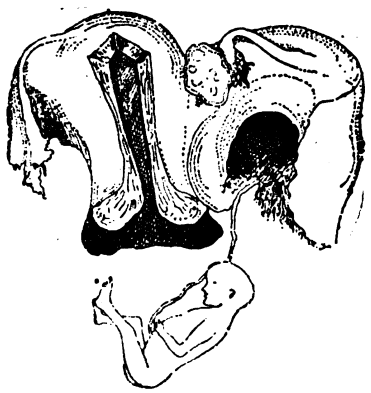
FIG. 24.



always causes considerable pain (pain preventing sleep) and is frequently accompanied by transient fever. Broad ligament hæmatoma is often confounded with cellulitis and the differential diagnosis is sometimes very difficult. The bare physical signs in both conditions may be identical. Besides being a rather frequent operation sequel, hæmatoma of the broad ligament is occasionally met with after labour and abortion and in connexion with menstrual irregularity and arrest when no pregnancy exists. Other cases are due to the intra-ligamentary rupture of a tubal pregnancy, as already explained, but these are by no means so frequent as some writers would lead us to suppose. In this respect extra-peritoneal hæmatocele (broad ligament hæmatoma) may be said to contrast with intra-peritoneal hæmatocele. Intra-peritoneal hæmatocele in women is almost always due to tubal pregnancy; hæmatoma of the broad ligament, on the other hand, is only in the minority of cases due to this condition. When the pregnant tube ruptures into the broad ligament the hæmorrhage may be limited or small in amount and the placental attachment may be undisturbed. If so, the tube retains its relation and attachment to the placenta while the fœtus (instead of escaping upwards as in abdominal pregnancy) escapes downwards between the layers of the broad ligament and undergoes its further development beneath the peritoneum.

Let us take an actual example of this accident and study it more closely. There is a remarkable specimen in Mason College Museum given by Mr. Hancox which beautifully shows the condition of a broad ligament pregnancy of four months' growth and is well adapted for our purpose. On the right side of the uterus in the illustration (Fig. 25) the

FIG. 25.

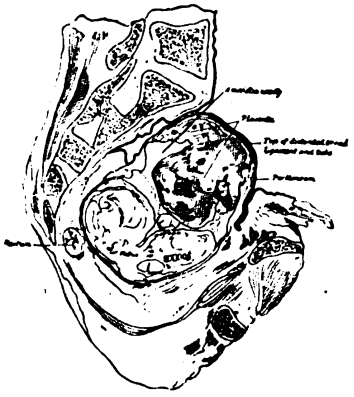


fimbriated end of the Fallopian tube is plainly seen resting upon the roof of a large excavated chamber formed by the upraised layers of the distended broad ligament. If we trace the tube from the fimbriated end towards the uterus we find that it is soon lost in the expanded roof of the broad ligament chamber. The tube as a tube exists no longer. Its middle third is ruptured and spread out and forms the immediate vault of the pregnancy beneath the peritoneum. It is only with difficulty that we can rediscover some trace of its independent existence on the further side of the broad ligament tumour before it enters the uterus. The fœtus has escaped from its cavernous bed by secondary rupture and is now lying outside the broad ligament. It is still, however, connected by the cord, and if we could trace this upward to its termination we should find the placenta attached to the roof and lateral wall of the cavity in the broad ligament, and plainly situated above the original position of the fœtus which has escaped from it. Note that the placenta is uppermost. The course of events has been as follows: the impregnated ovum was arrested in the tube; where it was arrested it adhered and vital attachment took place. At the point of attachment the placenta was formed and no subsequent growth of the pregnancy has separated this attachment. The tube, instead of rupturing upwards into the abdomen, has ruptured downwards into the broad ligament. Into this space the fœtus has been driven and over the buried fœtus the placenta is fixed and blocks any upward progress. What is the inevitable consequence? If the pregnancy continues to develop either secondary rupture must occur or the peritoneum be continually displaced to make room for the growing fœtus. In this instance the case has ended by secondary rupture and the patient has evidently died from hæmorrhage or we should not have such a specimen before us.

Let us now turn to Dr. Berry Hart's and Mr. Carter's sagittal section of a broad ligament pregnancy at nearly the same period of growth. (Fig. 26.) Here we may see an exactly similar condition beautifully portrayed in section. Mark at the highest point the "top of the distended broad ligament and tube"; below this, intimately attached and inseparable from the tube, the mass of the placenta, and again below this, crowded and buried in the lowest part of the pelvis, the unfortunate fœtus. Illustrations intended to show in section the peritoneal reflexions are sometimes confusing and difficult to understand, but this is exceedingly simple and intelligible. The pelvic peritoneum is lifted by the growth of the pregnancy until it is no longer pelvic, or only slightly so. Its reflexions before and behind are shallow depressions only and the arch of it runs across from the promontory of

the sacrum to the pubes. In this instance, too, the case ended by secondary rupture and the patient died from hæmorrhage, though an attempt was made to save her by exploratory incision. Some of the clinical and operative features of a case at this stage may be gathered from the following example.

FIG. 26.



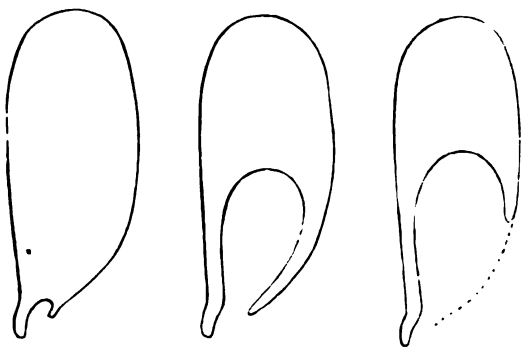
Mrs. G, aged thirty-one years, had been married for three years. She miscarried in April, 1891, and in February, 1892 (at twelve weeks). She menstruated regularly from this date until July, 1892, the last normal period being at the end of this month. Amenorrhœa followed, continued for nearly eight weeks, and was again succeeded by irregular vaginal loss for some two weeks before I saw her on Oct. 10th. The patient gave the history of a sudden attack of pain three weeks before on returning from church in the evening, violent abdominal pain and vomiting being the chief symptoms. This pain was repeated on the following Thursday and Saturday and to a less extent twice during the week that had just passed. On examination I found the abdomen slightly distended and a hard tumour to the right of the middle line above the pubes. The uterus was of normal size, pushed to the left and fixed there. A pelvic mass to the right of the uterus was felt to be one with the suprapubic swelling and only slightly moveable together with the uterus. The pouch of Douglas was moderately distended with fluid. The patient was feeble; the temperature on the evening of the 9th had been 100° F. and the pulse had been 120. The diagnosis was made of intra-peritoneal hæmatocele and free blood in the pouch of Douglas due to the rupture of an extra-uterine pregnancy. Operation was performed on the morning of Oct. 11th, 1892. There were present Dr. Leslie Phillips (who assisted me), Dr. Edge, Dr. De la Chérois, Dr. Williams, and Dr. Addenbrooke. Free fluid blood welled out on opening the abdomen. A ruptured pregnancy was found in the right broad ligament filling up the right side of the pelvis. The hæmorrhage from this (into the abdomen) had been partly confined by adherent, inflamed, and greatly thickened intestine. On separating this the outer coat of the bowel was at one part slightly torn and this was sutured with a continuous Lembert suture. A large mole of pregnancy was removed from the right side of the pelvis and the blood and blood-clot thoroughly washed out with warm water. No pedicle offered itself for ligation as the pregnancy had been subperitoneal. The pelvis was drained. At the close of the operation although very little blood was coming through the drainage tube the patient's condition was very serious. The pulse was 156. Nutrient enemata were ordered to be given every four hours. In the evening the pulse was still 156. On the morning of the 12th the pulse was 148; at 6 P.M. it was again 156. On the morning of the 13th the pulse was 144. At 4 P.M. on this day the bowels were moved and the pulse fell to 129 at night. From this date recovery, although slow, was uninterrupted.

In abdominal disease a persistently high pulse-rate is more than anything else the gauge of the severity of the patient's condition. It is worthy of notice that the severity of this case was as marked as it could possibly be compatible with final recovery. These cases of broad ligament pregnancy with secondary rupture are always serious. Before operation they cannot be differentiated from the cases of later rupture of the tube already considered, but at operation in the more common tubo-abdominal rupture the hæmorrhage can be at once arrested by ligature of the broad ligament and removal of the tube. In the broad ligament pregnancy with secondary rupture the case is different—there is nothing definite to tie unless one ligates special vessels, the operation takes longer, the surgeon has to trust to pressure and drainage and the final result is correspondingly less satisfactory and certain.

The tubo-ligamentary or broad ligament pregnancy may go on to term, and in its full development and during the stages by which it reaches that development it differs very materially from the tubo-abdominal or ventral pregnancy and will need further consideration from almost every standpoint. In tubo-abdominal pregnancy if the patient survive the fourth month and the dangers incidental to the extrusion of the fœtus from the tube she is free from further dangerous complications until the term of pregnancy is near its completion. In the tubo-ligamentary, on the other hand, owing to the higher position of the placenta and its liability to detachment from the growth of the pregnancy, the patient is never free from danger, and although many cases of this kind go on to term secondary rupture and fatal hæmorrhage are by no means uncommon or impossible at almost any stage of the development. In both varieties the period of the third or fourth month is a specially dangerous one because up to this time the pregnancy has received the support and shelter of the pelvis. When the pregnancy rises out of the pelvis into the abdomen the protection afforded by this is lost, and in the broad ligament form the gradual elevation of the placenta brings an additional source of danger.

If we look at the specimens and illustrations already taken as typical of tubo-ligamentary pregnancy in its earlier stages it appears as if the peritoneum had been equally separated in all directions by the growing pregnancy, and certainly in Dr. Hart's and Mr. Carter's case of mid-term pregnancy the perfect arch of peritoneum (seen in section) with a sulcus of equal depth behind and in front marks the case as one in which the pregnancy has been up to this point peculiarly symmetrical in its growth and in its displacement of the peritoneum. But it is not always so. Earlier or later in the history of most tubo-ligamentary pregnancies the tumour tends to invade or displace the layers of the broad ligament and the peritoneum continuous with these unequally. Sometimes it is the anterior fold of peritoneum which suffers the more displacement, and owing to the work of Dr. Berry Hart and Mr. Carter these are the cases which are at present more recognised and better understood. The peritoneum is raised from the back, side, and front of the uterus, it is entirely lifted away from the bladder, it is raised from the anterior and lateral abdominal wall, and in this way a good portion of the pregnancy comes to lie in front of the peritoneum. The pregnancy becomes in some places "sub-peritoneal" according to common anatomical language and may possibly be opened from the outside of the abdomen without the necessity of incising the peritoneum anywhere. The pregnancy is at first "sub-peritoneo-pelvic" and afterwards

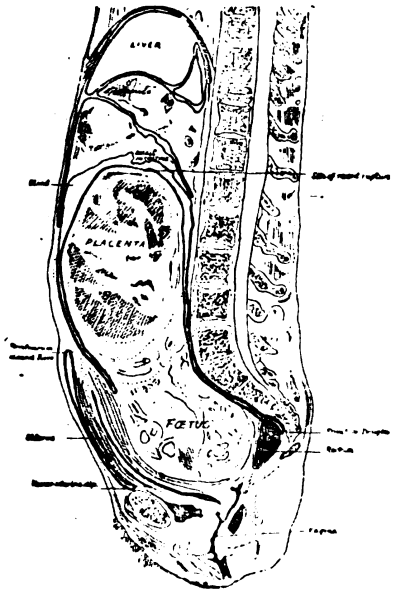
FIG. 27. FIG. 28. FIG. 29.



(if it continues to grow) "sub-peritoneo-abdominal." It cannot be adequately represented by any mere diagrammatic figure, as the tracing of the actual displacement of peritoneum is intricate and must obviously show considerable variations in individual cases. If, however, we take a sagittal section of the normal abdominal peritoneum to be roughly represented by the accompanying illustration (Fig. 27), and if we take the changes produced by a normal

(uterine) pregnancy to be represented by Fig. 28, the main or essential change produced in it by the growth of this form of tubo-ligamentary pregnancy may be approximately depicted by the following alteration (Fig. 29). Now if this diagram be compared with the actual condition found in a case of advanced sub-peritoneo-abdominal gestation, as represented in the frozen section illustration which by the kindness of Dr. Hart I am permitted to reproduce (Fig. 30), it will at once be evident that

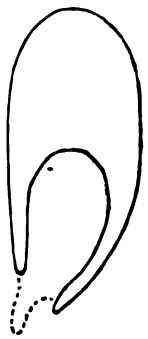
FIG. 30.



in both the posterior layer of peritoneum is unchanged and that it can be traced uninterruptedly right down to the bottom of the pouch of Douglas. It is altogether anterior to this where the displacement of peritoneum has occurred, and although in the frozen section plate this displacement is seen to be complicated by the retention or "survival" of the vesico-uterine fold (apparently cut off from the rest of the peritoneum), yet the general trend of the displacement or lifting is exactly as shown in the illustration. The anterior part of the pregnancy is that more uncovered by peritoneum and might possibly be reached by the surgeon without its section. It is, of course, this form of pregnancy which since it was first fully described has been very generally accepted as accounting for all cases of advanced extra-uterine pregnancy. It is only right to mention that Dr. Berry Hart himself is in no way responsible for this and that nothing he has written so far as I know affords any foundation for this teaching.

As we have already seen, tubo-abdominal or ventral pregnancy has quite another explanation and is practically distinct from the tubo-ligamentary variety from the moment that the fœtus is extruded from the tube. Now, a considerable body of evidence has formed which tends to show that this sub-peritoneo-abdominal pregnancy which I have been describing is not only quite distinct from ventral pregnancy, but represents only a part, and that perhaps the smaller part, of the cases of true broad ligament pregnancy. For sometimes—and probably in the majority of cases—it is the posterior fold of peritoneum (and not the anterior) which undergoes the greater displacement and then the condition found in advanced gestation is altogether different. The peritoneum is raised from the side and back of the uterus. It is raised from the pouch of Douglas and from the rectum and lifted upwards from the posterior pelvic wall as far as the sacral promontory. This appears to mark the usual limit of displacement and the peritoneum thus raised appears to be sufficient to satisfy the requirements of the growing pregnancy to term. The anterior peritoneum is quite undisturbed and an illustration approximately depicting the change in the peritoneal relations will have this outline (Fig. 31). On opening the abdomen at or beyond the full period of gestation the pregnancy is seen to be everywhere covered by peritoneum much as the uterus is in normal pregnancy, and it is not until the hand is passed behind the sac of pregnancy that one realises that the base of it fills the pelvis on the side from which it is springing and that the peritoneum is reflected from above the pelvis directly on to the body of the pseudo-uterus. The real uterus is found beneath the sac of pregnancy and pushed to the opposite side. This condition has been recognised for some years as occasionally met with by the surgeon when operating for the removal of an extra-uterine pregnancy at term, but the explanation of the method of its production was until quite recently imperfect or wanting. In 1892 I reported a case and described the condition, drawing especial attention to the intra-peritoneal nature of the gestation-sac as viewed from the front after abdominal section. I also drew attention to the breadth of its base and to the position of the uterus and expressed my conviction that the gestation-sac in this variety of ectopic gestation was formed by a "local development of the Fallopian tube and broad ligament."[3]

FIG. 31.



Absolutely true as this opinion was, being practically a rough generalisation of the account I have now presented, there was not at this time sufficient evidence to warrant any detailed history of the local development or displacement of the broad ligament. My own case and others like it had ended favourably and, so far as I am aware, no full or post-mortem investigation as to the exact relations of the sac had then been made. For more certain knowledge we are indebted to Dr. Dunning's[4] case, in which the sac of pregnancy was enucleated from beneath the peritoneum and the relations of the peritoneum to the sac and the amount and character of its displacement admitted of demonstration. From the record of this case there can be but little doubt that Dr. Dunning is right in his contention that this form of pregnancy is produced in the first place by a retro-peritoneal invasion from the broad ligament and that the majority of tubo-ligamentary pregnancies belong to this class or sub-division. My own case (already referred to) was as follows.

Mrs. H was a married woman, aged thirty-six years, the mother of three children, the youngest of whom was two years of age. The youngest was suckled for sixteen or seventeen months, menstruation recurring regularly during the greater part of the time. About one year ago the periods ceased and although some hæmorrhagic discharge occasionally took place this was irregular and scanty. The abdomen soon began to swell and the patient supposed that she was pregnant, but she had never clearly felt any movements of the child. On Feb. 17th, 1891, I saw her in consultation with Dr. H. S. Cook and made the following note: "The patient is very emaciated, sallow, and anæmic. Her tongue is catarrhal and tremulous. Pulse 104 (weak). She is feebly apprehensive, crying out at the thought of any disturbance of position or possible pain from palpation of the abdomen. She has been confined to her bed for more than two months with rigors, occasional fever (temperature 102° F.), frequent vomiting, and marked prostration. Examination (under anæsthesia): the abdomen is enlarged and prominent, the enlargement being more marked upon the left side. The line of greatest girth measures 42½ in. The enlargement is caused by a firm, well-defined swelling, dull on percussion and obscurely fluctuant to touch, which occupies about three-fourths of the superficial abdominal area. It is lateral in position, filling the whole of the left side of the abdomen below the umbilicus and extending over about two-thirds of the right half of the abdomen. The upper limit of the tumour is circular or crescentic in outline, it crosses the middle line half-way between the umbilicus and ensiform cartilage and is continued downwards over the right half of the abdomen until lost to the right of the pubes. The tumour, so far as it can be examined, forms a regular globe and is tense or resistant to touch except over a limited area to the right of the umbilicus. Here a kind of *ballottement* or rather pressure through fluid to a more solid part beneath, can be distinctly made out. *Per vaginam* the uterus can be felt enlarged, distinct from the tumour, and pushed to the left by it. The cervix is not developed as in the pregnant uterus.

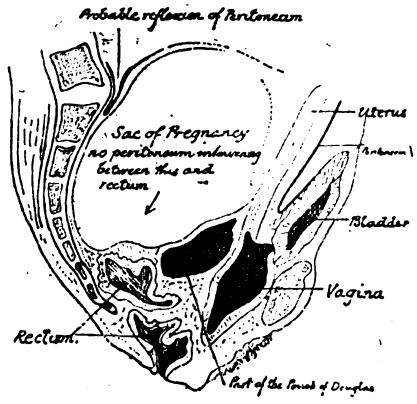
[3] British Gynæcological Journal, August, 1892.
[4] American Journal of Obstetrics, July, 1897.

The sound passes to 5 in. A large rounded mass can be felt in the pouch of Douglas; this appears to be one with the abdominal tumour. Auscultation of the abdomen for any evidence of placental souffle or fœtal heart-beat is negative. An alternative diagnosis is made of extra-uterine pregnancy with dead fœtus or ovarian tumour."

Operation was performed on Feb. 27th, 1891, when there were present Dr. Leslie Phillips (who assisted me) and Dr. Byron Robinson. I opened the abdomen over the area of least resistance already referred to, feeling assured that by so doing I should avoid the placenta. On dividing the parietal peritoneum, which was free from either displacement or adhesion, the wall of the tumour became visible, dark red or almost purple in colour. The hand could be passed in front of the tumour on either side and down into the pelvis. Behind the tumour it was stopped at the sacral promontory and the peritoneum appeared to be reflected from the spinal column upwards over the posterior surface of the tumour. I tapped the cyst with an ovariotomy trocar and evacuated several pints of dirty brown fluid. On opening the cyst a child was seen within it, dead and beginning to decompose. I removed it. The child was of full size and with the exception of some unnatural enlargement of the head was otherwise well formed. It was of female sex and weighed 6¼ lb. During the removal of the child the sac, which although thick was very brittle, tore slightly in a downward direction and I noticed that great care was necessary in dealing with it. The upper part was strictly intra-peritoneal and free from adhesions except some to the great omentum which were easily separated. It appeared to spring from the pelvis, having a very broad base with the uterus underneath it. Its interior was very foul and after washing this out with boric acid solution I finished the operation by sewing the opening in the sac to the abdominal incision. The placenta was not interfered with. The cord was left hanging out of the wound and the sac was drained. The placenta separated and came away about four weeks afterwards; this took place without any constitutional disturbance. The patient made a perfect recovery and has had a subsequent pregnancy perfectly normal in every respect.

Advanced tubo-ligamentary pregnancy must accordingly be divided into two sub-divisions or classes: (1) the anterior ligamentary, sub-peritoneo-pelvic or sub-peritoneo-abdominal pregnancy, and (2) the posterior-ligamentary or retro-peritoneal pregnancy. The first is established by post-mortem proof and frozen sections and does not admit of any doubt or question. The second rests mainly on operative evidence, but that evidence is confirmed by more than one operator, my own experience being exactly similar to that of Dr. Dunning, and I have very little doubt that in time this

FIG. 32.



will be supplemented by the confirmatory evidence of post-mortem dissection. Indeed, I have considerable grounds for believing that such evidence is already to hand and may be recognised in quite an old acquaintance—viz., the frozen section of an extra-uterine pregnancy, which is figured in Dr. Hart's and Dr. Barbour's Manual of Gynæcology (1883, p. 562–3). (Fig. 32.) In a recent visit to Edinburgh, when looking over the preparations belonging to Dr. Hart and Dr. Barbour, I was struck by the fact that in this section no trace of peritoneum could be found between the sac of pregnancy and the sacrum or rectum, and on more closely examining it with Dr. Barbour the condition found appeared to be consistent with the theory that the pregnancy had been tubo-ligamentary and that on the upper side of the section or the part removed the pregnancy had entirely lifted the peritoneum away from the pouch of Douglas and the rectum, while in and beyond the level of the section some remains of the pouch of Douglas still existed in front of the pregnancy. The pregnancy itself was therefore strictly posterior-ligamentary or retro-peritoneal, and we have accordingly anatomical as well as surgical evidence of the existence of this as a special form of pregnancy. If we turn again to Fig. 22 we shall see, I think, that this must also have been an example of the posterior or retro-peritoneal form of broad ligament pregnancy. Although the bony pelvis is not present the position of the sac as regards the uterus and rectum appears to make any other interpretation quite impossible.

There are two points worthy of further notice in the progress of a tubo-ligamentary pregnancy towards "term." The one relates to the development of the sac, the other to the position and integrity of the child and placenta. In the earlier months space for the growing pregnancy is gained (as we have seen) almost entirely by displacement of the peritoneum and this may be continued more or less throughout the whole period of gestation. In the later months another process of accommodation takes place and further space is obtained rather by development and extension or dilatation of the sac already formed than by further invasion of subperitoneal tissues, so that at term, although the pregnancy is entirely outside the peritoneum, it is not much more so than when *in utero*. For it must be remarked that every normal intra-uterine pregnancy is from the anatomical standpoint entirely subperitoneal throughout and yet the distended uterus forms an intra-peritoneal tumour. Similarly, although the base of the broad ligament pregnancy is entirely below the peritoneum, in most cases the upper part of the sac is intra-peritoneal and forms a tumour of considerable size. This applies to both forms of tubo-ligamentary pregnancy, particularly to the posterior or retro-peritoneal, where the sac of pregnancy forms a pseudo-uterus, which is almost entirely an intra-peritoneal tumour. To a less extent it may be seen in the sub-peritoneo-abdominal form also. If we turn again to the illustration (Fig. 30) of Dr. Berry Hart's and Mr. Carter's case of advanced tubo-ligamentary gestation we find that the fœtus is crowded down into the pelvis and mainly beneath the peritoneum, but the upper pole of the pregnancy containing the placenta reaches high into the abdomen and forms an intra-abdominal tumour covered by unbroken peritoneum and very comparable to the tumour formed by a pregnant uterus at a similar period of gestation.

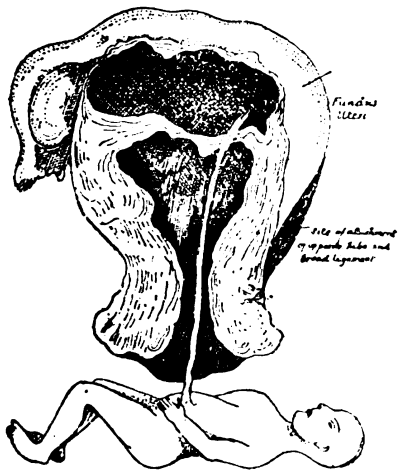
With regard to the placenta, I have only to draw attention to my belief that its position is inseparably bound up with the position of the Fallopian tube and that its final resting-place is therefore also the final resting-place of the tube. In the large section of advanced pregnancy figured by Dr. Hart and Mr. Carter traces of muscle tissue probably belonging to the tube were found, as Dr. Hart has told me, at the very top of the gestation sac. And this section shows, I believe, the greatest displacement of the placenta on record. In my opinion the original relative positions of the child and placenta are fixed at the time of invasion of the broad ligament or abdomen. In tubo-abdominal or ventral pregnancy the child is uppermost. In tubo-ligamentary or broad ligament pregnancy the child is undermost, its relative position to the placenta being fixed by the relative position of the tube to which the placenta is attached. If the relative position alters during the course of the pregnancy, as it evidently does to a considerable extent in the later stages of the posterior ligamentary or retro-peritoneal form of tubo-ligamentary pregnancy, it is because the sac develops posteriorly to the tube and therefore affords room for the child to pass behind the placenta and so to attain a higher position. Similarly, in the sub-peritoneo-abdominal form it may be quite possible for the child to pass in front of the placenta during the later stages of its growth. If the placenta occupy the highest part of the sac during the later stages of pregnancy it affords evidence of extreme dislocation of the tube, and such a case is liable to hæmorrhage and rupture however far advanced the pregnancy may

be. The placenta will suffer from local hæmorrhage and the pregnancy will be liable to terminate disastrously before the full period of development. In those cases which go to "term" the placenta is usually fully equal to the nutrition of the child, and though much has been written on the faults and lesions of the extra-uterine placenta as responsible for failures and defects of the extra-uterine fœtus I cannot say that the relationship appears to me to be by any means established. So far as my own experience goes the extra-uterine child at term in size and weight and general nutrition is in no way behind the average. But the child is often locally defective or malformed, such defects or malformations almost invariably corresponding to some long-continued pressure exerted by the bony skeleton of the mother on the extra-uterine fœtus. These malformations are most commonly met with in children of abdominal or ventral pregnancies. The children of ligamentary pregnancies, and particularly those of the posterior variety, may be free from any visible defect whatever.

3. *Tubo-Uterine Pregnancy* (*syn.*, *Interstitial Pregnancy*).

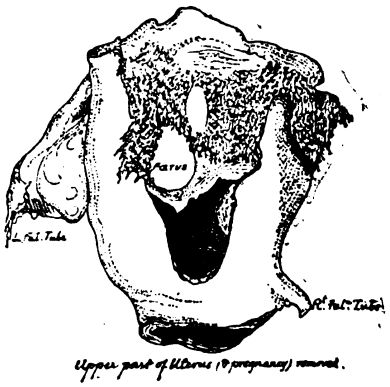
Tubo-uterine or interstitial pregnancy is a rare condition and there are only a few specimens which are readily available. Strictly speaking, this pregnancy is not really extra-uterine or only becomes so by rupture into the abdomen, but the pregnancy is "ectopic," outside the uterine cavity, and it is perhaps the most dangerous of all the forms of ectopic gestation. In most of the specimens of this disease or accident it appears to be the tissue on one side of the fundus which is mainly invaded by the growing pregnancy. The obstruction to the passage of the impregnated ovum and its primary attachment is probably exactly at the uterine ostium of the tube. This refuses to admit the passage of the "oosperm," the ostium is pushed before the growing ovum as it increases in size, and a burrow is formed into the uterine tissue (above or to one side of the cavity of the uterus), where the pregnancy finds a temporary resting-place and bed. This naturally raises the height of the uterus on the side affected, and in all the specimens I have seen the asymmetry produced by this has been very noticeable, the Fallopian tube of the non-affected side appearing to enter the uterus at a lower level midway between the (altered) fundus and cervix. In one of the best known specimens (No. 2517[90] of the Guy's Hospital Museum) the uterine appendages of the opposite side appear to have been removed with the unfortunate result that this asymmetry is not readily recognisable. The sac of pregnancy appears to lie across the fundus from right to left, and this is decidedly the impression given of the specimen by the illustration in Mr. Bland Sutton's book.[5] In reality, however, as the following more recent sketch (Fig. 33) will show, the unaltered

FIG. 33.



part of the fundus lies altogether to one side of this sac of pregnancy and the raw surface where the opposite appendages have been removed shows that there is quite as much distortion in this specimen as in that of the Royal College of Surgeons of England (4691), the other specimen in Guy's Hospital Museum (2517[85]), and in the specimen presented by Mr. Tait now standing in the Mason College Museum (Fig. 34). All show alike that the Fallopian tube and

FIG. 34.



fundus of the side affected are very considerably raised above the level of the fundus and appendages of the opposite side and that the tubes accordingly appear to enter the uterus at different levels. This asymmetry may be simulated by pregnancy in one part of a double uterus or by cornual pregnancy in a bi-corned uterus and, indeed, several supposed specimens of interstitial pregnancy have been found on close examination to be of this nature. In both of these conditions, however, there is always some angle, more or less well-marked, where the double organs join and this is of course absent in a tubo-uterine pregnancy.

A tubo-uterine pregnancy may continue to grow for several weeks to the end of the fourth month or even longer, between uterine peritoneum on the one hand and uterine mucous membrane on the other. Sooner or later rupture takes place, either downward into the cavity of the uterus or upward into the abdomen. The former method of rupture is a highly probable occurrence and if it occurred would presumably be followed by spontaneous healing of the wounded tissue and normal delivery at term, but in spite of the slenderness of the bridge of tissue usually existing between the sac of the pregnancy and the cavity of the uterus we have no positive demonstration that this has ever taken place alone. The only rupture that is known to occur is rupture into the abdomen (or into the abdomen and uterus simultaneously), and the result of this is always appalling. Diffuse hæmorrhage, worse (if possible) than that which takes place with early rupture of the tube, is the main feature of the pregnancy and hitherto this has always proved fatal in a very few hours. The only case approaching or possibly belonging to this class which I have met with in the living subject is the thirty-second of my series.

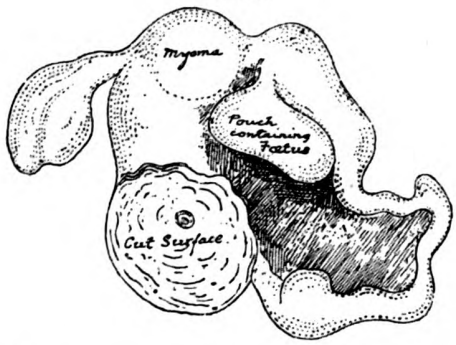
Mrs. I, aged twenty-seven years, had been married for seven years. She had had three children, the youngest of whom was nineteen months old. She was "regular" until May 6th, 1896, and since this date (until Sept. 10th) has had almost constant discharge of brownish blood. During the latter part of this time she suffered from abdominal pain and tenderness. Early in September this notably increased and the severity of the pain necessitated her confinement to bed. On Sept. 8th I saw her and found the abdomen distended and acutely tender. A fixed hard tumour was felt on the left side, having a crescentic outline and occupying the whole of the left inguinal region. On vaginal examination the mass was felt to be one with the uterus, but on passage of the sound no increase was found in the length of the uterine cavity. The patient stated that the swelling was rapidly increasing in size and the lump in the abdomen had only been noticed for a few days. The patient's lips were pale and her pulse was rather quick and feeble. A diagnosis was made of the left tubal pregnancy with hæmatocele and operation was done on Sept. 10th, 1896. On opening the abdomen a large sac was exposed formed by the expanded left cornu of the uterus, the left tube and the left ovary, and containing placental remains. This was adherent to omentum and intestine, the union with the latter being so intimate that separation had to be made by incision. When the sac was fully freed, opened,

[5] Surgical Diseases of the Ovaries and Fallopian Tubes, 1891, Fig. 103, page 349.

and cleaned it was seen that the inner part of the pregnancy had apparently invaded the uterine tissue of the cornu, and this, together with the base of the sac and broad ligament, was ligatured off from the rest of the uterus in four sections, leaving a long oblique wound on the left side of the fundus. The hæmorrhage was then controlled and the abdomen was closed, a drain being left in the pelvis. The patient made a good recovery.

On examination of the specimen removed it appears, I think, as if the pregnancy had been originally purely tubal and (possibly) a pregnancy of the outer part of the tube, that it had become firmly adherent to the uterus and ovary, and had quite secondarily invaded the side of the uterus in process of growth. If so, it is a special form of tubo-uterine pregnancy, which at present is unrecognised and certainly demands our attention. A specimen recently shown to me by Dr. Cullingworth, and already referred to in my first lecture, appears to me (at all events, so far as I have been able to examine it) to be of the same nature as regards the invasion of the uterus. This specimen is one in which a tubal (or tubo-uterine) pregnancy has been complicated with myoma of the uterus. The fœtus is contained in a curious diverticulum of the tube, while the placenta appears to have invaded the substance of the uterus. The upper part of the uterus (containing both pregnancy and myomata) was removed by hysterectomy and the following is a rough sketch of the parts removed (Fig. 35). In this

FIG. 35.



case there had been no intra-peritoneal bleeding at the time of operation. Whether Dr. Cullingworth would agree with me or not I am unable to say, but it appears to me that this is (like my own) a tubal pregnancy which has quite secondarily invaded the uterus.

In some of the older statistics of extra-uterine pregnancy cases of "interstitial" pregnancy figure largely and in far higher proportion than in any statistics obtained from later experience. Thus in Parry's 500 cases 31 are stated to have been "interstitial," while in Hennig's list of the same date (1876) in 150 cases 42 are reckoned as interstitial. These numbers must almost necessarily be largely mistaken, since any recent specimen is only of rare occurrence, and it is highly probable that some tubo-ligamentary and cornual pregnancies have been included by mistake. When a specimen is difficult to place, the position of the round ligament with regard to the pregnancy is sometimes of service in deciding its true character. This should be on the uterine side of a tubal or tubo-ligamentary pregnancy, while it should be on the other side or in the anterior wall of an interstitial or cornual pregnancy. The position of the round ligament as a guide to the differentiation of cornual pregnancy was first pointed out by Virchow, afterwards utilised by Professor Sir William Turner of Edinburgh, and has proved of very great value. It is not, however, an infallible guide. I have quite lately seen an intra-ligamentary tumour in which a large mass of the tumour was bulging between the round ligament and uterus. The normal relations had been so altered by the growth of the tumour that what should have been the uterine end of the round ligament was lost on the surface of the tumour and no direct connexion could be traced between the round ligament and the uterus. Yet the latter was intact and the tumour was removed without any injury to the uterus. This occurred in the hospital practice of my colleague, Mr. J. Furneaux Jordan (February, 1898).

THE PROGNOSIS AND TREATMENT OF URÆMIC CONVULSIONS AND COMA, WITH SPECIAL REFERENCE TO THE SENILE KIDNEY.[1]

BY ARTHUR T. WILKINSON, B.A., B.SC., M.D. LOND.,
ASSISTANT PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

I WISH to record two cases of acute danger to life from convulsions and coma which seem to me to be worthy of publication. They have the added interest which attaches to recovery and they suggest certain pathological and therapeutical remarks.

The first case was that of a clergyman, aged sixty-nine years, living amongst the Derbyshire hills, a great walker, accustomed to hard work, subject to worry and naturally a large eater. Prior to an attack of influenza with bronchitis early in 1891 he enjoyed excellent health but has since been conscious of some of the infirmities of age. Last autumn he complained of a feeling of pressure on the head which was aggravated by coughing, and coming in one night after a journey his family noticed limited facial paresis with dragging of the feet in walking. This, however, rapidly passed away. Six weeks later he became confused in mind when conducting a service in the church, repeated the same words a dozen times and had to be led down to the vestry. Next day he was quite well again. On March 12th, 1893, from which day the above account is dated, he complained of headache, was very restless, worked feverishly hard in his garden, and the colour of the cheeks and nose became of a deep purplish hue. He refused all treatment. On the 18th he wandered about all day complaining of his head and could not settle down to his books. About 5 P.M., as his son—a Lond. Univ. M.P., to whose careful observation I am indebted for this detailed account—was talking to him he replied confusedly, then absurdly, and soon quite incoherently. He was removed to bed and found to be very drowsy with great congestion of the face and nose. When spoken to very sharply he recognised those around him but immediately relapsed into stupor. There was no paralysis. During the night the drowsiness deepened; he recognised no one, lying on his back with closed eyes and stertorous breathing. He was, however, able to swallow teaspoonfuls of liquid food. Throughout the whole of the 19th and 20th he remained in this condition, having a convulsive seizure during the night of the 19th. I saw him in consultation at 9 P.M. on the 20th, the unconsciousness having then lasted fifty-two hours. Briefly the condition at that time and throughout the day, when he was carefully watched by his son, was as follows. There was intense purplish congestion of the skin of the head and neck and slight swelling of the cheeks with definition of the venules; the conjunctiva and lower lids were suffused and slightly œdematous; the pupils were moderately contracted, equal, and responded sluggishly to light; the skin was moist; reflexes were present; there was no ascites and no anasarca; the temperature was 98·6° and 99° F. on two occasions; respirations 24, deep and snoring; there was no pulmonary abnormality except that the air did not appear to enter the bases freely; the pulse was 88, regular, hard, and incompressible; the cardiac impulse was heaving and laboured, and displaced 1 in. to 1½ in. outwards; the aortic second sound was loud and ringing; the first sounds at the apex were overlapping rather than duplicated; there was no murmur; the abdomen was normal and the bladder was not distended. The patient lay upon his back with his legs at times drawn up, his hands clasped over his head or chest, and his eyes closed. If very sharply spoken to he occasionally responded, the only word uttered being "Yes." There was no rigidity and no paralysis. He resisted feeding, but swallowed whatever liquid passed the teeth. The tongue was thickly coated and dry; there were sordes on the teeth and lips and the breath was foul; there was no loss of control over the sphincters. The bowels were opened by enemas on the 19th and 20th. One curious fact, which I have noticed before in like cases, was the

[1] A paper read before the Manchester Clinical Society on Feb. 19th, 1895, and revised for the Stockport and District Medical Society's meeting of May 13th, 1897.

strength with which the *besoin d'uriner* asserted itself; once during the day he managed to wriggle to the edge of the bed and passed water on the floor. The urine was dark in colour, of specific gravity 1030; it deposited urates freely on cooling and contained the faintest trace of albumin. I was unable to obtain any at that time for further examination. Five grains of calomel were ordered at once, to be followed in the early morning by two-drachm doses of sulphate of magnesium till the bowels were freely opened. I also recommended venesection if matters did not mend. He took the calomel and two doses of salts during the night. About 5 A.M. the coma was so profound and the patient's condition so critical that venesection was contemplated. Between 5 and 6 o'clock, however, he passed three or four large, loose stools, and towards 6 o'clock a comparatively quick change for the better occurred. The cyanosis lessened, the breathing became quieter (26), and the pulse was much more compressible, "running," and it increased in frequency to 102. Between 6 A.M. and 8 A.M. there were gleams of consciousness and apparently natural sleep. At 9 A.M., after sixty-four hours' stupor, the patient woke up, recognised his usual medical attendant, took a glass of milk in his hand, drank it, and asked one or two questions in a perfectly rational manner. Later in the day, of his own accord, he made arrangements for the following Sunday's service. He had no recollection whatever of the events of the past three days. The bowels were kept open, the pulse tension became normal, and shortly afterwards he resumed his work. A year later he had supper at my house and was mentally and physically all one could desire. Two years after the attack he called and reported himself, now in the "seventies," as preaching once every Sunday, able to walk a couple of miles easily, and as having his usual brain power and excellent digestion. I found the pulse to be 76 and regular, tension medium, inclining to high; left cardiac dulness just within the nipple line; the second sound somewhat accentuated at the right second cartilage but not noticeable to the left of the cardiac impulse. The sounds were otherwise normal. He said he usually rose once a night to pass urine, could empty the bladder completely, and had had no sign of cystitis. The prostate was, however, somewhat enlarged. The urine was examined from time to time by his son and by myself. The amount appeared to be about normal and its specific gravity averaged 1018 or 1020; there was no deposit and no casts; standing on nitric acid it gave no reaction; occasionally with the nitric acid and sulphate of magnesium solution a faint haze was seen, but no definite ring of albumin was ever demonstrated. The son informed me that his father habitually neglected the preventive treatment advised; he ate heartily, though his friends limited the *menu* as much as possible, and beyond an occasional aperient eschewed medicine; otherwise the end might have been much longer deferred. To show his activity I may mention that on the day before his death he took two cripples to Manchester to endeavour to find a home for them. On July 16th, 1895, he had a severe apoplectic seizure at 9 A.M. and died the same afternoon from cerebral hæmorrhage. I did not see him and no post-mortem examination was held.

The second case is of quite a different character. The patient was a married man, aged forty-seven years, whose family history was satisfactory. Up to thirty-five years of age he was free in his habits, but since that time he has been very steady and a strict total abstainer; he was always very strong and muscular. On Jan. 19th, 1893, his master, a medical man, noticed that his eyes were puffy and that his face was somewhat swollen, so he ordered him to bed. The patient himself was not aware of the change. There was no other dropsy. On examination the urine was found to contain some albumin. Under the daily administration of drachm doses of compound jalap powder he improved somewhat, but in spite of the purgation suffered from headache. On Jan. 29th at 10 A.M. he was seized with severe uræmic convulsions; the face turned very red, then purplish in colour. He remained in a comatose condition all day, except at noon, when he complained of frontal pain so intense that it made him scream. Very troublesome vomiting set in. At 5 P.M. he had another fit, after which he was very rough, tried to get out of bed, and had to be held down. Elaterium in ¼-gr. doses was administered without result, probably owing to the fact that the stomach rejected everything, even cold water. At 11 P.M. he was again in severe convulsions and remained unconscious till 2 A.M. About midnight ½ gr. of pilocarpin was injected subcutaneously, and the dose was repeated in fifteen minutes. This produced very profuse perspiration. It was the opinion of the practitioner in whose service he was that the injections saved his life, as he was in a most critical condition at the time. In the morning he was described as being calm, conscious, and suffering only slightly from headache. He was then washed, well rubbed, enveloped in warm blankets, and driven down to the Manchester Royal Infirmary to be under my care. It is interesting to note that in spite of the above statements as to apparent consciousness the patient declared that he remembered nothing after the onset of the first fit till he found himself in bed in the infirmary. The condition on admission and further notes taken by my excellent clerk, Mr. E. W. Battle, were in brief outline as follows: "The patient is a strong, well-built man; face red, partly from exposure; lips purplish; no œdema of eyelids or other dropsy. He is drowsy; complains of intense headache and dimness of vision; exhibits marked amblyopia; discs and retinæ normal. Respirations 16. Considerable amount of frothy sputum; physical signs over the lungs normal. The heart's impulse is of medium strength, somewhat diffused, visible in the epigastrium, and, like the dulness, extends outwards to the left nipple line; second sound accentuated at the right base and both sounds at the left apex; no murmur; pulse 68, regular, small, high tension" (see Fig. 1). "Tongue dry, slightly furred; patient thirsty.

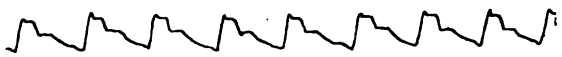
FIG. 1.



Tracing shortly after admission, Feb. 1st.

Some pain and flatulence after food; no vomiting; bowels kept freely open—e.g., five times between Feb. 1st and 2nd. Urine: amount, 55 oz.; specific gravity 1020, acid, clear above, heavy deposit of urates; small amount of albumin, too small to 'Esbach'; no blood, epithelium, or casts to be found. Temperature normal throughout." The patient's weight averaged just under 12 st. He remained in the infirmary for three weeks, and was under observation a month longer at the convalescent home. No further symptoms developed. The high arterial tension and headache continued throughout, though varying in degree from day to day and responding markedly to nitro-glycerine tablets (Figs. 2 and 3). The urine, which was

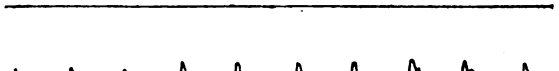
FIG. 2.



Tracing on Feb. 11th. No nitro-glycerine had been given for twenty-four hours.

examined daily, averaged 65 oz., the extremes being 55 and 98 oz. The percentage of urea ranged from 1·3 to 1·6, the amount excreted on the 16th being 480 gr.

FIG. 3.



Tracing on Feb. 12th, taken five hours after the administration of a tablet of nitro-glycerine.

The albumin disappeared by the 17th. No casts were ever discovered. He steadily improved at Cheadle, though the pulse tension remained above normal to the end. He returned to the infirmary for examination in June, 1893, came

to the Manchester Clinical Society two years later, and I have had specimens of his urine up to May, 1898. During the five years which have since elapsed he has had no symptom of uræmia, not even headache. His sight is good, the urine is normal in character and amount, the specific gravity being usually 1022, with 1·85 per cent. or more of urea, and there is no need for nocturnal micturition; indeed, he enjoys good health and is able to follow his employment. Though naturally a hearty eater he has been sparing in his diet ever since the attack and has also paid special attention to the regularity of the bowels.

And now having given my texts I wish to deal with them (1) clinically, (2) pathologically, and (3) therapeutically.

With regard to the first of these heads the marked cyanotic redness of the face seen in both cases might in earlier days have provoked the diagnosis of cerebral congestion. Knowing, however, little or nothing of the real condition of the brain we are now accustomed to point to the prominent cardio-arterial phenomena and to blame the kidneys for failing to purify the blood. Nevertheless, in not a few cases of convulsions and coma the urinary evidence, in my opinion, fails to substantiate any serious structural change in the kidneys and the happy sequel confirms the acquittal. Take the first case already detailed. We have a man whose cells—for physically we are a collection of cells with their cast-off clothing—were sixty-nine years of age and therefore presumably somewhat the worse for wear. The sixty-four hours' coma with convulsions from which he suffered can only be termed "uræmic." The diagnosis of acute Bright's disease was out of the question. In the absence of a post-mortem examination I suppose it is impossible to exclude chronic Bright's disease with absolute certainty. Nevertheless, I must express and defend the opinion that the facts warrant the absence of chronic inflammation of the kidneys. It is true that the patient had slight prostatic enlargement, but none leading to bladder distension or urinary change. It is true also that he showed signs of so-called uræmia for some time before the attack referred to, and that during the attack high arterial tension with definite cardiac enlargement were prominent phenomena. But he lived for two years and four months after the attack under medical observation and was in active work up to the day of his death. So well did he feel that it was impossible to persuade him to adopt, except very casually, the dietetic and medicinal preventive measures which were prescribed. During this period there were no diuresis, no dropsy, no eye phenomena, no discovery of renal casts; albumin, though carefully looked for, was never with certainty detected. Indeed, in no respect did the urine suggest Bright's disease. The pulse tension, however, varied considerably, tending at times to range distinctly high, and his spirits, mental power, and companionability played see-saw with the tension of his pulse. Now, I hold that it is quite unnecessary to invoke an inflammatory change in the kidneys to account for the symptoms. I rather judge that through age his kidneys were physiologically feeble and unable to excrete properly the nitrogenous waste of a hearty eater. With increasing years the vitality of the active protoplasm of the different organs deteriorates. Brain, heart, muscle, and glands become unequal to the tasks of bygone years. The large physiological reserve of earlier life is gradually lost until ordinary effort taxes the tissues' full power. When not built on the "one-hoss-shay" principle some organ takes the lead in the downward path. In this case the patient had begun to outlive his kidneys, a condition by no means rare and of extreme clinical interest. Though most of us have been brought up to regard uræmia, especially in old people, as the outward and visible sign of Bright's disease I venture to question the correctness of the inference and prefer to consider cases such as the above, in as far as they are renal, as coming under the head of the "senile kidney." This is no mere matter of nomenclature, a distinction without a difference, for it materially affects both the gravity of the prognosis and the character of the treatment. Dr. Balfour in his book on the Senile Heart rightly reminds us that in old age we are apt to diagnose "fatty heart" more frequently than we actually find it. It should be called "old muscle" which under adverse conditions may fail, but if relieved of strain will go on again in its quiet way as well as ever. So I hold that the senile kidney is not necessarily an inflamed kidney or even in the strict sense a diseased kidney; it is simply an old kidney, equal to some work, but not to full work. When overtaxed it may give rise to the most alarming and critical uræmic phenomena. The diagnosis of "Bright's disease" and the damper of "old age" take the edge off the treatment. It is assumed that the finale has been reached and that active interference is undesirable. Now it is in just such cases as these that the cerebral disturbance may be quite out of proportion to the renal failure, and old age, instead of a bar to recovery should be our hope and a stimulus to action. If the crisis be tided over and the kidneys be judiciously humoured many years of usefulness and quiet enjoyment may be added. Apart from definite organic disease the body is loth to die. There is an art in growing old with comfort and safety. As Oliver Wendell Holmes hints, old age has to leave many cards on us before we acknowledge ourselves at home to him. We are slow to recognise that the day for records is past, that the play given by functional power in excess of need is no longer ours. A failing heart pulls us up as we hurry to the train or tram and we make good resolutions and limit ourselves to respectable leisurely golf or the mildest of cycling. But a failing kidney, unless it act through the heart, does not worry us much. There may be no consciousness of any departure from robust health. The full pulse, with tension inclining to be high and in course of time arterial thickening, is commonly considered to be "a good strong pulse," and was thus described to me by an elderly gentleman yesterday. There is neither dropsy nor albuminuria, though the lower lids at times may be suspiciously full. The urine is variable in quantity, inclining to deficiency rather than to excess, of full colour, and of average or high specific gravity. There is, indeed, nothing to lead the patient to the medical man, and yet were the possessor of senile kidneys wise and wealthy he would visit his physician daily, and regard him as the purveyor of health rather than the curer of disease. I say "he," for the majority of the cases are men, with whom approaching age curtails outdoor rather than indoor activities. The grey-haired boys are more apt to forget the lapse of years amid the festivities of the dinner-table than in the gymnasium or athletic ground. The knife and fork are wielded as energetically as ever, and the health of friends is drunk to the detriment of the drinker. Literally, in cases recently seen by me, roast beef, plum-pudding, mince-pies, and "good old port" are still the order of the day when impaired excretion calls for abstemiousness. Old habits die hard and obstinacy is not confined to children. When the attack does come it is often quite as much the result of undue stoking as of a blocked funnel. There is no doubt in my mind that habitual over-eating and drinking, or even the continuance in old age of the table habits of adult life, conjoined with senile kidneys, will produce many of the systemic changes usually attributed to chronic Bright's disease. This specially applies to the cardio-arterial and cerebral phenomena. The blood-contamination which is a tolerably fixed factor in true renal disease is, of course, more fitful in its senile "double." Hence the course of the former is more definitely progressive than is that of the latter. Still, I am inclined to think that the arterial thickening found in elderly persons of full habit often arises in this way. The associated cerebral affection may be gradual and cumulative, as in the case of the clergyman, or sudden in its onset. It is characterised by coma and marked congestion of the face and neck with or without convulsions and passing paralytic phenomena. That paralysis may occur in uræmia and in this allied condition, independently of a hæmorrhagic focus, is surely placed beyond doubt. About the year 1880 I saw a man suffering from chronic interstitial nephritis who again and again was brought home from business in uræmic coma. On one occasion he also developed hemiplegia and hemi-anæsthesia and when in that condition was seen by the late Dr. James Ross. The paralysis and coma passed off coincidently and completely and were followed by delusions which lasted several days. He tried to discharge all in attendance because of the clocks carried about in their interiors, the ticking of which greatly annoyed him. Dr. Ross agreed with me in attributing the whole to the uræmic condition. Eighteen months ago I saw a man, in consultation, who, when in the act of drinking healths after dinner, according to his custom, fell down in a state of unconsciousness. Though comatose he strongly resisted all attempts to convey him to bed. When seen later in the day he was found to have an extremely congested face, pupils equal but sluggish in reaction, a pulse of very high tension, and heart-sounds to match. There was definite right hemiplegia, affecting the arm more than the leg, and great

irritability, in spite of complete loss of consciousness, so that it was difficult to keep him in bed. The *besoin d'uriner* asserted itself. The temperature rose to 102° F. We therefore gave him minim doses of tincture of aconite and grain doses of calomel. I confess I was inclined to regard the condition as one of organic lesion, and my friend was the first to suggest that the case was almost on all fours with that of his father. Anyhow, as the arterial tension yielded both coma and paralysis vanished simultaneously. The patient was unconscious for three days, but after the recovery of consciousness he desired to get up and rebelled against the enforced rest. The urine was acid, high-coloured, deposited urates, and did not contain albumin. This patient is still alive and in his average health. The urine is acid, high-coloured, its specific gravity is 1022, and it contains neither albumin nor sugar. It is interesting to note in all such uræmic conditions that many apparently voluntary acts and intelligent responses to questions leave absolutely no impression on the memory, just as in the post-epileptic state. The other day one of my out-patients after an epileptic fit walked several miles in his shirt-sleeves with an axe over his shoulder before he came to himself.

Sir William Broadbent in his very able and interesting book on the pulse lays great stress on the association of convulsions with high arterial tension and suggests that cerebral capillary stasis is the immediate antecedent. Headache and coma are equally the product of vascular tension, and if the intense congestion of the head and neck be any guide to the intracranial condition the explanation just given would certainly apply to all the cases I have seen which were independent of true Bright's disease. It is evident, however, that Sir William Broadbent holds that the high tension producing such convulsions may be quite independent of the kidneys. In other words, the impurity of the blood is due to over-production rather than to imperfect elimination. Whilst acknowledging the possibility of such an origin I am not prepared to exonerate the kidneys so completely in my cases as Sir William Broadbent seems disposed to do in his. Indeed, I believe that just as the cerebral condition is the outcome of the high arterial pressure so the latter indicates the retention within the system of excretory matter which even though in excess physiologically healthy kidneys could easily eliminate. Almost invariably the high tension is of some standing and the gathering storm gives its warning. There is a state which suggests a standing cause, the man having no superfluous kidney power. All the cases are met with in middle or later life and the younger the patient the more certain are you to find either free living—which undoubtedly tells on the kidneys—or actual renal disease which more seriously limits urinary play. This seems to apply to most, if not all, of the cases quoted by Sir William Broadbent. I believe that many men who habitually imbibe wine and spirits and eat largely have at forty or fifty years of age kidneys which for excretory power must be classed as sixty or seventy years old. It is in the middle and later life that alcohol finds a man out. Such persons innocently expect a bottle or two of medicine to set them right, forgetting the number of larger bottles emptied in the past and the length of time devoted to the process. It is this renal defect which gives point and more or less continuity to the contamination of blood due to the otherwise comparatively harmless excesses in diet.

What the exact element is which raises the arterial tension I do not know. It may be a single factor, a varying factor, or a combination of factors, and it is possible that at times its retention may be compatible with the elimination of the other urinary excreta. Anyhow the cerebral phenomena associated with the senile kidney suggest to me a simpler form of blood contamination than that found in the terminal uræmia of true Bright's disease. That the high tension is a recognition of the need for excretion in a body awake to its needs appears to me plain, but the indication at present is general rather than special. I do not believe that uric acid is the key to this secret chamber.

And now let me formally restate the position taken in this paper. In old age and premature old age there may be a curtailment of renal excretory power without any of the urinary signs of Bright's disease. This functional failure is associated with diminished and condensed rather than with abundant pale urine. It is apt, especially under the stress produced by repeated excesses in diet, to give rise to high arterial tension, cardio-arterial changes, and marked cerebral phenomena. The prognosis of uræmia occurring under such conditions is far more favourable than in true Bright's disease. Apart from intercurrent disease cerebral hæmorrhage is the most common terminus. A post-mortem examination is rarely made, the cause of death being evident, and if the body be examined the kidneys, when not definitely sclerosed, are exonerated, and age and arteries alone credited with the final result. Should any structural change, however slight, be found, latent Bright's disease is taken to be a sufficient solution of the problem. To the clinical picture drawn above, which is by no means a rare one, I am accustomed to give as a name the "senile kidney." Since I first read this paper the need for the definite recognition of such a condition, *especially in its relation to uræmia*, has been strongly corroborated by the volunteered experience of medical friends. That uræmic coma and convulsions are not always associated with Bright's disease is frequently illustrated in the puerperal state. During pregnancy, owing to fœtal life and metabolism, there is a call for increased maternal excretion and after birth uterine involution and other changes predispose to undue blood contamination. Should true kidney disease exist one can easily understand how acute disturbances may arise. But in a large number of cases puerperal convulsions do not come under this category. They are purely passing phenomena and leave not a wrack behind. When the blood is surcharged with excreta a comparatively slight renal inadequacy suffices to ensure an explosion. Pressure prior to or at birth may interfere with functional activity, the toxins themselves may produce temporary paralysis of renal cells, &c.—somehow a second factor arises and high tension with coma and convulsions is the result. But it is a case of "*Sublatâ causâ tollitur effectus*": appropriate energetic treatment tides over the crisis and the patient's life prospects are unimpaired. I am inclined to think that such attacks occur apart from pregnancy and in the other sex. The second case which I narrated would undoubtedly be classed as acute Bright's disease. But the only prominent phenomena were those of severe uræmia with prolonged arterial tension, phenomena which indicate not inflammation of the kidneys but simply retention of the urinary excreta. The signs of renal congestion and tubal inflammation were at a minimum. Beyond some puffiness of the eyes at the outset there was no dropsy. After admission to the infirmary there was never more than a trace of albumin in the urine. Blood, renal epithelium, and casts, though carefully looked for, were never found, even when inorganic deposits were present to carry them down. If present at all such elements must have been few and far between. I myself was inclined to regard the case as one of chronic interstitial nephritis, the latency of which is known to all of us. But time appears to be solving the problem adversely to this conclusion. Five years have passed; at no time during that period has the urine been found to be in any way abnormal. No albuminuric retinitis or other register of renal disease has developed and the patient enjoys good health. We have here a hearty eater who, in earlier years, was very free in his habits and who probably thus took the edge off the excretory powers of his renal protoplasm. The kidneys receive a slight check and phenomena altogether out of proportion to the renal change rapidly develop. At present he lives in the regulation of his food and bowels, as knowing himself to possess kidneys equal to ordinary demands but not fit for record excretions.

Let us now turn for a few moments to the pathological side of this subject. At times elderly kidneys are described by the morbid anatomist as "somewhat fibrous." It does not, therefore, follow that we are to call the disease chronic interstitial nephritis. Fibrosis has a wider significance, and it is quite unnecessary to conjure up the spirit of inflammation to account for its presence. Between those who hold that all renal sclerosis is inflammatory in origin and that the associated cardio-arterial change is a dependent sequel and those—like Gull and Sutton and Balfour—who would make the kidney disease a mere degenerative item in a primary arterio-capillary fibrosis there is a reasonable *via media*. That chronic interstitial nephritis is a well-established inflammatory affection due to definite irritation, frequently scarlatinal, and responsible for cardio-arterial, ocular, and other remote phenomena, there can, I think, be no shadow of a doubt. But that all renal sclerosis owns a similar origin I do not believe. Many pathological facts seem to suggest that whenever there is diminution or loss of functional power without coincident loss of blood-supply; whenever, that is, the protoplasm of the master tissue fails in its activities whilst the nutritive

supply is maintained, there is a tendency to overgrowth on the part of the connective tissue. It is reasonable to suppose that vascularity in absence of the usual metabolic and excretory processes may unduly stimulate the connective tissue cells. The blood, accustomed to dispose of its goods to the active protoplasm and being foiled in its efforts, seeks another market, and presses its wares on the interstitial tissue; this having no active function can only show its overfeeding by overgrowth and by the display of its anabolic power in the manufacture of intra-cellular fat or extra-cellular fibres. The best example in a tissue not given to adiposity is seen in the descending lateral sclerosis which follows a lesion of the upper motor arc. We have a tract of living protoplasm cut off from its trophic cortical cells and thus rendered functionless by a lesion which does not interfere with its blood-supply. Certain brain scleroses in early life seem to me to own a similar origin. It is not, of course, suggested that the vascular factor is the only factor in the production of such pathological results. I do not forget that blood-supply is largely a question of nerves and that independent trophic influences are at work; in short, that the problem is complex. In this connexion the periodic nervo-vascular tension associated with functional activity must not be forgotten. We know that the former may occur without the latter, as when the submaxillary branch of the chordatympani is stimulated after the administration of atropine; the vessels dilate, the gland is gorged with blood, but no secretion follows owing to the paralysis of the cells. It may be that the "empty stomach" of a man long past his usual mealtime is due to this tension awaiting cell activity. This unfulfilled expectation when often repeated is undoubtedly a cause of gastric disease, not simply because the organ fails to rise to the occasion when the food does come, because hope deferred maketh the stomach sick, but possibly also because the natural relief to the nervo-vascular erethism given by periodic cell activity and secretion is not experienced, and the unfulfilled desire to provide a functional blood-supply is partly diverted to the connective tissue elements. This question hardly arises in connexion with the kidneys, the cells and glomeruli of which are always in action, but in these organs other factors, even more potent, come into play. Not only have they a blood-supply out of proportion to their size, but also their failure in function produces a general rise of blood pressure with special local vascular stress. Diminished excretion entails increased blood-supply. Should the glomeruli and tubal cells be unable to respond to the stimulus the increase of the interstitial elements is hardly to be wondered at. This hyperplasia may occur, but not necessarily, in senile cell failure. That lead, alcohol, and other poisons may produce renal sclerosis through primary premature loss of vital power in the excretory protoplasm I firmly believe. The gout which accompanies plumbism bears witness to the imperfect excretion. Strong alcohol acts as an irritant and produces small-celled inflammatory exudation, as is well seen round the lobules of the liver when spirit, almost "neat," is frequently poured into an empty stomach on the "hail fellow, well met" principle. Being rapidly absorbed, and only diluted with the blood in the portal vein, the liver experiences its full irritant power; before reaching the other organs of the body the alcohol is mixed with the blood in the superior and inferior cavæ and exposed to excretory areas, so that its power as an irritant is very much lessened. Unfortunately, moderate drinkers measure the effect of alcohol on the system by its action on the muscles and the brain, and so are often able to carry and guide home a drunken and disreputable liver without any compunction. Primary alcoholic irritative interstitial nephritis is therefore not a common occurrence; it is, however, occasionally seen in very heavy whisky drinkers, though commonly overshadowed by the hepatic lesion. Many persons who continuously imbibe more dilute alcohol, as opposed to the "nippers" already referred to, exhibit widespread pathological changes which, in part or at times, are irritative in character, but which may largely be explained in another way. Short of primary interstitial irritation, I believe chronic alcoholism takes the edge off the powers of the more highly specialised protoplasm, notably affecting that of the nervous system and kidneys, which is more staid in character and does not show the rapid reproductive changes seen in the cells of the blood, alimentary tract, &c. As the result of the prolonged influence of alcohol we have curtailed functional activity, diminished vitality, and lessened power of resisting disease. In the nervous system this discounts mental and physical vigour and renders a man of less use to himself and to the community. In the kidneys, where its incidence is possibly greater than on the remaining organs on account of the relatively large blood-supply, it entails the consequences of premature senility. Physiological cell-failure may alone result or, in accordance with the principle already laid down, fibrosis may be superadded. Though it may be difficult in alcoholic peripheral neuritis to prove that diminished axis-cylinder power precedes the interstitial nerve changes, in the parenchymatous paralysis following diphtheria, &c., which are painless from the start and plainly toxic and central, the hyperplasia of the endoneurium is so evidently secondary that it gives countenance to one's views whilst illustrating the general theorem. Anyhow, the relation of diminished functional power with continued blood-supply to fibrosis deserves attention. Should the quality or amount of arterial blood transmitted to an organ be diminished without primary failure of the functional protoplasm, fatty metamorphosis, without fibrous thickening, usually follows.

Where the curtailment of nerve energy, vascularity, and functional activity are coincident simple atrophy is the natural sequel. The marvellous involution of some uterine fibroids at the menopause is a sufficient illustration. A year or two, as I have recently witnessed, may thus render impalpable a large abdominal tumour. But where the blood-supply is retained and function lost the connective elements may revel in the unwonted feast, as in uterine hydatids, where, through failure of the fœtus, the blood-supply is diverted from its main object and the body forgetting to turn off the vascular taps the current is concentrated on the connective tissue, here of the "mucous" variety. This principle seems to have wide applications in pathology and I am glad to see that Professor Adami, in the excellent article on Inflammation contributed to vol. i. of Professor Allbutt's System of Medicine, is disinclined to regard all sclerosis as inflammatory in origin.

Thirdly, dealing with the therapeutics of my text, the prevention and treatment of uræmia in senile kidney and other renal failures may be considered under two heads: (1) attention to diet and (2) measures calculated to aid excretion, to lower arterial tension, and to quiet convulsion. Though of the greatest importance a few passing remarks must suffice for the former. Temperate living in old age would lengthen many a life, warding off apoplexy and uræmia. Indeed, the marked difference in personal comfort and vivacity brought about by a change in table habits has often astonished both the patients and their friends, as the former entirely ceased to discuss whether life was worth living. This need not entail the adoption of liquid or invalid diet, for in advanced life the stomach usually secretes and digests more satisfactorily when stimulated by solid food than when treated to "slops." The sum total of food should be restricted within reasonable limits. This is more important than any specific act of self-denial. If an egg or fish be allowed for breakfast animal food should be permitted at one subsequent meal only, and that not too late in the day. To prevent undue condensation of urine the amount of liquid imbibed should average 40 fluid ounces and be taken chiefly between meals lest it dilute the gastric juice. Intoxicating liquors are better forbidden; if insisted on a small amount of diluted dry spirit during the chief meal and at bedtime may open the tardy stomach arterioles and favour sleep. That vascular tension is thus kept down is matter of observation. Prolonged uræmic coma, just like an attack of gout, is a time of diminished ingestion, and the latter no doubt aids the recovery.

Under the second head I wish to discuss in more detail the value of (*a*) purgatives; (*b*) chloroform, bleeding, and the nitrites; and (*c*) diaphoretics. The importance of attention to the bowels cannot be over-estimated. Not only does regularity greatly lessen the chances of secondary fermentations and toxin formation, but by purgation we can turn out of the body bile and half-digested food and also command the radicles of that vein which carries the crude products of digestion to the great provident dispensary of the body, the liver, where for weal or woe so many mixtures are made. Modern abdominal surgeons, whose one aim in the old days was to keep the intestines quiet, are now beginning to realise their value in elimination and to substitute calomel and salines for opium. They talk of "the race for the bowels" and use the intestine as if it were a drainage-tube. I firmly believe that in commanding the liver and intestines we hold the most important excretory area in the body after

the kidneys. In this respect the views of the late Dr. Mahomed were undoubtedly correct. Indeed, the efficacy of purgation in high arterial tension and uræmia is acknowledged by all, but there is still considerable diversity of opinion as to the relative value of the different drugs. May we employ calomel? Sir William Broadbent places it *facile princeps* amongst the drugs which lower arterial tension and strongly advocates its use in from 2 to 5 gr. doses. Many other writers—e.g., Dr. Whitla in his excellent Dictionary of Treatment—only mention it in order to warn their readers not to prescribe it, and my early training and teaching ran in the same groove. Now I frequently exhibit it when I have reason to regard the uræmic phenomena as out of proportion to the organic renal change. Should the cells of the kidney be much degenerated—that is to say, in parenchymatous disease with dropsy, marked albuminuria, and abundant fatty epithelium and casts—the drug is distinctly dangerous. Quite recently I saw such a case in which 5 gr. of calomel had been given. It stopped the uræmic vomiting, relieved for the time the headache, and lowered the blood tension, but the marked swelling and tenderness of the salivary glands and gums, the furred, foul tongue, &c., gave ample witness that the administration was a mistake. In the terminal uræmia of Bright's disease calomel acts as a poison and the more definitely the cerebral phenomena depend on organic renal failure the more doubtful the use of mercury. The condition of the kidneys *quoad* Bright's disease is in my opinion to be our guide. It is the fact that severe convulsions and coma may be associated with a minimal or passing renal defect that makes calomel admissible. That all such cases have exactly the same pathological substratum I am far from believing, but the use of calomel is not limited to those conditions in which the renal trouble is only transitory. Whenever the blood tension is high, the urine is passed in fair quantity, of average or high specific gravity, deposits urates and contains only a small amount of albumin, I employ calomel without hesitation. Taken alone the amount of albumin present is of little importance. In puerperal convulsions I have seen very highly albuminous urine return to the normal within a few hours. Numerous and varied renal casts must, however, give us pause, more especially if they testify to chronic tubal change.

In senile failure, and in the middle and later stages of chronic interstitial nephritis, we must remember that the system is sensitive to mercury and therefore recall Dr. Ringer's remarks on minimal dosage. In early days I saw 15 gr. and 20 gr. of calomel given as a purge with excellent results. The Cleadle bull-dogs, of local repute, are said to owe their ferocity to this drug. Such treatment in renal failure could only be regarded as tempting Providence. One grain is often an ample dose. Quite recently I saw a gentleman, well in the "teens" of stones, who smiled at the powder in the evening, but assured me that his respect for it was considerably raised on the following morning as it kept him from business. A lady, aged seventy-six years, who was under my observation for several years with gouty cardio-arterial and retinal changes, was severely purged by 1 gr. of calomel, but so greatly relieved thereby that for three or four weeks after each dose she seemed to have taken a new lease of life. The same lady for three years took 5 gr. or more of pulvis ipecacuanhæ compositus every night with great advantage, a method of administering opium in Bright's disease which I consider to be safer than any other. As commonly happens this patient died from an acute and entirely independent affection.

Calomel undoubtedly reduces high arterial tension and relieves the troublesome cardiac, pulmonary, and cerebral phenomena associated with it. It takes several hours to act, but the effect produced is less evanescent than with other drugs. How calomel acts I do not profess to explain. That mercurials will often clear a dense uratic urine is known to all. Elimination of bile by the bowel is probably the principal part of the programme. Anyhow, in dealing with high tension calomel is superior to all other purgatives, including blue pill. It sweeps and drains the intestines as well as the hepatic ducts and in my opinion differs materially from crude mercury in its action. In a case of obstructive jaundice of some weeks' standing, now under my care in the Manchester Royal Infirmary, in which the administration of olive oil, massage, and other treatment have failed to remove the obstruction, both patient and medical man gave independent witness that 1 gr. of blue pill taken three times a day increased the colour of skin and urine, whilst 1-grain doses of calomel caused decided improvement in the digestion and complexion and lessened the urinary excretion of bile, in spite of the continuance of the block in the main duct. Next to calomel, but as its aide-de-camp rather than its substitute, I do not hesitate to place Epsom salts, and in acute cases I am accustomed to follow up the calomel after five or six hours with 2 to 4 drachm doses till free purgation occurs. In chronic high tension an aperient dose of the mistura alba on rising each morning gives very definite relief. I use it extensively in out-patient practice and find, as Dr. Whitla observes, that it can be continued with advantage for long periods. Our mercurial ancestors, with their nightly blue pill and morning black draught, and their by no means delicate attentions to the *primæ viæ*, were perhaps nearer the mark than some of the more scientific moderns. I am told that my friend, the clergyman, was a younger and a better man whenever he had time and grace to attend to his bowels. When calomel is contra-indicated, and especially if dropsy be present, I often employ the compound jalap powder in drachm doses. Some fortify it with elaterium: my experience of the latter drug has not been encouraging. On two occasions the fault may have been in the quality of the drug supplied, in other cases it has been rejected or failed to act. An extra drachm or two of bitartrate of potash may be added, as recommended by Sir William Roberts, with excellent result.

There are, however, cases in which the convulsions are so severe and the whole condition so critical that some method of treatment more rapid than purgation is urgently demanded. If the blood tension be high I believe that both theory and practice uphold blood-letting as a reasonable and efficient remedy. It is true that physiology teaches us that moderate venesection does not lower the arterial blood-pressure and arguments have been based on this statement deriding its utility in disease. But surely a deviation from the normal is a very different thing from a return to the normal. The aim of the automatic regulating mechanism of the body is to secure normality. It may raise the blood-pressure with a view to increased excretion, but it will gladly allow a return to the normal if practicable. I advocate bleeding as a temporary device to tide over a crisis; that it accomplishes its end is undoubted. It must in most cases be backed up by measures more definitely depurative in character, dietetic and excretory. Some obstetric writers, like Dr. Galabin, absolutely set their faces against it. A friend of mine, surgeon to a large hospital, who has had a wide experience in such cases, told me that the only patient he lost in puerperal convulsions was the only one he did not bleed. Its utility in uræmia is maintained by such authorities as Sir William Roberts, Sir William Broadbent, and Dr. Osler. It may be employed with advantage in all cases in which calomel is admissible. Where the patient is already very anæmic and the kidneys are far advanced in organic disease both remedies are worse than useless and the prognosis is not markedly affected by any treatment. In the clergyman first referred to the congested face and full habit of body distinctly warranted the use of the lancet, but the absence of convulsions allowed time for the action of still better remedies. In dealing with severe puerperal eclampsia chloroform by the lungs and chloral and bromide *per rectum* are of unquestionable value. Nevertheless, though they mitigate the convulsions, like morphia they mask the coma, and I am bound to confess that when the pulse tension is high and the patient is plethoric I incline to the older method of treatment. Of the reported value of morphia in uræmia proper I have had no experience and should prefer to commence the trial of it on my enemies rather than my friends. Still, it strikes me as peculiar that the two drugs, mercury and opium, against the use of which in Bright's disease we were formerly warned, should be now both to the front in the treatment of uræmia. This does not prove that the former fears were groundless, but rather supports my present position—namely, that the more pronounced symptoms of uræmia, coma and convulsions, are often associated with comparative renal integrity.

In dealing with the results of chronic high tension I have found the nitrites very useful, but so far have not tried them in actual convulsions. An aching head or a heart struggling irregularly and painfully against an over-full arterial system will at once gratefully acknowledge the receipt of a dose of nitrite of ethyl, as suggested by Dr. Leech, or more slowly respond to tabellæ of nitro-glycerine. The latter preparation, because of its stability and ease of administration, I frequently employ in chronic high tension. It

gave great relief in the second case and may be used to diminish the intense headache which often accompanies the development of albuminuric retinitis. The sphygmograph readily reveals the action of the drug and may be employed to indicate the amount and frequency of the dose required to mitigate the tension. I say "mitigate" advisedly, for to relieve the symptoms it is not necessary, nor, indeed, is it an easy matter, to establish a normal tension. A tabella every six or eight hours is usually sufficient to accomplish the desired end. In one case of cardiac asthma with very irregular high-tension pulse the relief given by the nitrites was so great that the patient was immediately transferred from his bed to the local races, and the latter end of that man was worse than the first. As his medical attendant observed, the treatment both cured and killed him. Sometimes the nitrites produce definite diuresis, but even this should not lead us to set aside other eliminatory measures. When the kidneys fail the skin presents a large and active secretory area second only in importance to the mucous membrane and glands of the alimentary tract. The fact that in Bright's disease urea is excreted by the skin is a definite indication to the therapeutist. Of every-day drugs the sweet spirit of nitre and the acetate of ammonia are the most popular and valuable diaphoretics, but in uræmia we are compelled to adopt more active measures, such as the external application of heat, wet or dry, and the hypodermic injection of pilocarpine. The hot pack is one of our most valuable remedies and available in almost all cases. It is, however, to be specially selected when calomel and venesection are out of the question, when the system generally, and the connective tissues in particular, are drowned in ureated liquid and when the brain disturbance is more dependent on direct intoxication than irregularities of arterial pressure; in other words, in the dropsical uræmias of blocked or bankrupt kidneys.

The employment of pilocarpine hypodermically is not without its dangers. Nevertheless, if other remedies fail, it may be tried, provided the patient possesses full power of deglutition and the thoracic organs are in good conditon. Its action should be assisted by the use of hot blankets, ot bottles, and warm drinks. Usually the response of the skin is rapid, a few minutes sufficing to start the perspiration, but the response of the system is somewhat more uncertain in time and degree. The effect produced, however, in some cases, as in the second already referred to, is very striking. Personally I avoid the use of the drug if possible, but confess that I have not tried the method of inunction recommended in milder cases by some writers with the object of reducing the risk of cardiac collapse and pulmonary œdema to a minimum. As pilocarpine is recommended in some forms of insanity it may be interesting to add that my friend Dr. Wansbrough Jones after the hypodermic injection of ½ gr. for ocular disease witnessed the immediate development of acute melancholia with attempted suicide, and the repetition of the dose some time later at the recommendation of the oculist led to a similar disturbance followed by several months' detention in an asylum. As there was no family history to suggest such a complication the drug was naturally suspected. At any rate the dangers of pilocarpine are sufficiently real to render its use a matter for deliberation. Many other interesting points in the treatment of uræmia press for discussion but time forbids. My object is accomplished if I have left on your minds the impression that so-called uræmic convulsions and coma have not necessarily the serious prognosis usually accorded them; that they may occur apart from evident organic disease; that even in Bright's disease they may prove to be mere accidents by the way; and, lastly, that the value of treatment is often greatest in old age, when the physician is in danger of standing by to watch the curtain fall before the drama has really reached the *finale*.

Manchester.

ON Wednesday evening, May 25th, a conversazione of the St. Andrews Graduates' Association was held at 11, Chandos-street, Cavendish-square. The company was received by the President, Dr. William F. Cleveland, and Miss Cleveland, assisted by the Vice-president, Sir Charles Gage Brown, and others. There was a large gathering of members and their friends, and an excellent selection of vocal and instrumental music was given under the direction of Dr. Cooper Key, of Wilton-place, a member of the council of the association.

MALARIAL FEVER: SOME SUGGESTIONS IN ITS PATHOLOGY AND TREATMENT.

BY WILLIAM FORBES-LESLIE, M.B., C.M. ABERD.

DURING the last few months malaria has appeared as a plague at Batum and in other districts of Asiatic Russia, causing a dreadful mortality, and the losses of the Spanish army in Cuba from the same cause, which I have reason to believe may be placed at nearly 100,000 men, with the death of Sir William Maxwell and others, make this, so it seems to me, an opportune moment for its discussion. My experience of the disease, extending as it does over a period of nearly twenty years, may, I hope, give me a certain authority for the statements I am about to make and lend weight to the observations which have led me to conceive a new pathology and treatment for it. Malaria for centuries has been recognised as the fever which infected marshy and tropical districts. It has during this long period received many names according to the type in which it manifested itself. There are certain parts of the world where it is more common than in others and where it is most deadly; such a part is the west coast of Africa, East Africa, and Madagascar, and it is the malarias of these countries, especially of the latter two, which I wish to discuss. Malaria is endemic, that is, it is confined to certain districts, and has no power to spread beyond its natural zone of production. Some observers are inclined to grant it an epidemic power, and this I believe it has in certain of its independent forms, such as influenza, malarial cholera, yellow fever, and dengue in all forms arising from and particularised from the parent disease. It has the tendency to widely extend itself beyond its seat of origin by winds, rivers, and sea-currents, to be deflected by forests, perpendicular cliffs, and to be impelled obliquely along slopes from the earth to the upper air-currents. It has a great attraction for the earth, which prevents it rising perpendicularly as do the more volatile matters of evaporation. I have noticed that according to its methods of transmission so it differs in the symptoms it produces. Thus if drunk in water or taken in food it gives rise to algid forms. If inhaled in the district itself it gives rise to a continued type frequently terminating in hyperpyrexia, but if inhaled at sea to an irregular type, characterised by intermittent fever, ague, or enteritis. I cannot see that Dr. Manson has proved that the mosquito is the intermediary between the malarial germ in the soil and that found in the human blood. The poison itself is said to be an organism, and this can hardly be doubted, but its form and method of development are not yet understood. Italian observers lay claim to its discovery. Their experiments have been made on Roman fever. It is not singular, therefore, if other observers contest this organism and lay claim to have discovered another which they say is always found in the blood in malaria. The difference in the fever of the Roman marshes from the Chinese and Indian fevers is most marked and my experience in Africa alone has taught me that the fever of no district resembles another, but they differ in some instances as widely as typhoid fever from cholera. Indeed, one could make a fever map of the African continent as uniform in its areas as the counties of England appear on a school atlas. Observers have tabulated such a number of bizarre forms of the organism in the blood that one gets confused and doubtful as to their identity and rather inclines to the belief that they are abnormal elements of the blood changed by some chemical action of the poison than individual organisms. My opinion is that the true germ of malaria has not yet been discovered and will not be till we can obtain a higher power of the microscope. As every district has a fever differing clinically, so must every fever be produced by a different and modified organism. How can we say definitely, then, Here is the organism of malaria? Rather say, Here are a score of organisms which produce malaria. We are only on the threshold of our knowledge of its life-history. Another fact I have observed is its power to produce other diseases. In this it somewhat resembles syphilis; but I cannot help thinking there may be some relationship between the two. In all malarial districts we find syphilis in its worst form, and in Madagascar it is so

common that but one adult native out of ten has not had it or is not suffering from it. Then we know that syphilis came from the east. The poison of malaria is an elastic poison. It is not only changed by difference of district and atmosphere, but by constitutional idiosyncrasies. We must read a malarial origin in pneumonia, typhoid fever, cholera, dysentery, enteritis, yellow fever, malignant endocarditis, multiple neuritis, locomotor ataxy, myelitis, meningitis, lunacy, hepatic troubles, kidney disease, blood diseases, skin diseases, and a host of others, not forgetting the bleeding diathesis. We must be prepared to recognise and treat these, not by the ordinary routine, but by that which applies to malaria, the initial disease and origin of them. It is wonderful to think that a poison can be so mobile as to be capable of change to such an extent. It naturally leads one to a belief that disease can only be impelled along certain planes and that under certain stimulation the tissues react in a certain manner. Another interesting fact in African fevers is that the sequelæ are far less in extent and severity in the algid than in the low forms. Thus we get serious impairment of motor or sensory paths, such as multiple neuritis, locomotor ataxy, migrating neuritis, sclerosis of the cord, paraplegia, hemiplegia, meningitis, meningeal and cerebral hæmorrhage, epilepsy, and diseases of the heart, liver, spleen, and kidneys. There is a great similarity between forms of malaria and influenza. It is natural, as it were, for one to telescope into the other. An attack of influenza will terminate in malaria or the reverse. And I have often noticed that malaria may infect with influenza, so that in this way malaria may originate an epidemic energy. It is quite in line with present opinion that influenza is a hybrid of malaria, for it is conceivable when we consider the mobility of the poison, its proneness to change with a change in its environment, and the fact that as disease is now undoubtedly proved to be the product of organic life that this life should be dominated by the law subserving life in the other departments of nature, and that the law of ascent is as applicable to the organisms of disease as to the organism of man.

We have now arrived at a stage when it is possible to determine the laboratory of the poison. It is necessary in every specific disease that it should have a nidus suitable to its development. Most observers in malaria have placed this in the blood. They say that once having gained entrance to the blood-stream it finds the necessary material for development and sets up a train of symptoms which are the clinical parallel of that development. Klebs was the first to demonstrate this theory by the discovery in the blood of an organism which he believed to be that of malaria. But it is obvious that there must be many organisms in the blood which from our imperfect microscopical powers have escaped notice; and also with a poison so powerful as malaria there must be a corresponding change in the elements of the blood with the production of bizarre forms, the difference between which and the latter is so slight in some cases, if any, as to render a decision difficult if not impossible.

It has been a matter of considerable dispute in what manner the poison obtains entrance into the system. Laveran and older authorities held that it did so through the drinking water, others again believe that it is inhaled, and lately Dr. Manson has come forward with a theory that it enters the blood directly through the agency of mosquitoes. I believe it is possible for it to enter in all these ways. But its introduction by water through the *primæ viæ* is undoubtedly the most frequent method and the most fatal. In almost all the severe cases of algid malarias I have treated the poison has been, as far as I could ascertain, introduced in this manner. So long as the water is boiled, the fruit fresh, and the other natural conditions of health fulfilled, there will be no algid malarias. Dr. Manson's observations have been principally taken from Chinese and Indian malarias. He hypothecates a parasitic cycle such as one finds in certain other diseases. He then goes on to prove this hypothesis by demonstrating similar organisms in the mosquito and malarial blood. The mosquito may in many cases become an accidental medium, but that it is a necessary intermediary is not borne out by facts. It is highly probable that mosquitoes absorb the malarial germ during their aquatic life and that it is possible to introduce such into the human blood, but whether the organism so introduced can set up the disease in healthy blood is not proved. It is not certain that infected blood from one person can produce the disease in another. If there is, as Dr. Manson believes, a parasitic cycle, such introduction must necessarily break that cycle, because it is not only necessary for the organism to change as the development proceeds, but a change must take place in the blood to fulfil a further development in the organism. Further, to look at it practically, how can Dr. Manson explain the reason why persons are attacked at sea by fever who have never been bitten by mosquitoes and who have never been before to a tropical country? I have seen hundreds of such cases. How is it that all the passengers on that side of the vessel nearest the coast have been seized by fever and the remainder on the other side escape. Surely it is not possible to believe that only these were bitten by mosquitoes and the rest were not. Is it not more conceivable and in line with its diffusion to believe that trade winds blowing off the coast carried the poison against that side of the vessel and that it was inhaled by the passengers whose cabin windows were open, but following a law of its diffusion which prevents its rising perpendicularly, was repelled by the side of the ship and obliged to ascend obliquely over it? We can divide most diseases into those arising from organisms in the blood and those arising from the introduction into the blood of the developmental products of organisms outside the blood. Under which class does malaria enter? It is generally believed that it is under the first that we must place it. I entered the field of practical observation equipped with this theory, but my experience after a time led me to modify my belief and I have now altogether changed it. I cannot bring myself to consider malaria other than the result of the products of the developmental energy of the organism outside the blood-stream, and some of the facts which have led me to this belief are that preceding the fever there is invariably a stage of hepatic congestion and signs of bile in the blood; the proneness of the disease to attack the *primæ viæ*, as evidenced by gastric derangement, enteritis, dysentery, and typhoid fever; the peculiar liability of the liver to acute inflammation with abscess as an extension from the *primæ viæ;* the induction of the algid malarias through the *primæ viæ;* the success of a treatment which aims at sweeping out the intestinal tract and disinfecting it; chills and rigors preceding the rise of temperature, with alternating falls and sweating; and the periodic type of the disease with alternations of health and disease. We know that constipation and other bowel derangements will cause stagnation of bile with increased absorption into the blood and that in this condition the constitution is more liable to disease than at any other time. We know also that by an energetic action by purgatives we can cleanse the *primæ viæ*, promote the natural passage of bile, and filter that already in the blood partly through the intestinal walls and by the kidneys. Now we know of no organism which fulfils part of its life history in the human blood which gives rise to such symptoms as are invariably found as a part of this disease except perhaps dengue—but dengue is only malaria under another name—and relapsing fever, which bears a close relationship to it. Idiopathic cases of pyæmia are so like malaria that it is often impossible to distinguish them. But this only bears out the fact that malaria, like pyæmia, is an extraneous disease. If we grant the extraneous life of the parasite then where is its place of development? Like pyæmia it must have a laboratory. I have no doubt that the laboratory is in the intestines, and that from here the poison dispenses its products either as spores, such as those bodies in the form of spheres, crescents, &c., which have already been discovered in malarial blood, or intercellular elements, or as a ferment to the blood-stream just as diphtheria finds a suitable nidus in the tonsil and distributes its poison from thence. It is also certain that the liver has an influence upon its development. Derangement of the biliary functions is always present before an attack. But such a condition can be observed before all diseases of the intestinal tract, showing the intimate relation between the liver and the *primæ viæ* and the tendency to inflammation spreading upwards to the liver. It is interesting to observe that Lauder Brunton attributes some importance to the liver in connexion with the arrest of certain substances absorbed from the alimentary tract whereby they are either destroyed, stored up, or it may be prevented from entering the general circulation in too large amount and that ptomaines may be arrested in this way. To understand the functions of the liver we must remember its unique relation to the vascular

and digestive systems, whereby many of the products of gastric and intestinal digestion have to traverse it before reaching the blood. The process of intestinal digestion is largely due to organisms and it is possible that many of these reach the liver with the material they have acted upon. But there are also organisms of disease which as accidental guests in the intestines also reach the liver. If the liver had no function of this sort the blood must be invaded by hordes of organisms or their products. It is necessary that a filter should exist between the alimentary canal and the circulation and it is natural to look for it in the liver. If this be true, infectious diseases must be preceded by hepatic derangement. Is this the case? It is invariably the case that disturbance of the hepatic functions ushers in infectious or endemic diseases. It is generally believed that at such times the blood is less powerfully phagocytic, but it seems rather that the destructive function of the liver towards organisms and ptomaines is lost. It is difficult to understand how ptomaines are destroyed in the liver. H. Rogers, as quoted by Landois and Stirling, says that it only possesses this property so long as it retains glycogen. Animal starch or glycogen is a true carbohydrate. It is stored up in the liver cells as amorphous crystals; its mother substance is the carbohydrates of the food; it is increased by large quantities of starchy matters, milk, fruit, and cane sugar; it is diminished enormously by a purely albuminous or fatty diet, by forced muscular movements or fatigue, exposure to cold, by hunger or by anything which disorders the biliary functions.

Now let us look at the conditions which induce malarial fever. They are identical with those which diminish glycogen—e.g., purely albuminous or fatty diet, fatigue, exposure to cold, hunger, or anything which tends to the formation of acid, a derangement of the biliary functions, while on the other hand those whose diet consists largely of carbohydrates are usually the persons who escape fever. Let us turn for a moment to the subject of glycosuria. This is a condition characterised by the presence of grape sugar in the urine, which Dr. Pavy holds is due to the liver being deficient in glycogen from a fault in its glycogenic functions. If this be so, then a person suffering from diabetes is unduly susceptible to malaria, which is the case. The exciting causes of glycosuria are, broadly speaking, the exciting causes of malaria, and the fatal effects of opium in malaria may have something to do with its action on the hepatic vaso-motor nerves, whereby it diminishes the formation of glycogen. These facts, I think, go far towards proving that the liver has a peculiar function with regard to ptomaines, retaining, destroying, or utilising them in its metabolism, and that this power depends upon the amount of glycogen in the liver. The latency of malaria may depend upon the retention of the ptomaines in the liver till such time as functional derangement permits their access to the circulation. In every disease with the absorption of poisons there comes a time when the phagocytic action of the blood is neutralised, and even, though the absorption is stopped, the system fails to recover itself. But before this point is reached malaria will exhaust itself by the natural channels. The fact that irritation of the urinary tract is a common feature in fever goes far to prove this. That the poison remains in the blood is highly improbable. The keenest observers have failed to discover it therein. But directly there is an imprudence in the diet whereby the glycogen is diminished then the fever manifests itself. The effect of chills inducing an attack strengthens the hypothesis, for we know that in hot climates the glycogenic functions are profoundly affected by changes of temperature. If we have come to this conception of the pathology of malaria by observing its clinical features, we shall be further strengthened in it by the favourable effect of a treatment based upon this conception. Heretofore physicians have been satisfied in trying to destroy the organism in the blood, but it is difficult to reach the blood with drugs; they have first to pass through the various chemical processes in the laboratory of the body which have power almost invariably to split them into their radicals. The present treatment of malaria may be conveniently divided into the specific and non-specific. The former is held by the mass of the profession, the latter by only a few. The doctrine of specifics is present in the traditions of medicine from the earliest times and it is natural to believe that in the great economy of nature there is a remedy for every disease. Consequently when quinine was discovered to have a favourable effect on malaria it was at once conceived to have a specific action. That it has a favourable effect is beyond doubt, but a specific action would intimate that it cures the disease—which it certainly does not. I have come to this conclusion from a study of both the Indian and African fevers. The method of giving quinine in large and frequent doses is sometimes a source of danger; it may in strong constitutions cut short an attack of ague, but in the deadlier forms of malaria it is most pernicious. I have seen better results attend the administration of simple remedies aiming at alleviating the symptoms. The great Dr. Livingstone came nearer the true treatment of malaria than any other observer. He discovered that a combination of jalap and calomel had the effect of cutting short or preventing an attack. He had it made up into pills which his followers called "Livingstone rousers," duly appreciating their drastic purgation. But Livingstone was unable to explain their action. After several years' study on African fevers I began to suspect that it was not in the blood we must look for the chief source of the poison but in the intestine. I was led to this belief partly by the facts I have already stated in considering its pathology and by the inefficacy of quinine, partly by observing the benefit arising from "Livingstone rousers" and by my experiments on gastric malarias.

Experimenting with the drugs in "Livingstone rousers" I found that jalap had no effect on fever; with calomel I had a different result. I had already administered it as an antiseptic in malarial enteritis with marked success. At the time I did not base it on the theory I now hold, but for some time I had been convinced that mercurial compounds exerted a beneficial action on malaria. Calomel by combining both the properties of a stimulant of the intestinal glands and an antiseptic of the intestinal tract appealed to me as being peculiarly adapted to the objects of its treatment. It was therefore with considerable interest that I read in THE LANCET[1] Surgeon-Lieutenant-Colonel Duke's article on the Treatment of Asiatic Cholera by Calomel. There is a form of malaria which closely resembles Asiatic cholera; indeed, it appears to me that there is a relationship between them. I found that calomel exerted the same beneficial action here as Surgeon-Lieutenant-Colonel Duke ascribed to it in Asiatic cholera. In that form of malaria where uncontrollable vomiting is the prominent symptom—"the white vomit"—its action was instantaneous. In the comatose form its effect was equally rapid, in the continued fevers it cut short the attack. In hyperpyrexia it immediately reduced the temperature. In agues it had the effect of at first confining the stages and then preventing them. In malarial pneumonia it had an extraordinary effect in controlling the spread of the inflammatory process in the lung and also reduced the temperature. Of course each case requires modification in its treatment, but usually I gave 3 gr. at first in cases in which there was constipation and 5 gr. in those in which laxity of the bowels was a prominent symptom. Twenty-four hours after I administered a smaller dose and if there was no severe purging in thirty-six hours a still smaller one. I always use calomel in powder as I find its action is more certain than in pills or tabloids. On no account is opium to be used. Dr. Webster Jones in an article in THE LANCET some years ago on the Value of Calomel in Asiatic Cholera pointed out the fatality following the administration of opium and I am convinced that the same is the case in malaria. Large saline draughts should not be given with calomel to hasten its action, but soda- and potash-waters in small quantities to quench the thirst and alkalise the plasma are necessary. In cases where paralysis of muscles is present or failure of heart threatened hot soup with large doses of pepper will be found of great advantage. I cannot recommend pepper too highly as a stimulant in malaria. I now turned my attention to those drugs which stimulate biliary secretion, such as podophyllin, rhubarb, colchicum, and euonymin. I was not long in discovering that they were injurious, showing that increased secretion of bile without proportional oxidation reacts unfavourably. This went far to prove my theory of intestinal absorption. But I went still further, for I have found fever to be induced by a full diet of meat and fats, which we know increases in a marked degree the secretion of bile and diminishes glycogen. In both ordinary attacks and those induced by diet the administration of calomel has the same beneficial effect. But, as I have

[1] THE LANCET, Feb 4th, 1893, p. 244.

said, it is not only necessary to destroy the laboratory of the poison in the intestine: we must also destroy it in the blood. It is not enough to stand by and wait till the poison is exhausted through the natural channels of excretion. It clings to the blood with a strange obstinacy and seemingly has the power after passing from the blood into the intestine to develop and reconstitute its laboratory. We might by the administration of calomel again cleanse the *primæ viæ*, but we do not prevent a fresh infection. No, we must attack it in the blood. In a *method* of treatment we find the true adaptation of the term specific. It is not enough to use such drugs as iron and carbonate of potash as we do in the anæmia of chlorosis. We have here no vital poison like malaria. Dr. Eustace Smith, in his work on the Diseases of Children, says that in malaria where there is much acute enlargement of the liver and spleen quinine seems to be useless and advocates a treatment with grey powder. I find that quinine has a more favourable action on the poison after the administration of calomel than without it, because probably calomel obviates the biliary derangements which are a feature of quinine. Here we find, I believe, the true and proper application of quinine. I experimented still further on several drugs said to have antiseptic properties on the blood, such as salicylic acid, arsenic, potassium iodide, and carbolic acid. I got the best results from carbolic acid, but better results still by a combination of carbolic acid and quinine. I gave it in the form of a solution in the proportion of 1 gr. of carbolic acid to 3 gr. of quinine in sulphuric acid and water to 1 oz. every four hours till the temperature fell, then less frequently for several days, till the symptoms had disappeared. Almost every case reacted favourably to this treatment. In my hands it has been practically specific. Arsenic is largely used in the French army, partly, I believe, from economical reasons, but the mortality among their troops in Madagascar is a sad proof of its inefficacy. Arsenic diminishes the glycogen of the liver and is thus another plank in favour of the glycogenic theory. In the after treatment the principal object is to nourish the patient, at the same time keeping close watch on the liver, regulating any derangement at once, keeping the paths of excretion open, and giving a diet largely consisting of carbohydrates. Alcohol must be sparingly indulged in; excess is fatal. Another point which is not generally known is that a sea voyage is unfavourable unless the patient is fully convalescent. H.R.H. Prince Henry of Battenberg died at sea; so did Sir William Maxwell. It is a common thing for men to come on board at Beira incompletely convalescent and die before they reach Natal. In many cases men completely convalescent succumb to the terrible black-water fever after being a few hours at sea. What the cause is it is difficult to say. Possibly the motion of the vessel acting through the nerve centres on the vaso-motor nerves of the liver may disturb its glycogenic functions, or a chill may be the cause or it may be in the atmosphere itself. Whatever it may be, however, it is a law of malaria which it is well to bear in mind when advising a patient to take the voyage to Europe. It is too frequently the voyage from which none return.

Banchory, Kincardineshire, N.B.

EXTRAORDINARY CASE OF HORSE-BITE; THE EXTERNAL EAR COMPLETELY BITTEN OFF AND SUCCESSFULLY REPLACED.

BY WILLIAM J. BROWN, B.A., M.B. DUB., L.R.C.S. IREL.,
CERTIFYING FACTORY SURGEON.

ON March 2nd, 1898, at about 4.30 P.M., when present at an auction, I was asked to attend to a boy, aged fourteen years, whose ear had been bitten off by a vicious horse. He presented a hideous appearance, the greater portion of the pinna, together with a semi-circular flap of an inch radius from behind the ear, having been bitten off, leaving only the tragus with a quarter of an inch each of the helix and lobule. (See Fig. 1.) Although the case looked so hopeless (as regards disfigurement) I determined to make an attempt to save the ear, as the patient could be no worse off than he was then if the attempt failed. I asked for the ear and after about ten minutes' search it was brought to me, having been found near the horse in the stable yard. It was of a dirty drab colour and the posterior flap was curled up in a roll. I had no instruments or dressings with me, and it would have taken half an hour or more to procure them, which delay would have

FIG. 1.



The dotted line indicates the portion of the pinna and tissues behind the ear which were bitten off. A notch in the lobe indicates the spot where sloughing took place.

FIG. 2.



R. J——, aged fourteen years, as he now appears.

rendered the attempt to preserve the ear useless. I therefore procured some common needles and thread and after washing the ear in warm water I proceeded to sew it on by inserting a suture above and another below, followed by three behind and three before. The posterior flap had to be unrolled before I could stitch it and owing to the needles being straight there was great difficulty in placing the sutures in the concha and the fossa of the antihelix. I then placed a roll of cotton wool behind the ear to support it, and having wrapped it in cotton wool and covered it with a silk handkerchief sent the boy home. As soon after as possible I removed as much of the wool as I could without disturbing the wound, and after dusting the surface with iodoform wrapped the ear in cotton-wool and Gamgee tissue. On March 7th I removed the dressings, washed the ear with a warm solution of bichloride of mercury (1 in 1000), dusted the surface with iodoform, wrapped the ear in iodoform gauze, and packed it round and covered it with cotton wool. On the 10th I renewed the dressings and removed the sutures. On the 14th a small portion of the lobe sloughed away. On the 16th the patient looked rather anæmic and felt weak, so he was given a mixture containing sulphate of quinine and tincture of perchloride of iron. The same treatment was adopted throughout, the dressings being renewed every second or third day until April 7th, when they were allowed to remain on until the 12th, when the ear was completely healed and presented the appearance shown in Fig. 2. The patient's diet consisted of plain food, together with bovril, beef-tea, and eggs. He is a healthy, intelligent lad, who has survived several accidents, his body being covered with scars from burns. On one occasion it was necessary to transplant six skin-grafts from the calf of his leg to his thigh to replace skin which had been destroyed by burns.

This case, I consider, shows what valuable results may be brought about by antiseptic treatment and making prompt use of whatever comes handy when the proper instruments, &c., are not available.

Chester-le-Street.

A CASE IN WHICH A STONE WAS DETECTED IN THE KIDNEY BY MEANS OF THE X RAYS AFTER SUBSIDENCE OF ALL SYMPTOMS AND SUCCESSFULLY REMOVED.

BY CHARLES A. MORTON, F.R.C.S. ENG.,
PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, BRISTOL, AND SURGEON TO THE BRISTOL GENERAL HOSPITAL.

THE report of the case of Dr. Taylor and Mr. Fripp at a recent meeting of the Clinical Society of London [1] and the interesting discussion on the detection of stones in the kidney by the x rays which followed have induced me to publish the following case.

The patient, a boy, was admitted into the Bristol General Hospital under my care with well-marked symptoms of renal calculus, but these completely subsided with rest in bed and the boy could run about and jump downstairs without any pain and there was no tenderness in the loin on firm pressure or sharp percussion, so that he would certainly have been sent home without operation had the skiagram failed to detect the calculus, as I should have concluded that the stone might have passed down the ureter into his bladder or have passed *per urethram* without recognition. It is interesting to note that this complete subsidence of symptoms had occurred on a previous occasion, when he had been discharged from hospital apparently "cured." Probably when symptoms came on the calculus got out of its pouch in a calyx and moved about in the pelvis of the kidney and the subsidence of these symptoms was due to its falling back into this pouch again. This complete subsidence of symptoms has been observed in other cases when a stone has remained in the kidney, but without the detection of a calculus by x rays a surgeon would hardly like to do nephrotomy after the symptoms had passed off. That the stone in my case was of the oxalate variety made its detection more easy. The skiagram showing it was exhibited (together with the stone) by me at a meeting of the Bristol Medico-Chirurgical Society last autumn. It was taken by Mr. L. Tyack, lecturer on physics at University College, Bristol.

This patient, aged twelve years, came under my care at the General Hospital on June 28th, 1897, with a history of attacks of severe pain in the left loin. During these attacks he passed urine very frequently. The pain did not shoot into the groin or testes. From the description given by his mother there is very little doubt that he had hæmaturia after an attack. Strong percussion of the left loin seemed to cause some pain, but there was no tenderness on deep and firm pressure on the kidney or in the course of the ureter nor could any stone be felt in the lower end of the ureter *per rectum*. His bladder had been sounded by the assistant house surgeon before I saw him with negative result. In the previous September he had been a medical in-patient with attacks of lumbar pain. This was the first time he had suffered from the pain and it had not recurred in the interval. He was admitted on June 30th with a severe attack of pain which lasted twenty-four hours and was accompanied by vomiting but there was no hæmaturia. The pain was felt through the left loin. These attacks recurred for three days and required morphia injections. The muscles over the kidney became rigid and there was much tenderness over the whole of that side of the abdomen and in the loin behind. The urine was carefully watched but no hæmaturia was detected. The note on July 5th says that he had been free from pain for forty-eight hours, but that there was tenderness on pressure in the region of the kidney behind. A skiagram taken on the 8th showed a shadow lying over the twelfth rib, 1¼ in. from the spine. After this skiagram was taken he could run, and jump down several steps, without pain and there was no tenderness on sharp percussion of the loin and firm pressure there. He said the only pain he had was along the urethra after micturition and this had been present since the passage of the bladder sound before admission. However, another skiagram taken on the 14th showed the same shadow as the one taken on the 8th. I operated on July 23rd. Directly I passed my finger round to the anterior surface of the kidney I felt the stone covered by only a thin layer of renal tissue. It lay just where the skiagram seemed to indicate—in front of the last rib and therefore in the upper part of the kidney. After its extraction I could pass my finger into the dilated calyx in which it had been lying and then on into the pelvis of the kidney, so that I could recognise the apices of the pyramids; I thoroughly sounded the pelvis with a very small bladder sound, but failed to discover any other calculus. The boy made an uneventful recovery and when I saw him a few months ago he was still quite well. The stone was a typical oxalate calculus. It measured ¾ in. by ½ in. and on it was a process about ¼ in. long, covered with rare and beautiful crystalline oxalates.

Clifton, Bristol.

[1] THE LANCET, April 30th, 1898

THE ADMINISTRATION OF CHLOROFORM, WITH SPECIAL REFERENCE TO AN ADMIXTURE OF ETHER.

BY WILLIAM E. BURTON, L.R.C.S. IREL., LIC. MED. T.C.D.,
SURGEON TO THE ROYAL MATERNITY CHARITY AND LATE RESIDENT SURGEON, RICHMOND HOSPITAL, DUBLIN.

IN the controversy which has been carried on concerning the methods and the dangers of chloroformisation it seems a pity that the attention of one set of writers should have been so exclusively directed to the influence of the drug on respiration and of the others, equally exclusively, to its effect on the circulation, the fact being that these functions are so mutually interdependent that serious and continued interference with the one cannot fail to quickly affect the other; and when, as in $CHCl_3$ narcosis, such interference is due to primary and simultaneous inhibitive action on the nerve centres of both it would seem that neither of these functions can be neglected with safety to the patient. In other words, to watch the pulse and the pulse alone is to neglect the breathing which may and usually does give warning of an impending catastrophe the approach of which may not have been appreciable in

the pulse and *vice versâ*. Therefore the well-trained and experienced chloroformist will from the first keep watch upon both the pulse and the respiration and he will also note the colour of the skin as influenced by the state of the circulation. This last is a point the importance of which can hardly be over-estimated, and for these reasons: (1) pallor of the skin due to the physiological action of $CHCl_3$ means emptying of the capillaries, not only of the skin, but probably also of the whole organism; (2) empty capillaries argue plethora of the larger blood-vessels, especially the veins and consequent tendency to stasis, which reaches its final depth in "chloroform syncope"; and (3) in this condition (of approaching stasis) the brain and bulb are not merely deprived of sufficient blood-supply owing to inadequate heart action, but the blood which reaches them is itself more or less laden with $CHCl_3$ vapour and is therefore emphasising the inhibitory effect of the drug upon, among others, the centres of the respiration and vaso-motor system. So that at the moment when the heart and the respiratory muscles are in greatest need of normal stimulation only enfeebled currents reach them from a chloroformised brain through chloroformised nerves. Moreover, the muscular tissue itself is more or less immobilised by the direct action of the drug.

Here precisely it is important for the anæsthetist to bear in mind that the physiological phenomena produced by an overdose of $CHCl_3$ are in some important respects paralleled by those of fright[1] (and the patient is usually more or less alarmed and anxious)—e.g., there is (*a*) the proverbial skin pallor of fright; (*b*) syncope; (*c*) cessation of respiration; (*d*) absence of wrist pulse; and (*e*) death. Nor must it be thought that "pushing the chloroform" helps to abolish immediately these phenomena or to lessen their importance. On the contrary, during the first few minutes of chloroformisation the devitalising conditions arising from fright not only continue but become intensified, especially if the drug be "pushed" too rapidly. Herein, as I believe, lies the key to the occurrence of sudden death at the commencement of $CHCl_3$ anæsthesia; and also the explanation of the fact that patients who have no fear of either drug or operation almost invariably take the former well. But if, on the one hand, paleness of the skin implying an empty condition of the capillaries is an adverse sign, then, on the other hand, the safety of the patient is greater when the capillary circulation is well maintained throughout by reason of any one or more of the following factors—viz., (*a*) vigour of the whole circulatory system, (*b*) careful administration of $CHCl_3$, (*c*) a warm atmosphere (which also diminishes, perhaps, the amount of vapour inhaled), and (*d*) the simultaneous administration of any drug (ether) which causes dilatation of the capillaries while stimulating the vaso-motor and respiratory centres as well as the myocardium. (Possibly the heat of the atmosphere was a not unimportant cause of the greater success of the Hyderabad experiments, presuming, i.e., that the experiments were made during the hotter part of the day.)

Bearing in mind the foregoing considerations the statement of Leonard Hill and Harold Barnard that "chloroform acts upon three parts of the economy—(1) the heart, (2) the respiration, and (3) the arterioles"—is seen to be incomplete for two reasons: (1) it is evident that chloroform acts probably on all parts of the economy and interferes profoundly with tissue metabolism generally—especially, perhaps, with both that of the blood itself and of the nervous system; and (2) upon the heart, respiration, and arterioles chloroform does act directly, it is true, but such direct action is negligible if compared with the indirect effect due to the inhibitory influence of the reagent upon the nerve centres supplying these parts. In saying this I must not be understood as making the least attempt to minimise the value of the lessons to be learned from the brilliantly successful experiments of these authors, especially perhaps their demonstration that "chloroform syncope" can be (and has been) produced by an overdose of that drug. Nevertheless, it is surely of the utmost importance in the treatment of this subject that words which do not clearly or not quite inclusively represent the views of the authors should not pass uncriticised or at the least unchallenged. Waller's experiments (which were undertaken with a view to ascertaining "the relative efficacy of various anæsthetics," and for this purpose alone) contribute, however, some very reliable, because extremely accurate and demonstrable, data concerning the behaviour of the tissues—represented by nerve—under the direct influence of $CHCl_3$. Of these it seems to me the most important, placed in the order of their value for practical purposes, are the following: (1) the slowness with which tissue (nerve) recovers from the immobilising effect of $CHCl_3$; (2) the greater strength of chloroform as compared with ether; and (3) the narrowness of the safety margin which lies between sufficient $CHCl_3$ anæsthesia and a lethal dose. Inferentially—although Waller does not specifically state this—there is the corollary that a narrow limit also lies between sufficient and insufficient $CHCl_3$ anæsthesia. Consequently it is manifest that $CHCl_3$, however pure—and to use this reagent for surgical purposes in any other than the purest condition would be inexcusable—needs at all times the utmost care in its administration even in the hands of the experienced anæsthetist. Also quite as much care, deliberation, and patience are required in its use for the most trifling as are demanded for the most serious operation.

Without entering further into details, which are necessarily excluded from this paper, enough has been said to emphasise the dangers and the difficulties of chloroformisation. It was only after much careful and anxious thought about these subjects that I at length resolved to use for the purposes of general anæsthesia a mixture of ether with $CHCl_3$ in which the ether should be in much smaller proportion than in the mixture generally employed—e.g., either A.C.E. or Billroth's mixtures. In A.C.E. I had reached the conclusion that the alcohol served no other purpose than that of a diluent. On the other hand, the ether while present in far too large proportion to act as a stimulating counter-agent to the depressing influences of the $CHCl_3$ was when—as generally—used on an open mask too small in amount to make its anæsthetic effect available to an appreciable extent. Moreover, I found that the large percentage of ether in A.C.E. was calculated to blind the administrator to the cumulative deadening influence of the $CHCl_3$ on the tissues (especially of the nerve centres). I had also noticed that when A.C.E. had been used, however carefully, through a lengthy operation that the vomiting following the withdrawal of the anæsthetic was sometimes more severe and always more prolonged than where ether or $CHCl_3$ alone had been used. Bearing these facts in mind I employed (in the next four cases) instead of A.C.E. a mixture composed of four volumes of $CHCl_3$ with one of ether. The result was highly satisfactory in every instance. Nevertheless, it was evident that the proportion of ether was still too large as shown by the deeper breathing and the skin congestion. Accordingly I steadily diminished the percentage of ether in my subsequent cases until I arrived at the mixture which I am using with excellent results at the present time. This consists of one volume of ether mixed with sixteen volumes of $CHCl_3$. With this mixture I have had up to the present time invariably better results than I have ever previously had with $CHCl_3$ either alone or in the form of A.C.E.

It must be borne in mind throughout the anæsthesia that the presence of ether even in this small proportion causes not only deeper breathing than occurs with pure $CHCl_3$, but in many instances deeper than normal. Consequently, the intake of $CHCl_3$ vapour at each inspiration is (in such cases) larger than when pure chloroform is given. The following are, in my judgment, the chief advantages of producing surgical anæsthesia by using the 1 in 17 C.E. mixture: (1) the ether causes and maintains dilatation of the arterioles and capillaries, thus securing throughout a properly conducted anæsthesia (*a*) the needful blood-supply for the nerve centres including those of the heart and circulation and respiration, and (*b*) immunity from the central plethora produced by the immobilising effect of $CHCl_3$ on the vaso-motor centres; (2) deeper breathing throughout the entire period of anæsthesia however prolonged; (3) more powerful heart-contractions; (4) a wider zone of safety between full surgical anæsthesia and the "fourth stage"; (5) the rapid passing off of the narcosis on withdrawal of the anæsthetic; and (6) the slight sickness resulting from even a prolonged administration.

In giving this 1 in 17 mixture of ether and $CHCl_3$ I find it more advantageous to begin with a simple mask

[1] It must not be forgotten that in estimating the influence of the psychic centres upon any part or function full allowance must be made for the immeasurably greater results of such interference in the human than in other animals, nor that in this paper human organisms only are referred to in considering the action of $CHCl_3$.

designed by me, which permits at all times a free air-supply. Still, there is no doubt that in the great majority of cases the improved Junker remains the best apparatus for the administration of $CHCl_3$. As a precautionary measure I am in the habit of giving in certain cases a hypodermic injection of either of the following: (1) from 5 minims to 10 minims of a 10 per cent. solution of strychnine-sulphate (this stimulates the heart and respiratory centres and is, I think, necessary in all cases where the patient is frightened and distressed); or (2) from 2½ minims to 5 minims of 1 per cent. solution of atropine sulphate (this acts by paralysing the inhibitory fibres of the vagus and should be given in cases of weak dilated heart). Small doses of either of these drugs are useless owing to the antagonising effect of the $CHCl_3$. Whether drugs be given or not it would be well in all cases to secure, in the patient's interest, a warm room and sufficiently warm clothing.

Finally, I will state the following conclusions as the result of my experience. 1. In threatened death from $CHCl_3$ the first and, in my judgment, the most successful step is immediate inversion *in all cases*, the tongue being drawn forward at the same time. If this measure fail—and I have never known it to fail if it has been done in time—I believe that nothing else will succeed, not even artificial respiration, and for the following reasons: (*a*) when central stasis is approaching the feebly-beating heart is being rapidly overburdened with a surplus of blood which, leaving the capillaries depleted, has been pouring into the large veins; (*b*) this capillary depletion implies acute anæmia of, among others, the vagus centre and consequent cardiac inhibition; (*c*) if, in these circumstances, artificial respiration be done by (say) Silvester's method the inspiratory movement tends to drive still more blood into the already distended heart, thus limiting its already enfeebled power of contraction; and (*d*) the inspiratory movements aspirate the cerebral vessels and so further deplete the vaso-motor and respiratory centres while, *æquo pede*, they also help to deepen the cardiac dilatation and inaction. 2. Next to inversion in order of importance I should place the hypodermic injection of ether (30 minims) and 10 per cent. strychnine-sulphate solution (from 5 to 10 minims), which may be given during inversion. 3. Heat applied to the trunk and extremities. 4. When returning power of the heart is evident artificial respiration should be commenced at first, if necessary, in the inverted position for a few moments and afterwards in the horizontal position with the head below the level of the trunk.

Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TRUE SUBCLAVICULAR DISLOCATION OF THE HUMERUS.

BY T. WILSON PARRY, M.A., M.B., B.C. CANTAB.

MR. HOLMES, in his "Principles and Practice of Surgery," in contrasting subcoracoid with subclavicular displacement of the head of the humerus in dislocations of the shoulder-joint, states that "the true subclavicular dislocation, in which the whole head of the bone lies internal to the coracoid process, is very rare." The following case, therefore may prove of interest and be worthy of record.

A woman, thirty-four years of age, came to me on May 19th, 1898, with the request that I should as soon as possible reduce a dislocation of the right shoulder which she was suffering from. The history of the case was as follows. On March 2nd, 1898—that is, about eleven weeks previously—she dislocated the same shoulder by falling and striking her elbow as she fell. She kept the arm in a sling for over a week after the dislocation had been reduced and then allowed herself to bring it into ordinary use. She was away from home at the time when this occurred, so I did not attend her on that occasion. The present injury was brought about on the day mentioned above when she was making some beds. She was shaking a blanket when she suddenly felt the humerus spring out of its place. On examination I found the head of the bone to be completely internal to the coracoid process, immediately under the centre of the clavicle. There was just room enough for me to insert my index-finger between the inferior surface of the clavicle and the head of the humerus. The shaft of the humerus, I need hardly say, was directed some distance from the side. I made three or four attempts to reduce it by extension in the ordinary way without an anæsthetic, but the muscular resistance was too great for me to be successful. I accordingly put the patient under ether and was enabled when she was properly anæsthetised to put the bone in its right place in a moment. The woman, who is very intelligent, volunteered the remark that she knew at once that this second dislocation was worse than the former one, for she felt that the bone was more out of place this second time, and "what's more," she added, "it has given me a great deal more pain."

Youlgreave.

NOTE OF A CASE OF HÆMORRHAGE FROM THE EAR.

BY WALTER H. BROWN, F.R.C.S. IREL.,
HONORARY SURGEON TO THE LEEDS GENERAL INFIRMARY.

A CHILD, aged five years, a patient under the care of Mr. Eustace Carter, had been suffering from a follicular tonsillitis; this was apparently clearing up when, without any warning, hæmorrhage took place from the right ear, the amount of blood lost being very great. When I saw the child with Mr. Carter an hour later she was blanched, deeply collapsed, and the nightdress, pillow, and bedclothes were widely stained with blood. On examining the ear after washing out the clot I failed to detect the source of the bleeding; the examination of the throat gave no information. The meatus was then packed with iodoform gauze, a pad and bandage being put on; this was left in position for four days, during which time there was no sign of any bleeding and the child appeared to recover in a measure. On the packing being taken out a small quantity of pus escaped from the meatus; it had no smell. Four hours after the plug was removed another hæmorrhage took place, more copious than the first one and when I saw the child her condition appeared to be hopeless. The radial pulse could hardly be felt, the surface was cold, the mucous membranes were pale, and the child was restless and partially delirious. There was now present on the right side of the pharynx a swelling pushing the right tonsil over towards the middle line; this swelling did not pulsate. As it seemed most likely that the source of the bleeding was the internal carotid, and as it was quite clear that the child must die if another bleeding took place, I decided to tie the common carotid then and there. The child was put under ether and I ligatured the common carotid at the point of election. The subsequent progress does not call for special comment, the child made a good but somewhat tardy recovery, and is now quite well.

Hæmorrhage from the external ear is not a common occurrence—at any rate not in such formidable quantities as now related. Fortunately for the child we have had no opportunity of making a careful dissection of the parts involved to ascertain the exact cause of the bleeding. I venture to suggest that there had been some inflammatory change in the bone surrounding the internal carotid artery causing erosion of the walls of that vessel. I think now that it would have been better to have ligatured the vessel after the first bleeding rather than to have waited for a second attack and in any future case I shall adopt that plan.

Leeds.

ACUTE PHTHISIS IN A CHILD; RECOVERY.

BY F. G. A. ROGERS, M.R.C.S. ENG., L.R.C.P. EDIN.

THE following case presents several points which will probably be of interest to some readers of THE LANCET. The patient was a male child, four years of age, suffering from acute broncho-pneumonia. The mother had died from pulmonary phthisis and another child had died from tuberculous meningitis some two or three years before. The patient appeared to have recovered from the attack of

broncho-pneumonia and his temperature was normal; there were, however, numerous râles all over the lungs though not loud; the temperature again rose to 102° F. and then dropped, and so alternately rose and fell, the breathing being quickened, the face becoming flushed, and a troublesome cough coming on. There was evidently trouble at the right apex; bronchophony appeared and cough was almost croupous at times. Gradually the right side of the chest seemed to be contracting and falling in, the expansion of the right lung being imperceptible. From the history I judged there was tuberculosis rapidly setting in—in fact, the appearance was one of phthisis in a most acute stage. I told the friends that it was a hopeless case; however, as soon as it was evident to my mind that it was phthisis, I tried the following: dilute phosphoric acid, 40 minims; tincture of hamamelis, 40 minims; tincture of cinchona, 5 minims; syrup of lemon, ½ oz.; water, to 6 oz.; dose, ½ oz. every three hours. I persisted with this till the temperature again became normal and remained so and then ordered it every four hours. I ordered a teaspoonful of cod-liver oil in half a wineglassful of port wine morning and evening, beef tea, raw eggs, milk, &c. The child lost his cough; the right side is distinctly narrower than the other, and the wall over the apex is apparently flattened, but he plays about and is as well as he can be, and may we not hope that he may live as long as the average life? The child lives in the neighbourhood and may be seen. If this treatment is tried and found successful by others it will be a satisfaction to me.

Cardiff.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et exorborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GENERAL HOSPITAL, BIRMINGHAM.

TWO CASES OF ACUTE INTUSSUSCEPTION SUCCESSFULLY TREATED BY IMMEDIATE ABDOMINAL SECTION AND REDUCTION.

(Under the care of Mr. GEORGE HEATON.)

THE question of the treatment to be adopted in cases of intussusception is both interesting and important. It is important because the condition is decidedly frequent and Leichtenstein's statistics showed that in about 40 per cent. of all cases of intestinal obstruction the cause was intussusception. Moreover, in a large proportion of these cases the patient is very young and, according to Leichtenstein's figures, more than 22 per cent. were under one year old. At this tender age any abdominal lesion is of especial importance, as the mortality from intussusception shows. Till within the last few years the plan of inflation or injection was alone employed for the treatment of this condition, but the results were very unsatisfactory, and the trend of surgical opinion has been distinctly in the direction of early laparotomy, not preceded by any attempt at inflation or injection. In the first place injection is not harmless, for a fair number of cases have been reported in which rupture of the bowel has followed injection,[1] even though the injection has been most cautiously administered; and it is generally admitted that neither of these methods, injection or inflation, should be employed after forty-eight or even twenty-four hours from the commencement of the illness. For adhesions will probably have formed; and Marsh,[2] indeed, found firm adhesions fifteen hours after the onset of the symptoms. If, then, the condition has lasted twenty-four or forty-eight hours most surgeons are agreed that inflation, if used at all, should be employed for a very short time only and if unsuccessful laparotomy should immediately follow; but evidence is accumulating that a "primary" laparotomy (that is, one not preceded by inflation or injection) offers a still better chance of success. We have recorded several such cases in THE LANCET in the last two or three years and in February, 1895, we published a case operated on by E. W. Roughton in which recovery followed a primary laparotomy in a child aged only four months. A still earlier success occurred in an infant two months old who was operated on by Carpenter.[3] A valuable paper by F. H. Wiggin of New York appeared in THE LANCET last year[4] in which he forcibly advocated primary laparotomy, basing his opinion on carefully collected records of 103 cases. The two cases which Mr. Heaton has recorded below are valuable as showing the harmlessness of a laparotomy in this condition. It is not improbable that in a few years' time surgical opinion will be very adverse to any attempt at reduction by inflation or injection and that immediate laparotomy will be the rule rather than the exception in the treatment of intussusception.

CASE 1.—A boy, aged four years, was admitted into the General Hospital, Birmingham, on March 28th, 1898, with the history that at 9 A.M. that day he had been suddenly seized with violent abdominal pain. He became very collapsed and vomited almost continuously for an hour. He was then violently purged and passed a considerable quantity of blood *per anum*. This was repeated at 12 noon and again at 12 30 P.M. The vomiting continued up till admission into the hospital at 3.30 P.M., but the collapse had gradually passed off. His bowels had previously been regular, but he had always been subject to "bilious" attacks. He was a delicate boy and had been frequently laid up with bronchitis. On admission the temperature was 97° F., and the pulse was 112, small and regular. The symptoms of collapse had passed off, and he complained of but little abdominal pain across the umbilicus. He vomited some bilious fluid soon after admission. The abdomen was lax and there was but little tenderness. To the right of the umbilicus a freely moveable tumour could be easily felt. It was tender on pressure and could be felt to harden when it was pressed. The rectum contained a little blood and mucus. An anæsthetic was administered and laparotomy was performed seven and a half hours after the onset of the symptoms. The opening was made in the right linea semilunaris immediately over the tumour. The intussusception, which was 5 in. long, was brought outside the abdomen. It was reduced without difficulty except as regarded the last ½ in., the reduction of which required considerable care. The ileo-cæcal valve formed the apex of the intussuscepted bowel. The abdomen was then closed in the usual manner, the whole operation only lasting nineteen minutes. The patient's recovery was rapid and complete. For a few days after the operation he had a good deal of bronchitis, aggravated by his getting out of bed within a few hours of the operation. The bowels were opened naturally on the fourth day after the operation and he passed a hard fæcal mass which was covered with blood. The stitches were removed on the eighth day and he was discharged from the hospital early in May wearing a small abdominal belt to support the operation scar.

CASE 2.—A boy, aged three years, was admitted into the General Hospital, Birmingham, on March 29th (just twenty-four hours after admission of the patient in the previous case) suffering from abdominal pain and vomiting. At 1 P.M. on the day of admission, shortly after going to the closet without any action of the bowels, he was suddenly seized with violent pain in the right side of the abdomen. He vomited several times during the afternoon and had repeated attacks of abdominal colic. About an hour before admission he suddenly became profoundly collapsed and convulsed; he then again vomited and the collapse passed off. He had previously been in good health, though the action of the bowels had been somewhat irregular. On admission the pulse was 96 and the temperature was 100° F. At times the patient lay apparently quite comfortable and would allow deep palpation of the abdomen. But at frequent intervals he was seized with attacks of colic which produced a good deal of collapse. The abdominal walls were blistered and inflamed as the result of hot turpentine fomentations. In the intervals between the attacks of colic a small sausage-shaped mass could be distinctly felt to the right of and below the umbilicus; the mass was not tender and was freely moveable. The rectum was empty.

[1] Parkes: Transactions of the Clinical Society of London, 1892, p. 244.
[2] THE LANCET, Feb. 14th, 1891, p. 368.
[3] Philadelphia Medical Record, June 6th, 1896.
[4] THE LANCET, August 23th, 1897, p. 525.

The bowels were opened once after the beginning of the attack. The diagnosis of acute intussusception being fairly clear the patient was anæsthetised and laparotomy was performed seven hours after the commencement of the symptoms. A 3½ in. incision was made in the right linea semilunaris and the tumour was exposed. The tumour was with some difficulty brought outside the abdomen. The tension on its mesentery in order to do this produced a good deal of shock, which quickly passed off when it was relieved. It proved to be, as in Case 1, an ileo-cæcal intussusception and measured 3½ in. The invaginated bowel was reduced easily except for its last ½ in. This was swollen and œdematous and after reduction appeared as a raised œdematous ring on the surface of the intestine. The intestine was then returned into the abdomen and the abdominal wound was closed. The inflamed and vesicated skin of the abdomen was freely dusted with boric acid powder and the wound was dressed with iodoform gauze. The after-history was uneventful. Notwithstanding the raw state of the abdomen the wound healed by first intention and the stitches were removed on the eighth day after the operation. The patient was kept in bed for a month in order to consolidate the operation scar. The bowels were opened on the third day after the operation and a hard blood-stained fæcal mass was found. They were afterwards kept open regularly with small doses of cascara sagrada.

Both the patients in the above cases were shown at a meeting of the Pathological and Clinical Section of the Birmingham branch of the British Medical Association at the end of April and were then in perfect health.

Remarks by Mr. HEATON.—The two cases related above have a special clinical interest at the present time, when the whole question of the treatment of intussusception is under discussion. In each case the diagnosis was clear, the symptoms, though urgent, had only been in existence for a few hours, and the patient was in fairly good condition. Abdominal section was at once performed without any attempt being made by means of manipulation or inflation to reduce the intussuscepted bowel. Manipulation of the bowel through the abdominal walls has now been abandoned by most surgeons as a method of treatment in such cases, but inflation of the bowel *per rectum* is still as a rule tried before resorting to laparotomy. There is no doubt that a certain number of cases of intussusception can be reduced completely and the patients cured by such careful inflation, particularly when the intussusception is a very recent one; but it is at best a most uncertain method and at the same time by no means devoid of risk, for the bowel may easily be ruptured if too great pressure be employed. When operating upon such cases we generally find that the major portion of the intussuscepted bowel can be reduced without much difficulty. It is the last inch or half-inch which presents the chief difficulty; and it is quite impossible save by actual inspection to be sure whether complete reduction has been effected. It is for this reason that after apparent reduction by inflation the patients' symptoms frequently continue unrelieved and the tumour reappears. Reduction has in reality been incomplete and abdominal section later offers only a remote chance to a patient already exhausted by delay. Surgeons at the present day have practically abandoned the operation of relieving strangulated hernias without actual opening of the hernial sac and inspection of the condition of the bowel; and I venture to think that the same principle should apply to the treatment of intussusception. A rapid opening of the abdomen carried out aseptically adds practically no extra risk to the patient in the early cases, and in cases where reduction is found to be impossible affords the patient his only chance of recovery. Treatment by inflation should only be resorted to where from the patient's surroundings asepsis is impossible or where for other reasons active surgical measures are forbidden.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—Examinations for the certificate in psychological medicine of this association will be held in London, Edinburgh, Glasgow, and Aberdeen, on Thursday, July 7th, 1898. The examination for the Gaskell prize will be held in London at Bethlem Hospital on Friday and Saturday, July 8th and 9th, 1898. Candidates intending to present themselves for either of these examinations should give seven days' notice to the registrar (Dr. Spence, Burntwood Asylum, Lichfield), from whom any further information may be obtained.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Acute Dilatation of the Stomach.—Cirrhosis of the Liver.—Election of Officers.—Report of the Diphtheria Antitoxin Committee.

A MEETING of this society was held on May 27th, the President, Mr. LANGTON, being in the chair.

Dr. C. R. BOX and Mr. CUTHBERT S. WALLACE described a case of Acute Dilatation of the Stomach occurring in a youth, sixteen years of age, previously in good health, who came under observation on account of vomiting and collapse attributed to a blow on the epigastrium. The abdomen was rigid, distended, and almost motionless; its right lower quadrant was dull on percussion and tender in the region of McBurney's point. Peritonitis being suspected the abdomen was explored. An enormously distended stomach filled the whole of the abdomen, displacing the intestines towards the pelvis. The viscus was incised and emptied. Death followed in a few hours. Post mortem no cause was found for the gastric distension. Post-mortem digestion of the walls was rapidly advancing. The whole intestinal tube below the stomach was collapsed and empty.—Dr. PARKES WEBER recalled a case under his observation a few months since in which acute dilatation of the stomach was associated with acute febrile disease and pneumonia. The patient was a man fifty years of age. He died in collapse and no post-mortem examination was allowed.

Dr. HUGH R. SMITH read a paper on Seven Cases of Cirrhosis of the Liver occurring in Children and Young Adults. The clinical history and post-mortem appearance of each case was given in some detail. The ages of the patients varied from nine to twenty-four years at the time of their death. The cases fell into two distinct groups, corresponding fairly accurately with the so-called atrophic and hypertrophic cirrhosis of adults. Thus in the first four there were ascites, absence of jaundice, and small hob-nailed livers, which showed microscopically a well-marked multilobular arrangement of the new-formed connective tissue, and the course of the disease was short. Thus one case died eight days after the first appearance of definite symptoms and the most protracted only lived four and a half months. In the last three there was marked jaundice from the first, absence of ascites until the close of the disease, and a large liver, which showed a definite unilobular arrangement of connective tissue and very numerous new bile canaliculi.

The annual meeting was then held, the report presented at which showed the society to be financially in a flourishing position, and the following candidates for offices were duly elected:—President: Mr. John Langton. Vice-presidents: Dr. Sidney Coupland, Dr. James Frederic Goodhart, Dr. Leonard William Sedgwick, Mr. A. Pearce Gould, Mr. John Hammond Morgan, and Mr. William J. Walsham. Treasurer: Dr. William Miller Ord. Council: Dr. Arthur T. Davies, Dr. Archibald E. Garrod, Dr. Sidney Martin, Dr. W. Julius Mickle, Dr. J. F. Payne, Dr. F. G. Penrose, Dr. J. J. Pringle, Dr. Harrington Sainsbury, Dr. R. Percy Smith, Dr. J. C. Uhthoff, Dr. W. Hale White, Mr. James Berry, Mr. C. B. Lockwood, Mr. Stephen Paget, Mr. G. H. Makins, Mr. Rushton Parker, Mr. A. Q. Silcock, Mr. W. G. Spencer, Mr. T. P. Teale, and Mr. G. R. Turner. Honorary secretaries: Dr. J. Kingston Fowler and Mr. Charters J. Symonds.

Dr. CHURCH then read the report of the committee appointed in January, 1895, to inquire into the Clinical Value of Diphtheria Antitoxin. The committee was composed as follows: Dr. W. S Church (chairman), Dr. Stephen Mackenzie, Dr. Sidney Coupland, Dr. W. Hale White, Dr. Sidney Martin, Dr. W. Pasteur (honorary secretary), Dr. J. W. Washbourn, Dr. H. P. Hawkins, and Dr. E. Goodall. For the purpose of the inquiry 832 reports of cases were collected, but upon examination 199 of them had to be rejected, either because the committee were not satisfied as to the evidence of diphtheria or because the amount of antitoxin administered was not stated in normal units, leaving 633 available for further analysis. Of the cases which presented symptoms more or less severe of laryngeal affection nearly one half escaped the operation of tracheotomy, a very much larger proportion than is usually the case in laryngeal diphtheria treated in other

ways. The tracheotomies performed may be divided into two groups: (*a*) tracheotomy within twenty-four hours of the first injection and (*b*) tracheotomy at a later period. Only 2 out of the 75 belong to group *b*. The committee drew especial attention to these facts and also to the results of the operation of tracheotomy, in which the mortality amounted to 36·0 per cent., as opposed to 71·6 per cent. in the control series compiled from the records of the general hospitals before the introduction of antitoxin. The mortality fell as age increased, but it was in the first five years of life that the lessened mortality in the antitoxin series was most marked. It was to the lesser frequency with which membrane extended to the larynx and trachea in cases treated by antitoxin and to the effect of the antitoxin on them when membrane was present that the lessened mortality in the antitoxin series was mainly due. The total mortality in the 633 cases amounted to 124, or 19 5 per cent., as opposed to 29 6 per cent. in the non-antitoxin control series. Not only was the mortality in the antitoxin series much less than in the other, but the duration of life in the fatal cases was longer, a fact which has considerable bearing on the frequency with which paralytic symptoms occurred. The closest investigation failed to discover any connexion between the occurrence of paralysis and the amount of antitoxin injected, nor did the period of the disease at which it was first used appear to exert any influence on the occurrence of paralytic symptoms. Some form or other of rash followed the injection of antitoxic serum in very nearly a third of the cases. The rashes could be divided into two main types, those which were of an erythematous and those of an urticarial character; the former largely predominated. In no instance did the presence of a rash appear to have any bearing on the ultimate result of the case. Joint pains which were not met with in the non-antitoxin series and were apparently due to the antitoxic serum were observed in a small number of cases. The percentage of deaths with suppression of urine was found to be practically the same in the antitoxin and the non-antitoxin series. The general result of the inquiry showed that in the cases treated with antitoxin not only was the mortality notably lessened, but the duration of life in fatal cases was also prolonged. The injection of antitoxin may produce rashes, joint pains, and fever; with these exceptions no prejudicial action has been observed in the series of cases investigated to follow even in cases in which a very large amount of antitoxin serum has been used.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—History of Syphilis.—Henoch's Disease.—Peliosis Rheumatica.

A MEETING of this society was held on May 3rd, the President, Dr. ARNOLD EVANS, being in the chair.

Dr. S. LODGE showed specimens of (1) Sarcoma of the Eyeball; and (2) Foreign Body in the Eyeball, together with several microscopic specimens.

Dr. GLADSTONE showed a Stomach affected with Diffuse Cancer of the Pyloric Extremity.

Mr. MIALL read a paper on the History of Syphilis. He mentioned that though contagion in general was recognised from the earliest times, yet it was not till the end of the fifteenth century that contagion from sexual connexion was distinguished. It is probable that much of the "leprosy" spoken of by writers was really syphilis. The study of contagion threw much light on disease in general and was probably instrumental in fostering habits of cleanliness. The use of mercury in the treatment of syphilis had been in vogue from very early times and the effects of mercurialisation were also recognised. Reactions in favour of other drugs had from time to time occurred, and guaiacum, China root, sarsaparilla, juniper, mezereon, sassafras, and many others had been vaunted as specifics in the treatment of syphilis. Iodine was discovered early in the present century and was used in the treatment of venereal ulcers of the throat as a substitute for burnt sponge.—Remarks were made by Dr. GOYDER, Dr. HOBROCKS, and Dr. CAMPBELL, and Mr. MIALL replied.

Dr. H. ANGUS read a paper on Henoch's Disease. Alluding to the confusion existing in the classification of purpuric diseases Dr. Angus justified, on the ground of this confusion, the use of the physician's name who first described cases in which there was a definite group of symptoms associated with a purpuric eruption. The symptoms were colic, abdominal tenderness, vomiting often of green material, bloody stools, pain and usually swelling of the joints. A further characteristic of the disease was the recurrence of the symptoms at intervals of eight days or more. Dr. Angus then read notes of three cases which had come under his care. The first case was that of a boy, aged nine years, who had always been strong and healthy and was the son of well-to-do working people who lived on the edge of the moor. There was a family history of rheumatism on the father's side. The case conformed closely to Henoch's type. There was at first slight pain in the limbs, then severe hæmorrhage from the bowels and abdominal pain; the next day the purpuric rash appeared, chiefly on the limbs. The abdominal pain was very severe, resembling lead colic. There was no fever. In four or five days there was improvement, but this was followed by a relapse with recrudescence of all the symptoms; the temperature rose to 101° F. One of the extravasations near the knee-joint formed a superficial abscess which was opened and healed readily. Several relapses occurred and convalescence was not established for three months and there was then some pain in one foot and one wrist. There was ultimately complete recovery. The second case was of a similar nature to the first, except that there was hæmaturia. After three months' treatment in bed the patient was convalescent and was able to walk about, but the urine remained albuminous. He died three months later from nephritis. The third case was that of a boy, aged twelve years, in comfortable circumstances, with a good family history. The illness began with epistaxis and abdominal pain. There were tenderness of the abdomen and vomiting and there was a purpuric rash about the elbows and the knees. There was no rise of temperature or hæmorrhage from the stomach or bowels. After about a month's treatment in bed he recovered, but for some time was nervous and irritable. In none of the cases was there any heart murmur. Dr. Angus mentioned that Dr. Dreschfeld of Manchester had described a number of cases of Henoch's purpura and that he did not consider it a very rare disease. Dr. Angus stated that nothing was known as to the pathology of the disease and that examinations of the blood had given negative results. Fatty degeneration of the cutaneous vessels has been described. Bacilli had been obtained from patients dying with symptoms resembling those described, but these might have been cases of septicæmia. Henoch suggested the presence of a vaso-motor neurosis, leading to paralytic dilatation of the smallest blood-vessels, stasis of the blood, and rupture of the vessel wall or diapedesis of the corpuscles. The abdominal pain might be due to sympathetic irritation. Treatment had been confined to rest in bed with morphia to relieve pain. Hæmostatics appeared to have had no effect.—The paper was discussed by Dr. GOYDER, Dr. BERRY, Dr. MAJOR, and Dr. CAMPBELL, and Dr. ANGUS replied.

Dr. METCALFE read a paper on Peliosis Rheumatica and showed sketches illustrating the nature of the eruption. He described the course of the affection and recommended salicylate of soda followed by iron and arsenic in the treatment.

Reviews and Notices of Books.

William Stokes: His Life and Work (1804–1878). By his Son, WILLIAM STOKES, Surgeon-in-Ordinary to the Queen in Ireland. London: T. Fisher Unwin. 1898. Pp. 256. Vol. IV. of "Masters of Medicine." Edited by the late ERNEST HART, D.C.L. Price 3*s.* 6*d.*

OF the admirable series of Masters of Medicine already published we have read none with deeper interest than the Life of the great Irish physician, William Stokes, and although his son (Sir William Stokes), who writes his father's memoir, very modestly says that owing to his relationship he is to a great extent at a disadvantage, we think no one could have done such a work so well, for he thoroughly understood his father's aims, his patriotic love of his country, his desire to elevate the dignity and honour of his profession, and above all he knew how his father by "precept and example strove to teach the duties of a true and God-fearing physician."

William Stokes belonged to a family members of which have for five generations occupied prominent positions in the

public life of Ireland. Born in Dublin in 1804, William Stokes was the second son of Whitley Stokes, a man who was scholar of, senior fellow of, and regius professor of medicine in, Trinity College, Dublin. His influence on his son was very great, not merely owing to his varied gifts and his remarkable learning, but also because, as Theobald Wolfe Tone wrote, he looked upon him "as the very best man he had ever known." After a careful preliminary education at home, although, as he afterwards very much regretted, he was not allowed to enter college, young Stokes went to Glasgow, where he studied chemistry under Professor Thompson. He subsequently proceeded to Edinburgh, where he had the good fortune to come under the influence of Professor Alison. Under him he developed that love for clinical medicine and original research which ever afterwards so characterised him. It was at this time that Laennec startled the profession by the discovery of the stethoscope, and young Stokes in 1825 (when he was only twenty-one years of age and before he had obtained any medical qualification) published in Edinburgh a small treatise on the use of this instrument for which he received the sum of £70. In 1828 he wrote two lectures on the Application of the Stethoscope to the Diagnosis and Treatment of Thoracic Disease. Graduating in Edinburgh in 1825, Stokes returned to Dublin. In the next year we find him beginning his work at the Meath Hospital (at the early age of twenty-two years), where for forty-nine years, as one of the greatest clinical physicians who ever lived, he attracted students not only from all parts of the United Kingdom, but from the Continent and America. It was here that, associated with his beloved friend and colleague Graves (the great authority on fevers who inspired Trousseau and to whom we owe our earliest knowledge of "Graves's" disease), he completely reformed the system of clinical teaching, the principle being "to teach the individual pupil, to encourage him to learn, to show him how to teach himself, to bring him into the true relation in which he ought to stand with his instructor, to make him familar with bedside medicine, to show him the value of every new fact and observation in medicine, and to make him know the duty as well as make him taste the pleasure of original investigation." His hospital appointment gave him full scope for his powers of observation, of which he fully availed himself; and as a result in 1837 he gave the profession his great Treatise on Diseases of the Chest, a book characterised by Sibson as a "series of living pictures of disease," and one of the most valuable and far-reaching works which ever emanated from the Irish School of Medicine. In 1854 his Diseases of the Heart and Aorta appeared. It was subsequently translated into German, Italian, and French, and in this book, in connexion with fatty heart, the now well-known "Cheyne-Stokes respiration" was graphically described; while the mode of treatment known as "the Schott Method" is here anticipated by Stokes. This work gave him the same pre-eminence as an authority on heart affections that his first book had done on the other diseases of the chest. In 1874 his Lectures on Fever were published, and he also contributed to the *Dublin Journal of Medical Science*, to the "Cyclopædia of Medicine," and to the *London Medical and Surgical Journal*. It was owing to Stokes mainly that in 1838 the Dublin Pathological Society was founded, and he was one of the first secretaries. We have said enough to show that Stokes's original contributions to medicine entitle him to be placed in the very first rank of the "Masters of Medicine," but like other great men of the healing art, and notably his friend, Sir James Y. Simpson, he was gifted with a many-sided nature, his specialities being a love for the fine arts and antiquities. At a very early age he exhibited a liking for poetry and romance and this passion was intensified by reading the Waverley Novels. There is no country richer in archæological remains than Ireland, and this circumstance, coupled with Stokes's close association with such men as Petrie (his life-long friend, whose memoir was his final literary effort), Burton, Sir Samuel Ferguson, Thomas Davis, Mangan, and Anster, developed and intensified his remarkable taste for poetry and art. As an evidence of his recognised pre-eminence in such subjects he was elected in 1874 President of the Royal Irish Academy. It is interesting to know that he has transmitted these high tastes to his descendants—indeed, this "Life" of him is dedicated to his daughter, Margaret McNair Stokes, his "constant companion," who is everywhere acknowledged to be one of the best living authorities on antiquarian subjects.

Want of space prevents our referring to Stokes's views on medical education and on medical ethics (his admirable address on this latter subject to the students of the Meath Hospital should be republished and ought to be read by all young medical men), to his thoroughly Irish humour, to his great desire to raise the status of his profession, and to the many honours (professional and otherwise) which were heaped upon him; but we have said enough to show that this "Life and Work" of William Stokes, written with such literary finish by his highly-gifted son, should find a place in the library not only of every medical man who loves his profession, but also of those who admire true ability and who feel a kinship in what is most pleasing, helpful, and stimulating in the work and writings of their fellow-men.

Inflammation of the Bladder and Urinary Fever. By C. MANSELL MOULLIN, M.D. Oxon., F.R.C.S. Eng., Surgeon to, and Lecturer on Surgery at, the London Hospital; Examiner in Surgery at the University of Oxford, &c. London: H. K. Lewis. Pp. vi. and 156. 1898. Price 5*s*.

WE extend a cordial welcome to this book, for it is the first in the English language in which has been fully set forth the modern theory of cystitis and urinary fever. The influence of mechanical injury, as by a calculus, and of irritation, such as cantharides excreted with the urine, in giving rise to inflammation has long been recognised, but until very recently the fact was not appreciated that a cystitis evoked by either of these forms of irritation had no tendency to persist when the cause was removed and never in itself went on to the formation of pus. For a cystitis to be suppurative the presence of micro-organisms is absolutely essential. When it had been discovered that in all cases of suppurative inflammation of the bladder micro-organisms were present it was too hastily assumed that the presence of these bacteria was all that was necessary to set up a cystitis, but it has been clearly shown that injections of the very same microbes or their products into a healthy uninjured bladder were not necessarily followed by the appearance of any lasting inflammation; in one or two days they generally entirely disappeared. If, however, some injury had been inflicted previously on the bladder, if its walls had been rubbed or bruised, then a very different result followed. The septic injection was the starting point of a severe and protracted inflammation, the vessels of the vesical mucous membrane became dilated, much exudation occurred, and large quantities of pus were found in the urine. Thus it was shown that two sets of conditions are necessary for the occurrence of a septic cystitis — firstly, the presence of special micro-organisms, and, secondly, an increased vulnerability of the bladder wall. In a few cases, indeed, injections of virulent culture did produce a cystitis with suppuration, but these exceptional results are doubtless to be explained by the necrotic action which the toxins of these bacteria have on the vesical mucous membrane, so that the

toxins damaged the epithelium of the mucous membrane sufficiently to allow the bacteria themselves to set up a purulent cystitis. The most common conditions which act as predisposing causes of cystitis are congestion of the vesical mucous membrane and retention of urine. The congestion probably leads to impaired nutrition of the protective epithelium, with the result that it is less able to withstand the attacks of the micro-organisms; retention of urine never by itself causes cystitis, even though it may last for years, but retained urine forms a most admirable medium for the growth of very many forms of bacteria, and a further source of irritation is found in the decomposition of urea. Mr. Mansell Moullin considers it proved that only two micro-organisms can be credited with the power of breaking up urea so as to set free ammonia. These are the urobacillus liquefaciens septicus and the bacillus coli, though the latter is much less effective in this respect than the former. Ammonia, however formed, is an intense irritant to the mucous membrane and so materially assists in starting and keeping up the cystitis. Another point of great importance is the question as to the method by which these bacteria find their way into the bladder. The answer must unhesitatingly be that in the vast majority of the cases they are carried in by catheters. It is no easy matter to make perfectly aseptic the meatus urinarius, but even more difficult is it to prevent a catheter from carrying into the bladder the germs which are already in the urethra. A still more fruitful source of infection is the catheter itself; though its surface may be smooth and polished the interior is nearly always rough and irregular, so that even if at first it should be aseptic after it has been used a time or two it will be almost impossible to render it free from germs. If it be metallic it may be boiled, but the ordinary gum-elastic catheter cannot be cleansed by heat; many of its faults are innate and Mr. Mansell Moullin has had some catheters made in which these faults have been obviated. The catheter is quite solid beyond the eye and its interior is as smoothly polished as the outer surface. Sterilisation is almost impossible if any greasy lubricant is used, as the fat protects the germs from the action of the antiseptic. The author advises boroglyceride or lanolin which has been sterilised and which is kept aseptic by the addition of carbolic or boric acid, and further we are told that boric acid in a saturated solution is the most satisfactory antiseptic to employ.

Though in most cases the germs setting up the cystitis have been introduced from without by the use of a catheter, yet in a few cases it is extremely probable that they have been carried by the lymphatics from the neighbouring rectum, and this is especially likely to be the case when the cystitis is due to the bacillus coli.

The treatment to be adopted for suppurative cystitis follows naturally from a due appreciation of its pathology, and by no means the least important part is the prophylaxis which we have indicated above in speaking of the sterilisation of the catheter. When cystitis is already present emptying and draining the bladder or washing it out are necessary according to the severity of the case. For washing out the bladder Mr. Mansell Moullin prefers sodium chloride and boric acid dissolved in a solution of sodium borate if a mere cleansing action is required, but if a germicide is needed he advises a 1 per cent. solution of nitrate of silver.

We have thus far omitted to speak of the chapter devoted to Urinary Fever and we fear that lack of space will not enable us to deal with it as it deserves, but we must at least summarise this very clear exposition of a most important subject. There are certain very striking phenomena which only occur after an operation on the urinary organs. A patient has a catheter passed, and severe rigors follow with perhaps death in a few hours or days; such strange results from so simple a procedure demand an explanation. The explanations which have been offered of them can hardly be called satisfactory and yet the results are often so serious that surgeons have made great endeavours to understand their pathology in order to be better able to prevent their occurrence. Mr. Mansell Moullin classifies the cases in four divisions; in the first he puts those in which only a single rigor occurs, in the second profound collapse results, often followed by death in thirty-six hours. Both these forms the author attributes to septic absorption, the difference depending on the dose and the rapidity with which it enters the circulation. In the third form the symptoms do ot follow the operation for three or four days; in these cases a feeble pulse and dry tongue with increasing wandering delirium soon lead to a fatal issue. These symptoms are to be attributed, we are told, to a septic cystitis with an ascending invasion of the kidneys themselves. In the fourth variety there is continued fever with recurring rigors, the fever being due to invasion of the circulation by the organisms. There are certainly many things to be said in favour of this classification and on behalf of the author's contention that disease of the kidneys is no essential factor in urinary fever. We must confess that we think it probable that the nervous theory, which is often advanced to explain urinary fever, will be found inadequate to account for more than a very small minority of cases.

We have said sufficient to show that in Mr. Mansell Moullin's work these important problems are discussed thoroughly and in a manner which is fully abreast of the knowledge of the present day and the consideration of the principles of treatment is as thorough as the pathology. We can recommend a perusal of this interesting volume to all surgeons.

The Diseases of the Lungs. By JAMES KINGSTON FOWLER, M.A., M.D. Cantab., F.R.C.P. Lond., and RICKMAN JOHN GODLEE, M.S. Lond., F.R.C.S. Eng. With 160 illustrations. London: Longmans, Green and Co. 1898. Price 25*s*.

THIS work constitutes a most important addition to the literature of scientific and practical medicine. It is, moreover, a sign of the times, for it brings home to us the truth that even in a subject which might be thought to rest wholly within the physician's province it is needful for its complete exposition to call in the aid of the surgeon. It was a happy thought, marking thus a new departure, which led to the coöperation of such distinguished representatives of the two great branches of our profession in the production of a work of this class. The result has been no less fortunate, for not only is the work more complete in its survey than any similar book with which we are acquainted, but it shows how advantageous it is to have the subject viewed from the two sides. Naturally the chief share falls to Dr. Kingston Fowler, whilst to Mr. Godlee are assigned chapters dealing with injuries of the lungs and pleura, the surgical treatment of pulmonary cavities and of tumours and hydatids, of pleural effusions and empyemata, together with a description of actinomycosis, and a valuable introductory chapter on the Anatomy of the Chest. We may first turn to the main bulk of the volume which is the work of Dr. Fowler.

In the first place the reader cannot fail to be struck by the orderliness with which the contents of the volume are arranged. There is not any condition of the lungs and pleura known which does not in its due place receive attention. The various affections are dealt with in a manner proportionate to their extent and importance, whilst a pleasing innovation is the introduction at the head of each chapter of a summary list of contents, with page references, which has not,

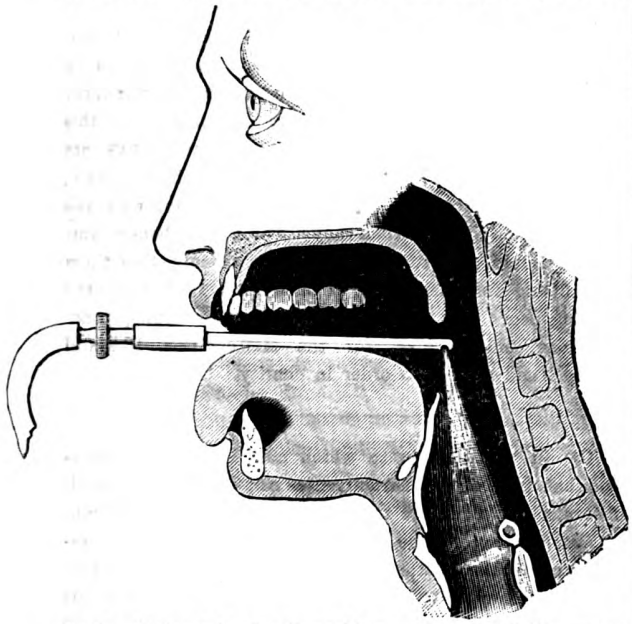
happily, prevented the addition at the end of the volume of a very complete index. These indications of an orderly system are further borne out in the individual chapters, where each branch of the subject is discussed in a regular rotation which applies to all the diseases. The description of the diseases is preceded by a chapter on Physical Diagnosis, which is thoroughly practical and not overweighted by theoretical speculations. We join with Dr. Fowler in the regret that the nomenclature of physical signs is still so equivocal, and we are glad to note that he adheres to the terminology proposed by the Committee of the International Medical Congress. Diseases of the Trachea are first described, and here, as elsewhere in the volume, details are given of actual cases, a practice which adds much to the value of the book. We may specially cite the notice of a remarkable case of chronic tracheitis, in which the posterior wall was so thickened as to be mistaken for growth, so that tracheotomy was performed. The thickened membrane was cauterised and the patient made a good recovery after a severe illness from broncho-pneumonia and pericarditis. Stenosis of the trachea from organic stricture and from compression is discussed, as well as perforation of the trachea by enlarged glands or aneurysms. The chapters on Bronchitis are excellent, but we may pass them by in order to draw especial attention to that on Bronchiectasis, which is most thoroughly considered. The varied etiology of this condition, the importance of its accurate recognition, and the difficulties in its successful treatment render it a matter for thoughtful and accurate analysis and this it has certainly received at Dr. Fowler's hands. The encouraging account he gives of the value of treatment by the "creasote vapour bath" introduced by Dr. Arnold Chaplin and the full details given of its application will certainly be welcomed by the practitioner, who has few more distressing and disappointing cases to treat. A separate chapter is devoted to Bronchiectasis in Children. This is followed by chapters on Bronchial Stenosis and Diseases of the Bronchial Glands. In the chapter on Emphysema the pathogeny of the condition is adequately discussed and the great service rendered to medicine by Sir W. Jenner on this subject is fully recognised. It may be mentioned that the treatment of emphysema by the compressed air bath is spoken of with approval. The chapter on Asthma opens with a striking description of the asthmatic paroxysm and in speaking of its pathology Dr. Fowler enumerates no fewer than eight alternative hypotheses which have been propounded. At the same time he points out that there is now little dispute as to the nervous factor in the affection, the point still *sub judice* being mainly as to whether the bronchial narrowing is due to temporary swelling of the mucosa by vaso-motor influence or the more classical view of spasmodic contraction of the bronchial muscles. To us it has always seemed that the efficacy of anti-spasmodics, and especially of vaso-dilators—such as the nitrites—tells far more strongly in favour of the latter than of the former view. Dr. Fowler has some judicious remarks on treatment, and his warning to the young practitioner not to prescribe until he has heard the experiences of the patient is sensible, for the asthmatic is a law unto himself; there is no affection in which idiosyncrasy plays so large a part, for, as the author pithily puts it, "asthma is a disease of 'exceptions.'" Many chapters are devoted to Pneumonia, its varieties, and its sequels, but we must content ourselves here with drawing attention to the excellent discussion upon the bacteriology of acute pneumonia, the description of chronic and subacute pneumonia, and on pulmonary fibrosis. Next in order come the diseases due to inhalation of dust, the destructive changes which are responsible for so large a premature mortality amongst workers in dusty trades being, as Dr. Fowler shows, due to tuberculosis, which is favoured as much by the unhygienic conditions of the workshops as by the inhalation of dust. Chapters on Congestion, Brown Induration, and Collapse follow, and then comes what is undoubtedly the *pièce de résistance* of the book, the ever-pressing subject of Pulmonary Tuberculosis. It needs many chapters for its exposition, and this is in all respects so thorough and comprehensive, so fully abreast of the knowledge of the day in etiology, pathology, and treatment, that it will be studied with profit even by those who have had most experience in this common disease of our country. Dr. Fowler recognises four types, to the characteristics of which he gives separate consideration. They are: (*a*) miliary tuberculosis; (*b*) caseous tuberculosis; (*c*) fibroid tuberculosis; and (*d*) chronic or fibro-caseous tuberculosis. He discusses the subject of Pyrexia in a separate chapter, whilst in his account of the chronic disease he introduces the very instructive diagrams showing the usual progress of invasion of the lungs which he first brought into notice some years ago. Upon Treatment, he deals with many topics in turn, gives full approbation as well as description of the open-air treatment, considers that "tuberculin" is a remedy which cannot be justifiably used as it induces pyrexia and may disseminate tubercle in the body, treats of antiseptic remedies, of the treatment of local conditions, of climatic treatment, and conveys much wise and practical counsel. There is a fuller study of the subject of Pulmonary Syphilis than is ordinarily met with in such works; Actinomycosis is described by Mr. Godlee, whilst Dr. Fowler writes on Pulmonary Mycosis and on Hydatids. Embolism, Thrombosis, Aneurysm of the Pulmonary Artery, Hæmoptysis, each in turn receive attention, the Pulmonary Complications of some Acute Specific Diseases closing the portion of the work devoted to the lungs.

After a chapter on Injuries of the Pleura by Mr. Godlee, the subject of Pleurisy is treated by Dr. Fowler. Here we have an ample account of the bacteriology of pleural inflammations, and it is interesting to note that in the author's opinion tuberculosis is responsible for very many cases of sero-fibrinous effusion, although it is not always possible to detect the bacillus in the exudation. Mr. Godlee's contribution of the Surgical Treatment of Diseases of the Pleura is, as is to be expected, full of information and of practical suggestion. He also contributes an article on Peripleuritis, Caries, and Necrosis of Ribs and Mediastinitis. Pneumothorax, Hydrothorax, Hæmothorax, and Chylothorax are next taken, the last-named rare condition being illustrated by the clinical and pathological details of a very instructive case. Tumours of the Pleura, Diseases of the Diaphragm, Tumours of the Mediastinum, and Pulmonary Osteo-arthropathy—these are some of the subjects which receive attention and render the work so very complete. Nor must we close this notice without a word of praise for the admirable anatomical chapter by Mr. Godlee with which the book opens. It is sufficiently detailed to render it of much value in the after consideration of pleural and pulmonary diseases, but what is particularly to be noticed is the abundance of excellent illustrations which here find a place. These alone are worth careful study and by the light of Mr. Godlee's text they teach most important facts which are of real practical value. Speaking of illustrations, it must be said that the whole volume is most fully furnished in this respect, a large proportion of the figures being original. These together with the general style of production of the work add to its attractiveness and enhance its value. It only remains for us to express the pleasure with which we have perused a book which bids fair to rank as a standard authority on a subject of high importance, and we may well congratulate the authors on the successful accomplishment of their task. The work will be widely welcomed.

New Inventions.

LARYNGEAL AUTO-INSUFFLATOR.

THE superiority in laryngeal conditions of medication by powders, on account of the more lasting effects of such substances as compared with solutions, coupled with the difficulty of accurately insufflating pulverised bodies into the larynx by individuals unaccustomed to throat work, has led me to devise an instrument (made for me by Messrs. Wood and Son, Manchester) by which powders can be readily blown into the organ by the patient or his friends. The apparatus consists of a straight tube with a receptacle for powder at one extremity and a small hole somewhat like the eye of a catheter at the other. This aperture is to be kept downwards when the tube is introduced and a tiny ivory knob on



the insufflator indicates its position. A tube and bellows complete the instrument, which should be passed into the mouth, resting on the tongue, until the soft palate is touched, the tongue being protruded. A deep inspiration is then taken and simultaneously the bellows are forcibly compressed, when the powder is partly aspirated and partly blown into the larynx. The advantages of the insufflator appear to be that (1) it can be used by the patient or his friends owing to the abolition of the usual terminal curve, thus obviating irritation of the sensitive parts about the pharynx by the inexperienced manipulator; (2) the end is not liable to be jerked when the powder is insufflated, as occasionally happens in the instrument ordinarily employed; (3) the powder is evenly distributed; and (4) the price is comparatively small (5*s*. 6*d*.).

St. Ann's-arcade, Manchester. E. S. YONGE, M.D. Edin.

NEW ASEPTIC OPERATION AND DRESSING TRAYS.

HAVING given an extensive trial to the various dressing trays usually sold and to several of my own design, I have now arrived at the most convenient and useful shape which has been made for me by Messrs. Arnold and Sons, West Smithfield, London. The trays are made in sets of three and all fit into one another to economise space and to keep out dust. They are made of tinned copper and can be boiled, scrubbed, and generally made aseptic. They serve for boiling instruments in before or after an operation, while they are adapted for carrying the dressings and sponges in a moist condition to an operation. They are equally adapted for private and hospital work. They fit almost every part of the body. To catch liquid at an ordinary laparotomy or operation about the inguinal canals one tray is put between the thighs and jammed well up against the perineum, while the other two are placed close up against the loin and thigh on either side of the patient. Any amount of washing out and sluicing the skin or operation area may be freely indulged in without wetting the tables and blankets. For all operations the trays serve as instrument holders half filled with antiseptic lotion. It will be found very convenient to keep a pair with, say, the usual instruments for curettement

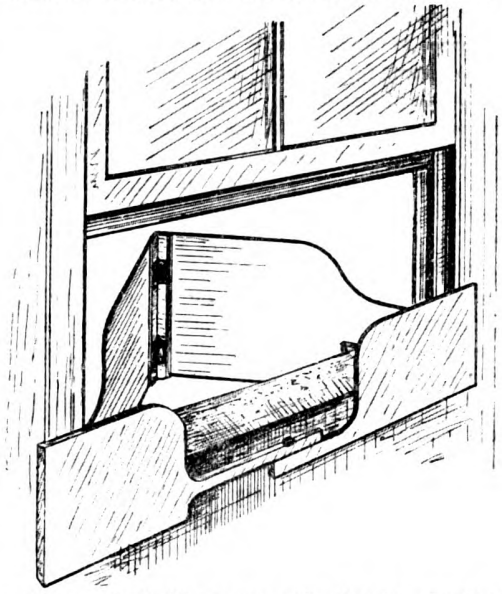


of the uterus always stowed in them—enema, uterine tube, Hegar's dilators up to 15, curettes, volsellum, &c. Two form a dust-proof box and can be kept on a shelf ready for instant use.

T. HOPE LEWIS,
Surgeon, Auckland Hospital, New Zealand.

A SAFETY WINDOW-CLEANERS' "CHAIR."

WE give below an illustration of a device for the prevention of accidents from window-cleaning. In our opinion there should be no necessity for such an invention, inasmuch as in the interests of humanity local authorities should have the power, if they do not already possess it, of making it illegal for a person either to sit or stand on a window-sill above the ground floor of a building for the purpose of cleaning a window. Until such necessary laws are made, however, we welcome any device which will prevent or minimise danger to life or limb from this cause. As will be seen from the illustration, two strong pieces of board rest against the frame and brickwork enclosing the frame of the window. These boards are connected together by two



arms of wood which slide one upon the other in order that the boards may be regulated to the width of the window. These arms are fixed together by means of a screw. Hinged to the side of each board facing the street are two other pieces of board which meet at an angle formed by means of a strong hinge. An immoveable back rest is thus formed for the person cleaning the window, who is consequently enabled with safety to use both hands in the task of cleaning the window, instead of being forced to hold on to the bottom of the frame with one hand. The price of the article is only 4*s*. 6*d*., and communications concerning it should be made to the inventor, Mr. H. Gold, 21, Great Eastern-street, E.C.

THE LANCET.

LONDON: SATURDAY, JUNE 4, 1898.

WE publish to-day our twelfth supplement in support of the Metropolitan Hospital Sunday Fund and in so doing, for this particular occasion only during the year, address ourselves to a body wholly outside the circle of those to whom as a rule we submit our weekly issues. But by this time it is well understood by our readers that we make this departure from our custom in the interests of a cause common to all alike—in the interests of work which is, on the one hand, dependent upon medical efforts for its due carrying out, but which is, upon the other, the result of the charitable contributions and foresight of the public. Hospital work forms a neutral ground upon which all men, medical and lay alike, can meet and unite to help those of their brethren who have the strongest possible claims on their humanity—the sick poor.

The supplement which we issue to-day, while it deals with the work and growth of the Hospital Sunday Fund from its inception, is written in two parts: the first being a statistical statement illustrated by a few easy and obvious morals drawn from the figures, and the second a short story describing a situation which would be an exceedingly frequent one in the unimaginable case of London being deprived of the services of its hospitals. We have resorted to fiction because it has seemed to us that the short story would form a convenient medium through which to impress the claims of the Hospital Sunday Fund on the general public, but we should like to point out that our story does not avail itself of the usual privileges of romance; for whereas fiction generally selects terrible examples and portrays them as common events, so that a situation set out by the pen of an adept novelist is apt to be much embellished by the art of the writer and by his feeling for chiaroscuro, our author, on the contrary, has chosen a commonplace incident, one of daily occurrence, and has shown how an annoying accident would be transformed at once into a very real tragedy were it not for the intervention of the hospitals. He has not sought to unfold a harrowing tale; he has not designed to shock or frighten persons out of large subscriptions in self-defence: he has simply wished to furnish small subscribers with a practical reason why they should subscribe in their numbers. If the masses will spare their 5*s.* we may be certain that the classes will subscribe their £5. For the Metropolitan Hospital Sunday Fund affords a peculiarly fit opportunity to persons of restricted means of tendering support to the medical charities of London. A small subscription given in this way possesses both actually and sentimentally a value which it could not otherwise have. It is no small thing that the poor man contributing his mite upon this occasion should be able to feel that it goes to swell a Fund large enough to form an indispensable part of the charitable revenues of the world's greatest city and yet to be drawn mainly from sources such as his own benevolence has opened up. Thousands of persons in London are so situated. The subscription list with its regulation guinea is not for them, and were it not for the recurrence of the Fund collections they would stand quite aloof, wishing well to their suffering neighbours but being powerless to promote their well-being in any way.

We need not labour the arguments of our supplement, the whole teaching of which is that the right-thinking inhabitant of London should levy an annual rate upon himself according to his means. It remains for us only to say, in words which we have employed almost identically before, that to all orders of mind, and all social grades, and all creeds alike the Metropolitan Hospital Sunday Fund must appear as a noble charity, splendidly directed, economically managed, justly administered, practical, and humane. To this Fund the rich should give, not only because they are rich but because they are directly benefited by the hospitals; the poor should give and they need no reminding what the hospital means to them when they are sick; the benevolent-minded should give, for no scheme can come before them more fitting for their alms than a fund to benefit the suffering poor; and, lastly, men of business habits, practical men, should give, for the Metropolitan Hospital Sunday Fund represents order in charity.

"OF all the diseases to which man is liable there is none that in point of destructiveness can be compared with tuberculosis." Such are the opening words of an article in the *Practitioner* for June, the whole of the number in question being devoted to the subject of tuberculosis, more particularly pulmonary tuberculosis, and containing numerous papers on the subject from all points of view by some of our most eminent authorities. The editor is to be congratulated on the success which has met his endeavours, for seldom has a better collection of papers been published in any single issue of a medical magazine.

The first article, on the Treatment of Consumption, is written in characteristic style by Sir SAMUEL WILKS. After a short historical *résumé* of some of the methods which have been employed the writer is forced to the conclusion that "the remedy for consumption is not medicine but fresh air. ..... Air and sunshine are the needs of the consumptive; without them no other remedies will succeed." This is the cry which rings throughout all the succeeding papers. It is an opinion which is rapidly gaining ground with all physicians, and without doubt will form the basis in all future treatment of the "national complaint" of all countries. Another of Sir SAMUEL WILKS'S remarks is worth quoting. It is expressed rather quaintly, but contains a great principle: "When reading at school of DIOGENES in his tub and the visit of ALEXANDER the Great to him, I thought he was a man of very bad manners in telling the monarch to get out of his sunshine, and it was not until late years that I took a different estimate of the philosopher. After an attack of influenza I went to Worthing to convalesce, requiring air and sunshine. Everything else in the

world was put aside for these; they were my only wants. When, therefore, I sat looking on the sea and basking in the sun a friend stopped in front of me to talk, he was stripping me of my only shred of comfort and I exclaimed, 'Get out of my sunshine!' I then discovered the greatness of DIOGENES, who evidently knew that the sun was the source of all power."

The second paper is by Dr. ARTHUR RANSOME on the Susceptibility to Tuberculosis under Different Conditions. The conditions include race, climate and locality, toil, sex, age, and heredity. Dr. RANSOME draws attention to the fact that in Dr. LOMBARD'S maps of the distribution of phthisis, the only portions of the earth's surface from which the colour is entirely absent are the arctic and subarctic regions, deserts, and high ranges of mountains, and it is precisely in those parts that human beings are fewest and most sparsely scattered over the ground. Dr. RANSOME speaks doubtfully of the influence of heredity, and comes to the conclusion that "it is highly probable that heredity has much less to do with consumption than is popularly supposed, and that it ranks very far behind many other predisposing causes. This view is gradually forcing its way into the insurance offices, the medical advisers of many of them being far less disposed to "load" applicants with a family history of phthisis than was formerly the case. After discussing the conditions named above the writer concludes "that, with the exception of soil, none of the influences that have been now passed in review have much to do with the spread of tubercular disease."

Dr. SIMS WOODHEAD'S contribution to the Bacteriology of Tuberculosis is excellent, telling all that is known about tuberculosis from a bacteriologist's point of view. The manufacture of KOCH'S new tuberculin is fully considered, but the expression of any definite opinion as to its therapeutical value is wisely refrained from. The important subject of the Relation of Tuberculosis of Animals to Man is dealt with by Dr. ALLAN MACFADYEN, who, after enlarging upon the results obtained by the Royal Commission upon Tuberculosis (1895), comments on several points which should receive the attention of those authorities whose duty it is to regulate and supervise the meat-supply and the milk-supply. His remarks are strongly and concisely expressed. He urges "an adequate inspection of cattle by veterinary surgeons; and the removal of suspected animals from the dairy sheds is required in the first instance. The use of tuberculin as a diagnostic agent is of the greatest value in this respect and the neglect of its aid is inexcusable ..... An early diagnosis of this infectious disease, whether in man or animals, is essential if we are to combat its stealthy spread and so limit the dangers that exist from the two great channels of infection—the sputum of phthisical patients and the milk of diseased animals." With this all must agree. The matter is still further dealt with by Dr. A. K. CHALMERS in a paper on the Causation of Tuberculosis and its Prevention by Legislation, and also by Dr. HERMANN M. BIGGS in an article on the Prevention and Restriction of Pulmonary Tuberculosis in the City in New York. Both these papers form most interesting reading and contain many valuable suggestions.

The Climatic Treatment of Tuberculosis is considered by several authors. Dr. C. T. WILLIAMS writes on the Treatment of Pulmonary Tuberculosis by Residence at High Altitudes; Dr. MICHAEL G. FOSTER on the Mediterranean Littoral as a Health Resort for Phthisis; Dr. F. M. SANDWITH on Desert Climate for Lung Tuberculosis; Dr. ALFRED P. HILLIER on the Climate of South Africa; and Dr. F. PARKES WEBER on Ocean Voyages in Phthisis—a series of papers which will prove most valuable for reference. Much interest will attach also to the papers on the Open-air Treatment of Consumption by Dr. HERMANN WEBER, Dr. RUFFNACHT WALTERS, and Dr. F. W. BURTON-FANNING. As we have said in our columns, when publishing communications on this subject from the same pens, we believe that this method of treatment will be largely adopted in the near future. The question naturally arises as to the most desirable methods of carrying it out. Experience alone can decide as to which course promises the better results—the treatment of phthisical patients in sanatoria under the care of an "expert" or the careful supervision of such patients in private houses by independent medical men.

Two other papers require to be mentioned—the Hospital Treatment of Consumption, by Dr. J. E. POLLOCK, and the Medicinal Treatment of Tuberculosis, by Dr. HECTOR MACKENZIE. They complete a really valuable little collection of monographs which we have pleasure in recommending to the perusal of all our readers.

THE facilities which are afforded to medical men for continuing their education, either in the general curriculum or in special courses, are very limited in Great Britain when compared with those which exist on the continent and in America. The centralisation of medical teaching and the treatment of an enormous number of cases under one roof and one State or charitable dispensation, as we find them in many foreign universities and hospitals, cannot be imitated in London. We have no central university and the hospitals are scattered, so that each appeals to its own supporters and considers primarily and rightly the comfort of the patients rather than the efficiency of the teaching. The systematic examination of the sick by a large class of students has not been introduced here as it has been in many Continental hospitals. Post-graduate teaching has, therefore, in London never been organised on a centralised system, although lectures and demonstrations have been given, generally on special subjects, at our hospitals and in our laboratories to medical men on payment of a small fee. Also, as stated in THE LANCET of May 28th, a combination of the London general hospitals has lately been formed by which a post-graduate student can attend any special part of the medical course at any hospital which he may choose instead of being limited as hitherto to one hospital. Now our experience leads us to believe that the post-graduate student wishes to attend one or more special departments or special hospitals rather than go through an extended curriculum, and in this matter he has a large choice in London already both of hospitals and teachers, although his clinical material cannot be brought to one institution. In fact, we think that under existing circumstances—circumstances, however, of very recent origin, the London post-graduate student can now obtain much of what he wants. But that others think differently is proved by

a scheme which has been submitted to us for the foundation of a Medical Graduates' College and Hospital on the American rather than the continental plan — that is to say, a college and hospital where qualified men alone are to be taught. We recognise the difficulties which must attend any attempt to combine teaching for students with post-graduate instruction. Of course, a college and hospital for post-graduates alone would be a more desirable method for giving the special instruction they desire, but in order to do this with efficiency provision must be made on a large scale. Lecture theatres, class-rooms, laboratories, a museum, and a library must have places in such a college, and such a hospital must attract by the wealth of its general and special clinical material and by the reputation of its teachers. Public consultations and advice to medical men on the diagnosis and treatment of their cases will require very careful management or they may possibly come to be regarded in a false light. It is hardly likely therefore that the scheme will receive much support from the teachers and governors of our general and principal special hospitals and in many instances an active opposition may be excited. The medical profession may subscribe liberally to the foundation and endowment of such an institution, but as the patients will not be admitted into the hospital for prolonged treatment, but rather for the purposes of teaching, it is questionable whether it will derive much support from the general public. If another JOHNS HOPKINS can be found to provide the necessary funds the scheme will be carried out easily, but unless some munificent benefactor arises we are doubtful whether the project, which has much to recommend it, can be brought to a successful issue.

THE Society of Medical Officers of Health for Scotland has issued a very useful "Memorandum with respect to the duties and sphere of the medical officer of health under the Infectious Disease (Notification) Act." By the new Scottish Public Health Act the Notification Act is made applicable throughout the whole of Scotland, and it seems that several instances of friction between the health officer and the medical attendant have recently occurred. The Memorandum points out that a good mutual understanding is essential for the efficient control of infectious disease; that as a general rule it is not the duty of the medical officer to review the practitioner's diagnosis; that the medical officer must start from the belief that certificates are given in good faith; that in respect of diagnosis the private practitioner has, as a rule, an advantage over the health officer in having had the case under observation and in knowing its history; that there are circumstances which justify the officer in reviewing a diagnosis in the interest of the public or of the patient, but that any such review should be made "with a clear apprehension of the delicacy of the undertaking, with due attention to professional etiquette, and, above all, in remembrance of the golden rule." When removal to hospital is in question the private practitioner may cordially concur in the procedure but may object to be an active party and the medical officer may have to step in. Small-pox and typhus fever are diseases which demand drastic suppression, but they occur so seldom nowadays that few practitioners have the opportunity of becoming familiar with them. Small-pox involves removal to hospital, revaccination of exposed persons, a report to the Local Government Board, and perhaps interference with employment. When all this routine has been discharged it is awkward for the private practitioner if it turns out next day that the case is not small-pox, and in his own interests a preliminary consultation would have been advisable. Even where gross carelessness or *mala fides* is suspected the patient should not be visited without prior intimation to the medical attendant. This is the statement of the Memorandum and is most clearly our opinion also. A local authority insisting on its officer making a practice of inquiring into diagnoses should be resisted. Where a different opinion is formed by the medical officer to that which has been expressed by the general practitioner, the information of the varying opinions should reach the patient or relatives through the practitioner, showing that neither medical man has lost confidence in the other because their minds do not happen in an individual case to jump alike. Where the original diagnosis is reversed in hospital the medical officer should take steps to secure "that the patient is not discharged in such a way as to suggest any reflection upon the action of the practitioner who certified the case." In issuing this sound Memorandum the Scottish Society of Medical Officers of Health has taken a wise step — a step, indeed, which is likely of itself to do much to attain the purpose of the Memorandum in the avoidance of friction and the promotion of public as well as professional welfare. It should be welcomed in Scotland as showing the anxiety of the Society that the public health medical service should maintain the best possible relationship with the great body of the profession. The hearty support which the profession gave to the health officers in their last year's strenuous and successful fight to obtain proper status and recognition in the new Public Health Act shows on the other side an equal friendliness which is well reciprocated in the document the contents of which we have here briefly indicated.

Annotations.

"Ne quid nimis."

DENTAL SURGERY AND HYGIENE.

DURING the International Congress of Hygiene and Demography recently held at Madrid an effort was made to establish a direct connexion between dental surgery and hygiene. In respect notably to the systematic surveillance and care of the teeth of children at school much is done but much more could be done to save the coming generation from one important cause of ill-health. Then, also, dental surgery is connected with special occupation diseases such as the necrosis prevalent among the match-makers. Speaking generally, the inferiority of the teeth of the present generation as compared with the teeth of previous generations is a very distressing symptom of the effects of modern life and the study of its causes involves at once questions of dental surgery and of hygiene. In view of these considerations it was felt that dentists should participate in the labours of the Congress of Hygiene. Some two years ago the Spanish Odontological

Society was established and this organisation determined to hold its first general assembly at Madrid at the same time as the Congress of Hygiene. But as there are many dental questions which do not come within the scope of hygiene the dentists met separately at the Royal Academy of Medicine. It was originally intended that when papers were to be read establishing a direct connexion between dental surgery and hygiene the dentists, who were all enrolled as members of the Congress of Hygiene, should go over in a body to the latter Congress. But at the last moment this was not found to be practicable, so the papers in question were read at the Academy of Medicine, with the understanding that they will be published in the official record of the Congress of Hygiene. There were altogether 121 members of what might be called the dental section of the Congress, including some foreign guests. Among the latter Dr. G. Cunningham of Cambridge read an interesting paper on the Teeth of School Children, insisting on a more systematic and wide-spread inspection. Dr. Bofill spoke on Antiseptic Dentifrices, demonstrating the inutility of the nostrums offered to the public. Dr. Aguilar read a paper on the measures to be taken to prevent the disease which is but too well known in the east of London under the popular denomination of "phossy jaw." He suggested that match-makers should not be allowed to work more than fifteen days consecutively and that then they should keep away for fifteen days. He likewise insisted that dental inspectors should constantly examine the mouths of such workers and remove all roots and decayed teeth. Dr. Boniquet of Barcelona spoke of the mouth as the unsuspected cause of many illnesses. For instance, he described eight cases of quinsy which he ascribed to bacteria which sometimes were able to work their way from the root of a bad tooth and passing through the connective tissues became the focus of an abscess situated at some distance. Dr. Hohr, a Spanish dental surgeon of German descent, read a paper on a microbe which he claims to have discovered and names the amœba buccalis. According to Dr. Hohr this microbe is in its normal condition when in the human mouth and there it does no harm; but when it reaches the intestines it gives rise to the amœba coli and may excite dysentery. The resisting power of the mucous membrane of the mouth is greater than that of the intestine. If this organism is in the mouth it will be conveyed to the intestine with the food or saliva and should the subject be predisposed dysentery will result. This assertion is based on the similarity of both microbes. Dr. Hohr therefore argued that if the teeth are kept in perfect order the amœba buccalis will not be found in the mouth; consequently it will not be conveyed to the intestines, and even if the subject is predisposed to dysentery he will escape. Thus dysentery may be prevented even where the predisposition exists by the active intervention of dental surgery. Since the conclusion of the Congress of Hygiene the Spanish Odontological Society have met again and have decided to hold another Dental Congress in two years' time at Barcelona. Foreign visitors will be welcomed at this gathering.

ALCOHOLIC STIMULANTS IN WORKHOUSES.

THE consumption of alcohol in workhouses is a subject of discussion as old as the larger question of which it forms a part. It is one which has for many years occupied the attention of local authorities, with the result, on the whole undoubtedly satisfactory, that the administration of stimulants, at one time regulated mainly by the free hand of custom, is now much less liberal. This statement, however, is only generally true and is qualified by notable exceptions. Eminent among the latter stands the county of Kent. From statistics quoted by a contemporary, the *British Temperance Advocate*, it appears that while the total bill for intoxicants used throughout the workhouses of England and Wales has decreased during the last twenty-two years from £82,555 to £32,911, or about £50,000, the sum expended in the workhouses of Kent has not diminished in proportion. On the contrary, it is noted that while only the three parishes of Eastry, Dover, and Medway show a consumption below the general workhouse average the remainder use an amount varying from 39 to as much as 693 per cent. above that average. Thus in the parish of Milton the sum expended in this way is 4*s.* 9½*d.* per head while in that of Cranbrook it rises to £1 7*s.* 4½*d.* Some allowance must naturally be made for divergence of opinion as to the necessity for alcohol in special cases and conditions, but even this concession will not enable us to explain differences in practice so marked as those above referred to. It is significant that the example of Kent is to a greater or less extent characteristic of the whole southern section of England. It would be of interest and no less, we believe, to the public advantage to have fuller information on this subject. In particular it should be profitable to inquire by whom, in what form, and under what conditions, alcohol is consumed in workhouses, and whether it has been found to exercise any influence advantageous or otherwise on its consumers. It certainly would be remarkable that in one parish the sum expended on alcohol should be ten times that in another or even more without producing some proof either favourable to its employment or the contrary. If none such can be found then the case for the free use of alcohol must be but a weak one and the question of its abatement must appeal to the ratepayer. For our own part while fully recognising the value of alcoholic stimulants in certain cases we are no advocates for their routine employment. The differences of opinion which appear to prevail among parish guardians with regard to this subject have not failed to attract the notice of the Local Government Board. We trust they will obtain at the hands of that body yet fuller investigation and such practical direction as they may require.

AN ABUSE OF THE EXAMINATION SYSTEM.

THE absurdity to which the system of examination may be reduced is well illustrated by the following incident. A practitioner thoroughly well qualified and holding also a diploma of public health applied recently for the post of medical officer of health in a northern borough. On appearing before the local council he was desired to answer certain questions bearing exclusively on the causation, development, and treatment of several infectious diseases. Naturally, and we maintain with much propriety, he declined to be thus examined on matters of a purely professional character by a lay committee and referred to his qualifications as affording satisfactory proof of his professional knowledge. It is gratifying to learn that this very rational view commended itself to more than one member of the extemporised "medical" board and that those members openly resented its action as a meddlesome impertinence. But the most singular part of the narrative remains to be told. It appears that the prime agent in this intelligent proceeding was himself a medical man though a member of the town council. We are not informed as to the result of this election. If in keeping with the procedure adopted success in the matter of selection could not be other than accidental. Any examination of candidates in the circumstances was not necessary, since if medical degrees are not sufficient to guarantee the most ordinary technicalities of our profession they have obviously no value. An examination conducted by an ordinary municipal body and under the conditions we have described could not, moreover, constitute a reliable test of knowledge

It is much to be regretted that the sorry part of principal actor in this comedy should have been allotted, as we are led to believe that it has been, to a member of the medical profession.

SIR JOSEPH FAYRER AND FALMOUTH.

WE desire to contradict a statement which appeared in THE LANCET of May 28th that Sir Joseph Fayrer has become a resident of Falmouth. Sir Joseph Fayrer writes: "Falmouth is a charming place and I occasionally spend a few days there, but I am, and intend to be, a resident of London as I have been for many years." We all hope that Sir Joseph Fayrer's residence in London may be still prolonged for many years. Our correspondent did not mean to imply that Sir Joseph Fayrer had left London to take up his permanent abode at Falmouth.

THE DOSAGE OF CHLOROFORM AND INHALERS.

THE early papers of Snow, which appeared in 1848 and which gave the results of a series of careful experiments made with narcotic vapours, have recently been recalled to the minds of those curious in such matters by the address given before the Society of Anæsthetists by Professor Waller. Snow dealt with the whole body, whereas Professor Waller dealt with nerve tissue, and of course Snow possessed neither the physiological training nor the perfected apparatus at the command of the later experimenter. Yet, as Professor Waller readily admitted, it is Snow's work which has suggested most of the later research and it is Snow's teaching which appears to gain fresh weight by modern experimental results. These papers deal with narcotics in general and not with chloroform and ether alone, and it is not too much to say that most of our knowledge of this group of medicines will be found in Snow's papers. It was a favourite illustration of his to place a candle in a bottle and diffuse chloroform in it. As the candle flickered it is recorded of him in Sir Benjamin W. Richardson's memoir that he said: "There, now, is all that occurs in narcotism; but to submit the candle to the action of the narcotic without extinguishing it altogether you must neither expose it to too much vapour all at once nor subject it to the vapour too long, and this is all you provide against in subjecting a man to the same influence." It was the firm belief in this view which induced Snow to proclaim the dangers of the "open method" then prominently before the world and sanctioned by the authority of Simpson and later of Syme. Snow's inhaler, designed to ensure a low percentage vapour of chloroform, valuable in its day, did not survive. To those accustomed to seeing chloroform poured unstintingly on a towel, on lint, or "on a dresser's woollen glove" *more* Professor Miller, Snow's teaching that 18 minims of chloroform absorbed by an individual of average size and weight will induce narcotism of the third or surgical degree, that 24 minims would plunge him into the fourth degree, and that 36 minims must arrest respiration, would receive scant attention. There can be no manner of doubt that Snow was right and that the advocates of the open method, when that is pursued according to Syme's directions by pouring unmeasured quantities of chloroform upon the cloth, are trenching upon dangerous ground. The safeguard to this method has always been the religious adhesion to the rule "watch the breathing." The strength of the vapour may cause holding of the breath; if the rule is kept the cloth is removed and the patient escapes the overdose. The rule is, however, not always kept and death results. But when Snow's principles are carried out this danger is absent, although there remains the peril arising from the gradual accumulation of chloroform in the blood. Clover's inhaler, among many, sought to obey Snow's injunctions, but its unwieldy size foredoomed it to oblivion. No objection of this kind arises in the case of Junker's inhaler. Its principle renders it capable of giving exact doses, but the earlier patterns were open to many practical objections—objections which the ingenuity of many anæsthetists has to a great extent removed. Among instrument-makers much credit is due to Mr. Krohne for his enthusiastic attempts to render Junker's inhaler as nearly as safe an instrument as any piece of mechanism can be made which stands between a human life and a lethal agent manipulated by the fallible hands of man. In another column we give illustrations of his more recent improvements. The instrument as figured is capable in the hands of a careful administrator of delivering a fraction of a minim of chloroform and so of maintaining a vapour of 1 per cent. or even less. The air is driven through the chloroform by means of a specially-contrived ball bellows which is so graduated that dosage of the anæsthetic can readily be effected and from ¼ to 1 minim driven through the delivery tube and presented to the patient. All the most advanced thinkers now recognise the paramount importance of accurate dosage in giving chloroform, and up to the present time no more accurate plan has been devised than that adopted in Krohne's modifications of Junker's inhaler.

A CHINESE HOSPITAL FOR PLAGUE AT HONG-KONG.

ON April 19th a special meeting of the Hong-Kong Sanitary Board was held to consider the advisability of permitting a Chinese Hospital for the reception of plague patients to be opened under the supervision of the sanitary board. The chair was occupied by the President (Dr. J. M. Atkinson, Principal Civil Medical Officer), and there were also present the Hon. R. D. Ormsby (Director of Public Works), Mr. E. W. Brewin (Acting Registrar-General), the Hon. F. H. May (Captain-Superintendent of Police), Mr. N. J. Ede, Dr. F. Clark (Medical Officer of Health), and Mr. C. Vivian Ladds (Colonial Veterinary Surgeon and Acting Secretary). The Captain-Superintendent of Police moved the following resolution: "That this board do appoint a branch hospital to the Tung Wah Hospital to be established on a site to be approved by the board as a place to which patients suffering from plague may be removed, provided always that such hospital be under the control of the Sanitary Board and under the supervision of one or more duly qualified European medical practitioners, and that the patient be allowed the option of being treated according to Western medical science or Chinese medical methods, and that the burial of those who die in the hospital and the removal of patients therefrom be conducted under regulations to be approved by the board and under the supervision of the doctors." Dr. Atkinson and Dr. Clark, the only medical members of the board, naturally opposed the resolution. According to the *Hong-Kong Weekly Press* of April 23rd Dr. Clark said he thought that in the interests of humanity it would be an evil if the Government of a colony such as this were to recognise in any way the so-called Chinese treatment of disease and especially the treatment of infectious disease. Dr. Atkinson said that in 1894 the mortality amongst the Chinese when the native doctors were allowed full scope was 93·4 per cent., and that in 1898 when the treatment was entirely in the hands of the Medical Department, it was 74 per cent. In the result the motion was carried. At a meeting of the board on April 21st it was announced that the Tung Wah Hospital Committee were willing to establish such a branch hospital and recommended that the Government should lend to them one-half of the cattle depôt at Kennedytown for the purpose. Dr. Atkinson said he considered that the sheds in question were most unsuitable and recommended

that mat sheds on the foreshore to the north of Kennedytown should be used instead. He, moreover, took the opportunity of repeating his protest against the establishment of a hospital where so-called Chinese practice is allowed, in which opinion he was supported by Dr. Clark. Dr. Atkinson's proposal as to the mat sheds was accepted and arrangements were forthwith made with a view to rendering them fit for occupation in the course of a week. In justice to Mr. F. H. May and his supporters on the board, it ought to be added that their action seems to be dictated by a desire to humour the prejudices of the Chinese population and not by any preference for Chinese medical methods rather than European ones.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

THE success of this exhibition, which was held for the first time last year, has induced the organising committee to make it an annual event. It was decided this year to hold the exhibition earlier (last year it was in July) and the Queen's Hall, Langham-place, was devoted on Tuesday last to the exhibition of a very interesting assortment of foods, drugs, surgical appliances, &c. The exhibition closes to-day (Friday). We have considerable pressure on our space this week, but we hope next week to give a detailed description of the novelties shown and of other things of general interest to the profession. Suffice it now to say that the impression that this new departure is a useful one is confirmed and it is evidently appreciated by all those who are anxious to keep pace with the advances which are made in pharmacy and dietetics and in the design and construction of various apparatus and medical appliances.

DIVERS' PARALYSIS.

AN interesting case of this rare condition is reported by Dr. Frederick Taylor in a recent number of the *Clinical Journal*. The patient was under treatment in Guy's Hospital. He had already suffered three times from paralysis, the first time being in 1890. The history of the present attack was as follows:—He was working with five other men at a depth of 162 ft. and went down three times, remaining below twenty minutes each time; the ascent occupied six minutes. He felt quite well after these descents, but at the fourth descent a heavy piece of machinery slipped and jammed him up against an iron beam. He did not lose consciousness, but tried to economise the air at his disposal. After about five minutes he felt suffocated, had intense pain and noises in the head, and began to lose consciousness. It had been noticed on the lighter that the air-tube was not working and another diver went down and by following the line reached the patient and freed the air-tube so that he could be drawn up. On this occasion the ascent occupied only one minute. He felt very giddy and sick, but did not notice anything else amiss. On standing he noticed a feeling of numbness in his feet and this was present also in his arms both as to power and sensation. On admission to the hospital nine weeks afterwards there was marked loss of power in both his legs. There was no marked wasting of the muscles of the legs, though they were soft and flabby. The knee-jerks were normal. There was partial anæsthesia over the inner side of both legs from 3 in. above the knees to 3 in. above the ankles, the areas being roughly symmetrical. There was no loss of sensation to pain; the sensations to heat and cold were normal. The patient gave some interesting information as to the difficulties to which people engaged in this occupation are liable. He said that in his experience the paralysis only comes on after working at great depths and seems to be due to too sudden alteration of pressure. The disease is frequently due to divers having to be quickly hauled up owing to the air-tube being foul. Old men, he thought, are more liable to these attacks than younger ones and the character of the water and the duration of the stay are not so important as is the age of the diver. At a depth of 150 ft. there is not much inconvenience, but every two or three feet lower makes a difference. When diving at great depths the men always have a sense of fulness in the head, buzzing in the ears, and flashes of light before the eyes. On coming up there is often bleeding from the mouth, nose, and ears. The patient also referred to the condition known to the men as "bends"—that is, wrist-drop and foot-drop. This usually lasts from two hours to twenty-four hours, when it completely passes off unless it is an exceptionally bad attack. This condition was ascribed by the patient to the bands applied round the ankles and wrists to make the diving-suit watertight. Dr. Taylor's remarks on the case, together with the literature he quotes, form an article well worthy of perusal.

MR. H. K. HUNTER'S CASE.

WE are authorised to state that the draft of the case appealing from the conviction of Mr. Hunter for calling himself "Physician" has been settled by Mr. Haldane, Q.C., M.P. (who will argue it on behalf of the Society of Apothecaries), and is now before Mr. Muir Mackenzie to settle on behalf of the General Medical Council. As soon as he has done this it will be set down for argument before the Queen's Bench Division and an application will probably be made for a day to be fixed for the hearing. Under any circumstances the case is expected to be disposed of before the long vacation. We take this opportunity of explaining that the General Medical Council issued separate summonses against Mr. Hunter, one for calling himself a physician and another for calling himself a surgeon, but did not proceed with the latter. Mr. Hunter called himself "Physician and Surgeon."

PREVENTION OF PHTHISIS BY SANITARY MEASURES.

WE have recently received the "Ninth Report of the Metropolitan Board of Water-supply and Sewage (Sydney, New South Wales)." It comprises the period from July 1st, 1896, to June 30th, 1897, and contains many interesting papers. One that is well worthy of attention is by Dr. T. M. Kendall and is headed "Mortality from Phthisis as affected by the Operations of the Board in the Metropolis of Sydney, N.S.W." The writer gives a short review of the views hitherto held on this subject and also the results arrived at by Dr. Sims Woodhead after his experiments on milk and meat from tuberculous animals. He also emphasises the frequently expressed opinion that phthisis is a preventable disease and that attention to general hygienic improvements such as good ventilation, plenty of fresh air, ample light, dry houses, good drainage, and avoidance of overcrowding tends to check the development of tuberculosis. Tables are then given showing the reduction in the death-rates from phthisis in the various districts before and after the construction of sewers. These are very remarkable. Several places are mentioned; thus, since the construction of the improved main sewers in the city of Sydney the death-rate from phthisis has decreased from 13·5 per 10,000 of the population to 9·8. An examination of the nature of the soils of the city and suburbs of Sydney shows that the greatest mortality from phthisis occurred on the clay shale soils, although in proportion to the density of population it was greatest on the water-logged sandy soils and on the sandy clay soils. Where the land was low-lying and with little slope the mortality was greater than on the high, sloping land notwithstanding the nature of the soil. Upon pervious soils the phthisis death-rate was 30·9 per 10,000 of the population, while upon

retentive or impervious soils it reached 50. The death-rate from this disease was highest upon those soils into the composition of which clay chiefly enters. Dr. Kendall draws the following conclusions from this inquiry: "1. That there is an undoubted relation between the incidence of phthisis and dampness of the soil. 2. That as the phthisis death-rate has been reduced in those districts provided with proper sewerage since the laying of the main sewers, the laying of the main sewers has exercised an influence over the phthisis death-rate through drying of the soil. 3. That in view of this success which has attended the board's operations up to the present time the extension of these operations will prove of great benefit in coping with the disease called phthisis."

THE COMPLIMENTARY DINNER TO DR. W. S. PLAYFAIR: A POSTPONEMENT.

IN consequence of the death of Lord Playfair the complimentary dinner to be given to Dr. W. S. Playfair on Saturday, June 4th, will be postponed.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND: ELECTION TO THE COUNCIL.

GENTLEMEN who intend to offer themselves as candidates for the Council of the Royal College of Surgeons of England are reminded that they must give formal notice to the Secretary of the College not later than Monday, June 13th. Blank forms upon which this notice may be given can be obtained from the Secretary at the College. The elections will take place on July 7th.

A PUBLIC HEALTH CONGRESS IN IRELAND.

FROM Aug. 18th to 23rd, 1898, the Royal Institute of Public Health (Dublin Branch) will hold a Congress of Public Health in the metropolis of Ireland. It will be under the patronage of H.E. the Lord Lieutenant of Ireland, the Right Hon. the Lord Mayor of Dublin, and Sir Charles Cameron, the last of whom will act as President of the Congress. The list of vice-presidents includes the names of the most distinguished members of the three learned professions in Ireland and the general committee is a powerful one. The Section of Preventive Medicine will be presided over by Dr. Grimshaw, C.B., Registrar-General; Chemistry and Climatology by Dr. John W. Moore; Engineering and Building Construction by Sir Thomas N. Deane; and the Parliamentary and Municipal Section by the Right Hon. Joseph M. Meade, P.C., LL.D. Conferences of army and navy medical officers, veterinarians, medical officers of health, and sanitary inspectors will respectively be presided over by Brigade-Surgeon-Lieutenant-Colonel Corbett, D.S.O.; Matthew Hedley, chief veterinary inspector of the Privy Council; Mr. Thomas J. Stafford, Commissioner, Local Government Board; and Mr. Conway Scott, executive sanitary officer, Belfast. Important as the Congress is likely to prove, the Health Exhibition which is to be held in connexion with it may be of even greater importance. The preliminary list of sections, embracing practically every department of sanitary science, begins with Physiology and ends with Toys. That work may be tempered with pleasure the Lord Mayor of Dublin has arranged to give a ball during the week, the High Sheriff a luncheon, and the Corinthian Club a dramatic entertainment; while Sir Henry Cochrane and Sir Christopher Nixon will be the hosts at garden parties. Various excursions have also been arranged and there is abundant evidence that the leading citizens are anxious to maintain Dublin's reputation as a city of hospitality. The Dublin Horse Show will commence on the closing day of the Congress and the Health Exhibition will be kept open while this is in progress. Full information regarding the Congress can be obtained by applying to the Public Health Office, Dublin.

THE POSSESSION OF DISEASED MEAT.

IN our issue of March 19th, 1898, we made some remarks upon the case of Mr. Albert Rendell, a draper at Bradford, who was convicted and fined by the stipendiary magistrate for having in his private larder the carcass of a sheep or lamb which was said to be unfit for human food. There was no exposure for sale, but the meat was intended for the food of the defendant, his family, and employés. The stipendiary relying on the case of Mallinson *v.* Carr, held that exposure for sale was not necessary for an offence and fined the defendant, but at the same time stated a case for a higher court. On May 26th the appeal was heard in the Court of Queen's Bench before Mr. Justice Wills and Mr. Justice Channell. They reversed the conviction in the court below on the ground that under the circumstances stated the magistrate had no ground for his decision under the Act. It seems to us that this judgment opens a way for very shady practices. Take the case of a butcher, for instance, who was anxious to get rid of unsaleable scraps and offal. As far as we can see he might feed his own family or his servants upon such offal without let or hindrance from the law. As we said before no one would take the trouble to dress a carcass and hang it in his larder unless there was an intention to use it for food, and to feed people upon diseased meat is neither right nor, to put it upon the lowest grounds, politic from a monetary point of view. We would even go further and say that it is more reprehensible to conceal diseased meat intended for human food than to expose the same for sale, since in the latter case it is obviously more likely to be seized and condemned. The heads of houses ought to be answerable at law for the intent to feed others under their roofs or in their employ with diseased or tainted articles of diet.

CHRONIC CONSTIPATION IN CHILDREN.

THE *Journal de Clinique et de Thérapeutique Infantiles* of May 19th, 1898, quotes a paper by Dr. L. Furst on the Treatment of Chronic Constipation in Children. The writer assigns as the causes of this condition defective peristalsis, insufficient secretion by the intestinal glands, in older children a sedentary habit with lack of physical exercise, and also in some others a feebleness in the action of the sympathetic dependent on excessive use of the brain. One important consequence, he maintains, is decomposition of the retained fæces, which in its turn he holds accountable for convulsive attacks, neurasthenia, insomnia, and other nerve disorders probably associated with absorption of the products of decomposition. Passing to treatment he places much faith in massage of the abdomen aided by small doses of a saline water repeated twice or three times daily. He recognises, also, the value of enemata and advises their use three or four times a week, the solution used being in this case also a weak saline one. The employment of enemata presupposes, of course, an absence of inflammation in the bowel and an uninjured mucous surface. By such means persevered in for some weeks or months Dr. Furst maintains that the difficulties both as to secretion and peristaltic action can best be overcome. His views with regard to the value of careful massage, diet, exercise, and enemata will find general acceptance. His advocacy of the repeated use of salines is more open to question, since the ultimate effect of this process must be to deplete and thus to weaken the bowel in a greater or less degree. The substitution of mild cholagogues with such laxatives—senna, cascara, &c.—as influence intestinal secretion and at the same time stimulate peristalsis appears to us a preferable method.

There is a stage in early childhood at which active exercise is not possible and such measures as those just described are then most useful. After that period, however, an active habit and a suitable diet will in the case of most children prove of greater value than the use of more artificial remedies.

THE CORONERS' SOCIETY.

THE annual dinner of the Coroners' Society of England and Wales was held at the Holborn Restaurant, London, on Thursday, May 26th. Some 50 of Her Majesty's coroners and their guests were present, the chair being occupied by the President, Mr. George F. Roumieu, J.P., coroner for West Surrey. After the usual loyal greeting of "The Queen and the Royal Family" the toast of "The Coroners' Society" was gracefully proposed by Mr. H. G. Croly, ex-President of the Royal College of Surgeons in Ireland, and responded to by Mr. Roumieu, the President. The Coroners' Society was founded in 1846 mainly by Mr. Payne, coroner for the City of London, and so has passed its jubilee, whilst the fact mentioned by Mr. Roumieu that of the 341 coroners of England and Wales 253 are members of the society clearly shows that coroners, medical and legal, recognise the value of solidarity and of the common bond of friendship which the society affords. We counsel the odd 88 promptly to add their names to the list of members. The toast of "The Visitors," proposed by the President, was replied to by Dr. Dawson Williams, Mr. Thomas Wakley, Jun., Mr. Arthur Hacker, A.R.A., and Mr. Marks, clerk of the Peace for the county of Bedford. We may be pardoned, we trust, for recording that the presence among the guests of the society of his grandson was the occasion of very pleasant proof (at least to us) that the name of Thomas Wakley, coroner for West Middlesex, and the work which he did to improve the status of the coroner's office and the coroner's court and to secure recognition of, and remuneration for, medical witnesses are by no means forgotten by the gentlemen who now, some sixty years later, discharge the responsible and onerous duties of Her Majesty's coroners. Moreover, we were glad to observe that the coroners are still recognised as "the people's judges." Mr. Roumieu strongly insisted that people, especially those in the lower ranks of life, were remarkably dependent on coroners for protection. Our readers will remember that the Founder of THE LANCET always maintained that coroners were "the people's judges." In the "Life and Times of Thomas Wakley" (p. 382) occurs the passage: "He [Thomas Wakley] pointed out that the coroner was the *people's* judge, the only judge whom the *people* had the power to appoint, while the office had been specially instituted for the protection of the *people*." The toast of "The Officers of the Society," proposed by the President and responded to by the secretary, Mr. A. Braxton Hicks, and the treasurer, Mr. Arthur Langham, brought the proceedings of a very pleasant evening to a close. We may add that the President-elect of the Society is Mr. J. C. Malcolm, coroner for the City of Leeds.

DEPILATION.

As is well known the application of chemical depilatories to the skin for the removal of superfluous hairs is not a very comfortable operation and may be attended with serious injury to the skin, for these compounds usually contain powerfully caustic components. There are a great many proprietary depilatories, consisting for the most part of sulphides of sodium, potassium, calcium, barium, or even arsenic, but they are not, as a rule, satisfactory. There are Oriental depilatories, Chinese depilatories, Turkish depilatories, all more or less of the same composition. Depilation, indeed, is a very ancient practice. Even the removal of superfluous hairs by means of electrolysis is a long and tedious process, and in reality amounts to the production of corrosive alkali in the follicle. We have, therefore, we fear, little consolation to offer to several correspondents who have recently written to us upon this subject. They should consult their medical attendants and beware of widely advertised nostrums. One states that he has an abundant growth of hair on his face and neck which he has attempted to remove in consequence of the representations of his employers, who forbid their employés to grow beards. He has a particularly tender and sensitive skin which quite prevents him from employing the razor with that frequency which the rapid growth of the hair would demand. In such a case the only plan is to allow the beard to grow and to convince the employers of the absurdity of their views and the extreme unreasonableness of their request. Dictation of this sort on the part of employers is pure tyranny, and no right-minded person would make such an idiotic insistence. Nevertheless, it prevails in a great number of respectable houses of business and the employés are threatened with discharge unless they submit.

THE DEATH OF LORD PLAYFAIR.

CHEMISTRY has lost a practical man and the political world an all-round and valuable consultant by the death of Lord Playfair. Hugh Lyon Playfair was the son of a medical man, George Playfair, Inspector-General of Hospitals for the Presidency of Bengal. He was born in the year 1819 at Meerut, whence later he was sent to England to school. His preliminary education finished, after a short stay at St. Andrews he eventually entered Glasgow University, then known as the Andersonian University. He was led, however, by indifferent health to return to India. After a fortunate restoration he came back and joined his old Professor at Glasgow, Dr. Graham, who had been appointed lecturer on Chemistry to University College, London. With the advice of Dr. Graham, Lyon Playfair next studied organic chemistry under the great Liebig and finally turned his chemical knowledge to account in the management of a calico-print works. Playfair did not stop long in a subordinate position, for in 1843 he became Professor of Chemistry to the Royal Institution at Manchester, now the Victoria University. Thirteen years later he was appointed Professor of Chemistry in the University of Edinburgh, where he had for a time the Prince of Wales and Prince Alfred as pupils. In the meantime he was engaged in considerable public work. He served most usefully on the Royal Commission instituted by Sir Robert Peel which was appointed to inquire into the sanitary conditions of the large and populous factory districts of the north. Other inquiries in which he faithfully and fruitfully worked were in connexion with the reorganisation of the Civil Service, the condition of the fisheries on the Scottish coast, the rinderpest inquiry, and the suitability of British coal for naval purposes, while he was also a special commissioner in charge of the Department of Juries in the Great Exhibitions of 1851 and 1862. In 1862 Playfair entered Parliament as the representative for the Universities of Edinburgh and Saint Andrews, and during his retention of this seat for seventeen years he occupied the position at one time of Postmaster-General under Mr. Gladstone and at another that of Chairman of Ways and Means in the "Eighty" Parliament. Despite the demands of such a publicly active life Lord Playfair found time to take up his pen and to write on literary, scientific, and financial topics. He was one of the heartiest supporters of the University Extension Scheme, and, indeed, invariably associated himself

with movements undertaken in the public interest. Lord Playfair died suddenly at his residence in Onslow-gardens on May 29th; the funeral is announced to take place to-day (Saturday).

CAN COMPANIES CARRY ON MEDICAL PRACTICE?

IT would seem incredible to the uninitiated that it should be possible for totally unqualified persons in the exercise of medical practice to be protected by the Companies Act. But such is the case. The subject was brought before the General Medical Council by a member *in camerâ*, who pointed out the valuable opportunity afforded by the occasion of the Companies Act Amendment Bill for providing a remedy for such a scandal. The Council afterwards gave leave for the motion on the subject passed *in camerâ* to be placed on the minutes. It is as follows:—

"That the President, Mr. Tomes, and Mr. Horsley be a committee to take such steps as they deem most effective to induce the Government to insert a clause in the Companies Act Amendment Bill, now before Parliament, with the object of preventing the registration of companies to carry on medical, surgical and dental practice."

The General Medical Council will do good service if it succeeds in this matter.

EXAMINERS OF DEFECTIVE CHILDREN UNDER THE LONDON SCHOOL BOARD.

THE appointments under the London School Board as "medical practitioner to take charge of the work in connexion with the examination of defective children and of children alleged to be defective" have been conferred upon Mr. G. E. Shuttleworth, B.A. Lond., M.D. Heidelb., and Mrs. F. M. Dickinson Berry, M.D. Lond. Dr. Shuttleworth has throughout his professional career been intimately associated with the study of "defective" children, having been assistant medical officer at the Earlswood Asylum and subsequently for twenty-three years resident medical superintendent of the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster. He has also been connected with various voluntary institutions established for the investigation of the mental and physical condition of school children in connexion with their education, has furnished important evidence on the subject in Government inquiries, and is also the author of several writings well known to the profession. Mrs. Dickinson Berry, the wife of Mr. James Berry, F.R.C.S., has held various appointments at hospitals for children and women and is an M.D. and B.S. (with honours) of London University.

MODERN SANITATION AND THE ANCIENT HINDOO RELIGION.

ON March 25th Surgeon-Lieutenant-Colonel W. G. King delivered at Madras University a long and able address to the newly admitted graduates in law, medicine, engineering, and arts. After appropriate exhortations to the members of each of the several faculties he urged the graduates as a body to remember that it was to them as educated fellow-countrymen that the people looked for guidance in the midst of doubts and perplexities as to whether Western civilisation was not incompatible with native religious opinions and customs. For instance, the advance of sanitary reform is almost entirely dependent upon the ability of the better-informed classes to influence the uneducated populace. "Those of you who have studied the learned shastras of your forefathers," he said, "must have found ample room for opinion that not only is modern sanitation compatible with caste, but that caste itself, although allied with religious observances, is a magnificent and elaborate system of sanitation. ..... But in the absence of the knowledge of Sanskrit in which these rules were conveyed, tradition, which has been the method of transmission from generation to generation, has led to no little distortion of the original dicta." For instance, the laws of Manu teem with minute directions as to the collection, retention, and withdrawal of water in a pure state, but unfortunately the perversion of the sense of the original shastras has led to wholesale pollution of rivers. In seeking to provide a public water-supply free from any form of animal contamination the various local authorities do not introduce any innovation contrary to caste requirements and act in strict accordance with the spirit of the shastras, and the same may be said with respect to the measures of segregation and disinfection during the present prevalence of plague, which, however, have been resisted on the assumption that they were inimical to caste. In fact, if there has been anything taught by caste it is the necessity for segregation as an aid against the spread of disease, the conditions which determine the duration and nature of the segregation being clearly shown by the laws of Manu and the edicts of Vishnu. On this occasion, for the first time in Madras University, an Indian lady obtained a degree in arts.

THE annual general meeting of the St. George's Hospital Graphic Society will be held at the hospital on Tuesday, June 7th, at 2.30 P.M. By permission of the Board of Governors the annual exhibition, which is strictly limited to the work of members, will be held in the board-room of the hospital. The exhibition will be opened immediately after the meeting and will remain open until the end of the week.

THE foundation-stone of the new building of the North London or University College Hospital, now being erected through the generosity of Sir J. Blundell Maple, Bart., M.P., will be laid by H.R.H. the Prince of Wales, K.G., Vice-Patron of the hospital, on Tuesday, June 21st. Visitors are requested to be in their places by 3.15 P.M.

THE German Emperor has conferred the Royal Prussian Order *Pour le Mérite*, for Science and Art, upon Sir William H. Flower, K.C.B., F.R.C.S. Eng., F.R.S., Director of the Natural History Department of the British Museum and President of the Zoological Society of London.

THE Library of the Royal College of Surgeons of England will be closed on Tuesday, Wednesday, and Thursday of next week (June 7th to 9th) as a conversazione of the Metropolitan Branch of the British Medical Association is to be held in the College building.

H.R.H. THE DUCHESS OF YORK has announced her intention to pay a private visit shortly to the Paddington Children's Hospital for the purpose of naming the new wards opened by the late Duchess of Teck.

THE foundation-stone of the new chapel of the City of London Asylum at Stone, near Dartford, is to be laid on June 18th by the Lord Mayor, who will be accompanied by the Sheriffs of London.

THE Freedom of the city of Edinburgh is to be conferred on Lord Lister on June 15th. Viscount Wolseley is to be similarly honoured on the same day.

THE second annual conversazione of the Royal Society will be held on Wednesday next, June 8th, at Burlington House.

THE IRISH LOCAL GOVERNMENT BILL.

III.[1]

A CORRESPONDENT, well acquainted with the facts of the case, writes to us as follows: "The Local Government Bill will seriously affect our brethren in Ireland. The control of the lunatic asylums, Poor-law relief system, sanitary matters, and the county infirmaries will henceforth be dealt with by county and district councils elected on a popular franchise. With the exception of the lunatic asylums no safeguards are provided in the Bill for the protection of the officers connected with the dispensaries and infirmaries. Past experience does not lead us to believe that popularly elected bodies will deal economically with such matters. With a few exceptions superannuation has been either withheld or granted with a niggardly hand. From time to time attempts have been made to place this question on a more satisfactory footing. ..... The 13th Section transfers the election of coroners from the present electorate to the county council. We think this change beneficial, as the turmoil of a coroner's election is neither dignified nor likely to attract suitable candidates. A suggestion has been put forward that the resident magistrate should in future become coroner for the district. Though this suggestion has emanated from a body deserving of all respect we cannot think it worthy of being seriously discussed. Hitherto the Board of Control has been practically autocratic with regard to lunatic asylums. The needs of the country have not been properly attended to and in many counties a deficiency of accommodation has arisen which amounts to a scandal. Idiots and semi-harmless lunatics are huddled together in the workhouses without suitable facilities for treatment or supervision. The press has frequently drawn attention to this lamentable state of affairs. Questions have been asked in the House of Commons and the Local Government Board inspectors have used their limited powers without any salutary change having been effected. If a centralised permanent board with ample powers at its disposal has failed to effect any improvement the future look-out is not a bright one. ..... It remains to be seen how far district councils will meet the necessities of increased expenditure and we fear any amelioration in the condition of Poor-law medical officers is likely to be delayed to the Greek Kalends. The admirable work done by the county infirmaries in Ireland is well known. Some of these institutions possess considerable endowments and all of the buildings were constructed by private donations and subscriptions. Their maintenance and the salaries of their officers are mainly supplied by Grand Jury presentments. In future these presentments will depend upon the will of the county councillors as they are not 'imperative presentments.' The Association of Infirmary Surgeons has drafted a scheme which is at present under the consideration of the Chief Secretary for Ireland. The object of this scheme is to form boards of management for the various infirmaries composed of representatives from the councils and from the general body of subscribers. This would remove the objection of the money-granting body being unrepresented on the spending body. Provision is also being made for extending the privilege of recommending patients for admission to clergymen of all denominations, Poor-law medical officers, and county and district councillors; also for the inspection of the infirmaries and the annual auditing of the accounts." Our correspondent's criticisms and suggestions are worthy of careful consideration and possess elements of real practical value. We need hardly point out, however, that the new councils will have these matters in their own hands and that the results will be good or bad simply in proportion to the wisdom which these bodies may possess and exercise. Under a democratic administration there is no remedy against the abuses of a system except to endeavour to select suitable representatives and to take care that they are kept fully informed of all the facts and necessities of the case.

A rapid survey will now be taken of those provisions of the new Bill which possess a direct bearing on medical and public health questions. Clause 6 of Part I. contains the provision: "The business of the guardians as local authority under the Diseases of Animals Act, 1894, and the Destructive Insects Act, 1877, shall be transferred to the council of each county." This touches a very important point in Irish local government, which has not received the attention to which it is entitled—viz., the organisation of public health and sanitary administration. It cannot be said that at present this is at all satisfactory. The death-rate in Ireland is, in general, much too high, and though poverty, distress, early marriages, and Celtic fecundity are partly accountable for this, there remains something to be attributed to imperfect sanitary administration. The Poor-law dispensary medical officers are also the health officers for their various districts, but in the appointment of these officers no security is taken that candidates shall possess the requisite sanitary knowledge, and further, they are isolated units, scattered over the face of the country, without organisation or capability of conjoint action. What would seem to be required would be, first, that candidates for Poor-law appointments shall possess a diploma in public health, and secondly, that each county council should have an officer of health who would give his entire time to this work and who would exercise supervision and control over dispensary medical officers in their functions as sanitary officers. The Royal College of Surgeons in Ireland in its memorial to the Chief Secretary states that it "considers that it should not be open to guardians or dispensary committees to place in charge of the sick poor persons who may be entirely inexperienced and whose competency for the special duties confided to them may be entirely unguaranteed. The College, therefore, submits that all candidates for such appointments should be subjected to a previous competitive examination in which a knowledge of their special duty as medical officers, as sanitary officers, and as public vaccinators could be verified." There is much to be said in favour of these recommendations and there is little doubt that their adoption would tend to improve the status and efficiency of dispensary medical officers in Ireland. In any case some means should be taken of securing an adequate amount of sanitary knowledge on the part of candidates for these appointments. The simplest means of attaining this end would be to make a diploma in public health obligatory. This would involve no real hardship and would at least tend in the direction of increased efficiency. Not less important is the second point, viz., that sanitary administration in Ireland requires more organisation and cohesion. It is not to be reasonably expected that dispensary medical officers, scattered over a wide area of country and too often overwhelmed with duties other than those pertaining to them as health officers, should pay adequate attention to sanitary matters. What is wanted is some superior officer, with adequate special knowledge and sufficient time, who should exercise a general control over public health questions within the area under his supervision. This system now prevails in the large towns, and machinery will be necessary to secure some similar methods in rural districts. It would not be unreasonable to expect every county council to have its own officer of health, and there can be little doubt that the money thus expended would be fully remunerative.

Clause 9 of Part I. runs as follows: "It shall be the duty of the council of every county to provide and maintain sufficient accommodation for the lunatic poor in that county in accordance with the Lunatic Asylum Acts, and if it appears to the Lord Lieutenant that any council fail to perform that duty, he may order that council to remedy that failure within the time and in the manner (if any) specified in the order. The duties of the council under this section shall be exercised through a committee appointed by them, and, if the Lord Lieutenant fix a number, of the number so fixed; and out of that committee a number not exceeding one-fourth may be persons not members of the council. There shall be transferred to the council, acting through that committee, the business of the governors and directors of the asylum under the Lunatic Asylum Acts; and the committee, subject to the general control of the council as regards finance, may act without their acts being confirmed by the council. ..... The county council through the said committee shall properly manage and maintain every lunatic asylum for their county; and subject to the provisions of this Act, may appoint and remove the officers of the asylum and regulate the expenditure; and the powers, under the Lunatic Asylums Acts, of the Lord Lieutenant or the inspectors of lunatics, as to those matters, and as to land and buildings, and as to the appointment of governors or directors, shall cease, and

[1] Nos. I. and II. were published in THE LANCET of May 14th and 21st, 1898, respectively.

also the Board of Control for lunatic asylums shall be abolished." It is further provided that the Lord Lieutenant must approve of the regulations adopted by these committees with regard to the management of lunatics, and also that where a district for a lunatic asylum comprises two or more counties the committee for the asylum shall be a joint committee of the councils of the counties with a representation of each council proportionate to the respective expenditures. These regulations regarding asylums do not call for any exposition, and on the whole they will be generally approved. As already remarked, the result of asylum management in the future will be a crucial test of the success of the new *régime*. The asylum boards of the past have been nominated by the Lord Lieutenant for the time being, they have been composed of men of rank and high social or professional status, and there can be no doubt that their duties have been in the main fairly well discharged. Clause 56 gives the county councils acting through their asylums committees power to appoint the officers of the asylum, and it is stipulated that "every resident medical superintendent shall be a legally qualified medical practitioner of not less than seven years' standing, and shall have had experience in the treatment of the insane, and every assistant medical officer shall be a legally qualified medical practitioner." Clause 50 provides that "The council for a county may, either by the exercise of their powers under this Act, or by taking over any workhouse for the purpose, provide an auxiliary lunatic asylum for the reception of chronic lunatics who, not being dangerous to themselves or others, are certified by the resident medical superintendent of an asylum of such council not to require special care and treatment in a fully equipped lunatic asylum, and any such auxiliary lunatic asylum shall either be a separate asylum within the meaning of the Lunatic Asylum Acts, or if the Lord Lieutenant so directs a department of such an asylum."

Clause 13 runs as follows: "A coroner for a county shall not be elected as heretofore, and on a vacancy in the office of a coroner for a county, the county council shall within one month after the vacancy, or such further time not exceeding three months after the vacancy as the Lord Chancellor may allow, appoint a qualified person to the office, and if the county is divided into coroners' districts, assign him a district. The county council may alter the coroners' districts and the enactments respecting those districts shall apply as if the county council were the justices assembled in special sessions for that purpose under the direction of the Lord Lieutenant, and the power of the Lord Lieutenant and justices in relation to coroners' districts shall cease. The Lord Chancellor may, if he thinks fit, remove any coroner for a county from his office for inability or misbehaviour in the discharge of his duty. The writ *de coronatore eligendo* shall cease to be issued, but neither the abolition of that writ nor anything else in this section shall alter the jurisdiction of the Lord Chancellor or the High Court or a judge of assize, in relation to the removal of a coroner otherwise than in a manner provided by this Act, or in relation to ordering a new election of a coroner. A person who is a coroner for a county shall not be qualified to be elected or to be a county or district councillor in that county." These provisions are all sufficiently clear and do not call for any special comment. The change involved in the mode of election of coroner will probably be found advantageous.

Clause 18 provides amongst other things that "for every rural sanitary district there shall be a rural district council, whose district shall be called a rural district." Clause 20 enacts that "in a rural district the district councillor for every district electoral division shall be the guardian for that division." Clause 24 provides that "there shall be transferred to the guardians the business of every committee of management of a dispensary district within their union, and these committees shall cease to be appointed." Clause 25 provides that "there shall be transferred to the district council of every rural district the business of the rural sanitary authority in the district. ..... Rural district councils shall also have such powers and duties of urban sanitary authorities under the Public Health Acts, or any other Act, and such provisions of any of those Acts relating to urban districts shall apply to rural districts, as the Local Government Board by general order direct; and every such order shall be forthwith laid before Parliament." These provisions are sufficiently self-explanatory and their importance is evident. As has been already insisted on, the administration of the sanitary laws in Ireland has not been satisfactory. There is much room for greater thoroughness and stringency in this department, but the present Bill only transfers existing powers to the new elective councils and does not provide any additional machinery. It will rest with the county and district councils themselves to effect a more thorough application of the Public Health Acts, under which the local authorities possess such ample and far-reaching powers. Ireland is a country in which the vigorous application of sanitary laws is peculiarly necessary. There is much poverty, and the tendency of the people is not in the direction of thoroughgoing hygiene. The more need, then, why the excellent public health laws which the country possesses shall be patiently and vigorously enforced.

The financial arrangements under the Bill have already been sufficiently dealt with. It remains only to notice some of these provisions which have a special bearing on medical questions. Clause 42 provides that "the Lord Lieutenant shall cause to be paid in respect of every local financial year, out of the Local Taxation (Ireland) Account, at such times and by such payments as he may direct, ... one-half of the salaries of the medical officers of the workhouses and dispensaries, ... one-half of the salary of one trained nurse in each workhouse who is actually employed and possesses the prescribed qualifications, ... and also one-half of the cost of such medicines and medical and surgical appliances as are provided in accordance with the prescribed conditions, ... and to each county council on behalf of every rural district in the county, and to each urban district council, one-half of the salaries approved by the Local Government Board of sanitary officers in respect of their duties under the district council, and t each county council who satisfy the Lord-Lieutenant that they have fulfilled their duty with respect to accommodation and buildings for lunatic poor, and that their lunatic asylum is well managed and in good order and condition, and the lunatics therein properly maintained and cared for, sums at the rate for each lunatic in the asylum for whom the net charge upon the council (after deducting any amount received by them for his maintenance from any source other than poor-rate) is equal to or exceeds 4*s* a week throughout the period of maintenance for which the sum is calculated, of one-half of such net charge, or 4*s*. a week, whichever is least." It is to be noted that these financial concessions, which seem on the whole liberal and well adjusted, are made in consideration of the termination of certain grants hitherto made out of the Exchequer in aid of the rates.

Part IV., dealing with boundaries, contains some provisions which will affect the work of the medical profession. It is provided that the existing boundaries of counties and unions shall be as far as possible preserved, that a union shall not in any case be divided between more than two counties, that a county district shall be situate wholly in one county, and that where a union is divided between two counties each divided part, so far as it is not contained in an urban sanitary district, shall be a separate rural sanitary district.

Clause 51 provides that "where a rural district is coextensive with a union, the district councillors shall, when exercising the duties of guardians, continue to be a board of guardians under their existing name." This is a small matter, but the advantage of calling the same body of men "district councillors" when assembled together for one set of duties and "guardians" when assembled for another is not altogether evident. Clause 55 contains the following important provision: "When any part of the salary of an officer of a county council is paid out of money provided by Parliament, or from the Local Taxation (Ireland) Account, he shall not be appointed or removed, nor shall his salary be fixed or altered without the concurrence of the Local Government Board." Clause 57 provides that "the additional salary granted to the medical officer of a dispensary district by reason of his being medical officer of health of any sanitary district shall be paid by the council of the latter district."

The memorial of the Royal College of Surgeons in Ireland already referred to makes a strong appeal that adequate provision should be made to enable poor-law medical officers to retire upon a pension as of right, if incapacitated from duty by ill-health or upon abolition of their offices, or after completion of the period of service required from Civil servants. The memorial further points out that the discretion at present vested in guardians with regard to this question has led to numerous cases of serious hardship. There can be little question of the reasonableness and justice of this contention.

The dispensary medical officer in Ireland is in general overworked and underpaid. It is nothing short of a scandal that he should be compelled to go on working in many cases when quite broken in health or incapacitated by reason of the infirmities of old age. A suitably adjusted system of superannuation would be not merely an act of justice to a hard-worked class of meritorious public servants, but clearly to the advantage of the public. Work such as that devolving upon dispensary medical officers can only be discharged efficiently by men in good health and not too far advanced in years.

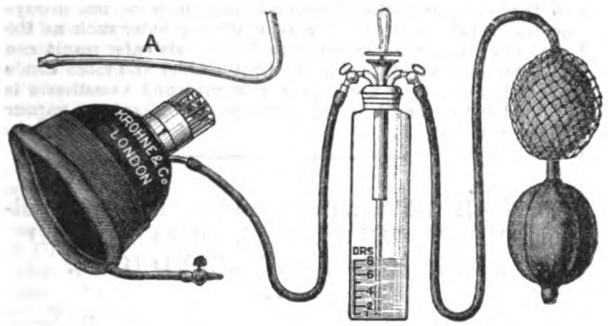
The next and concluding article will complete our examination of the Bill.

RECENT IMPROVEMENTS IN REGULATING CHLOROFORM INHALERS.

Definite Dosage.

BASING all their efforts upon the principles enunciated by Snow, that 18 minims of chloroform contained in the circulation of an average adult sufficed to produce complete anæsthesia, Messrs. Krohne and Sesemann have improved Dr. Junker's inhaler and made various alterations in its construction of which the following is an account. Fig. 1 represents Messrs. Krohne and Sesemann's improved Junker's Inhaler fitted with the feather respiration indicator attached to a vulcanite face-piece, with the Dudley Buxton funnel for filling and tube for blowing chloroform vapour into the mouth or nostril. The vulcanite face-piece can be replaced by a flannel cap or piece of domette stretched across a metal frame. The latter is a safer and more cleanly form of mask and, as it is now supplied with little clips which enable the administrator to readily replace the domette or flannel used in each case, it should commend itself to those who study to eliminate infection through the use of dirty inhalers.

FIG. 1.



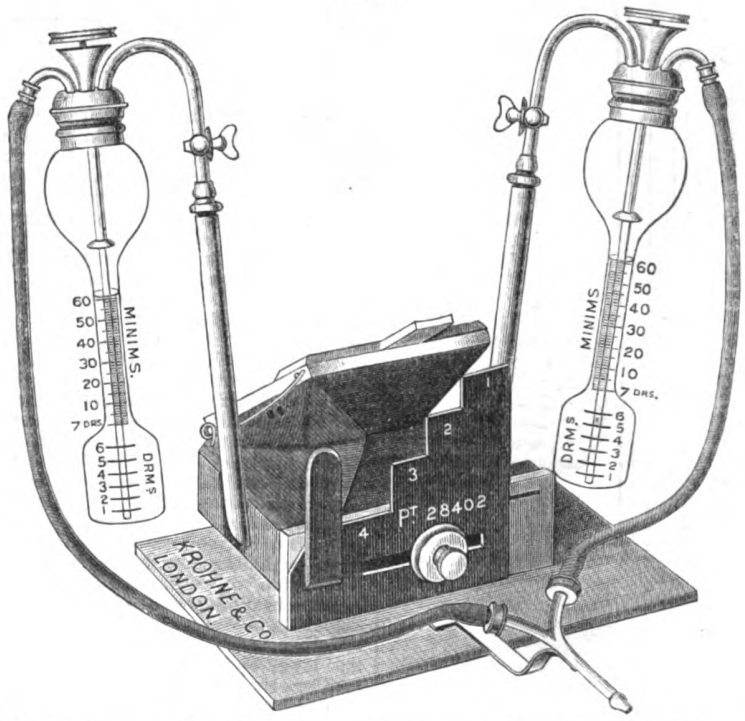
Graduated Air.

In Fig. 2 is shown a ball now supplied in place of the former round one, allowing definite quantities of air to be pumped through the chloroform according as the administrator compresses the rings marked 1, 2, 3, and 4. Fig. 3 shows the apparatus made for use in the tropics, the

FIG. 2.



FIG. 3.



use of rubber being confined to the tubes connecting the small bellows with face-piece and mouth-tube. It will be seen that by moving the stop the amount of chloroform is regulated by the air pumped through the liquid, and ¼, ½, ¾, or 1 minim is delivered at each compression of the bellows.

FIG. 4.

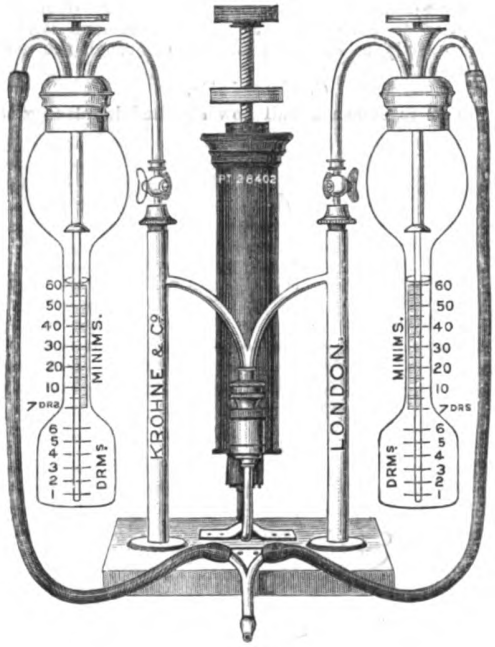


FIG. 5.

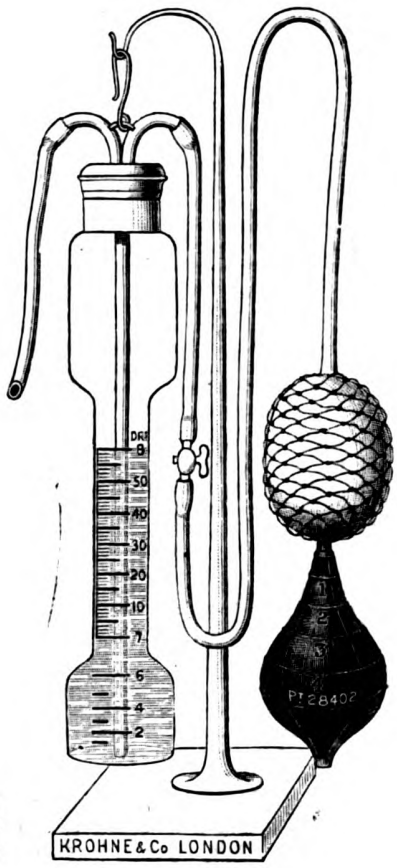


Fig. 4 shows the apparatus with vulcanite or metal air-pump with screw piston rod and nut. This arrangement ensures a rigid precision in the amount of chloroform administered, even, it is claimed, to $\frac{1}{100}$ of a minim. By its use, after commencing the inhalation with a most minute quantity, a gradual and regular increase in definite quantities can be effected. Fig. 5 is to show how accurately the amount of chloroform used can be measured. The eighth drachm is divided up into minims which can readily be read off after each administration.

It is asserted that with this apparatus 18 minims of chloroform will literally produce profound anæsthesia. For this to be the case of course there must be no waste, the quantity must enter the blood of the patient, and to do so in the best possible manner there is no doubt that Messrs. Krohne and Sesemann are correct in advising that it should be given in the most minute doses at a time so that the 18 minims are not absorbed for some minutes. It must be borne in mind that such an ideal result is only attainable in the case of patients who breathe easily and regularly. The data upon which Snow based his figures and those upon which Messrs. Krohne and Sesemann base theirs are derived from auto-inhalation (where the object of the individual is to inspire), whereas in actual practice patients are not always equally well affected towards the anæsthetic and rebel against it if it is not sufficiently diluted. The extreme value of great dilution of the vapour is shown in such cases so that, although the 18 minims limit may be not always achieved, yet by means of a regulating inhaler such as the one under review a far better and infinitely safer result can be obtained than was possible with the older and more crude methods so long in use. As a rule profound anæsthesia is secured with from 1 to 1·5 per cent. of chloroform vapour in the respired air.

ANNUAL REPORT OF THE REGISTRAR-GENERAL ON BIRTHS, DEATHS, AND MARRIAGES IN ENGLAND (1896).

IN THE LANCET of May 21st we reviewed the Registrar-General's annual summary of births, deaths, and causes of death in London and other large English towns for the year 1897, and shortly after going to press we received the report now before us which has reference to the preceding year, 1896. To the uninitiated it does not clearly appear why the report cannot be published until a year later than the summary relating to the same year, we have therefore made inquiries in the proper quarter and have ascertained the following particulars. The annual summary is compiled from the weekly and quarterly returns of the local registrars and relates to the deaths occurring in the 100 principal towns of England and Wales; it can therefore be issued shortly after the close of the year to which it relates and, as a matter of fact, it is generally published about the end of the first quarter of the ensuing year. But the annual report, which is based on the certified copies of the local death registers, cannot even be commenced until these copies have been received at the Central office from every registration district in England and Wales. As the deaths amount to as many as half a million annually and every one of these has to be classified according to age, cause, and locality by experts in the Statistical Department at Somerset House, it will be understood that a vast amount of clerical labour has to be expended before the 380 pages of tables can assume a form suitable for comment and comparison.

In the annual report for 1896 several topics of statistical interest are dealt with, either for the first time or else more fully than in previous annual reports. To one of these topics, which deals with the question of coroner's inquests in relation to uncertified deaths, we referred at length in our leading article of last week. The mortality of England and Wales in 1896 corresponded to a rate of 17·1 per 1000 living. With the exception of the year 1894, when it was lower by 0·5 per 1000, the rate of English mortality in 1896 was the lowest on record. At the several periods of life the death-rates in this year were with very few exceptions the lowest since the commencement of civil registration in 1837. Infantile mortality in 1896 was equal to 148 per 1000 births, and differed scarcely appreciably from the average in the preceeding ten years. In registration counties the mortality

among infants varied enormously, for whilst it was so low as 88 in Wiltshire it rose to 168 in Staffordshire and 175, or nearly double the rate, in Lancashire and Warwickshire.

Examination of the records of past years shows that although the rates of mortality among infants of both sexes vary greatly from year to year, the variations in the proportion of one to the other are comparatively small. Infantile mortality falls much more heavily on males than on females. To 1000 of each sex born in England and Wales during 1896 the proportion of deaths under one year of age were 161 and 134 respectively, showing an excess of 21 per cent. among males as compared with females. At ages under three months the disparity between the two proportions was even greater; the mortality of males at this age was 81 per 1000 births and that of females 64; the deaths of male infants to those of females being in the proportion of 126 to 100 in equal numbers born. Among the diseases which specially affect infants of this tender age bronchitis, pneumonia, and convulsions appear to cause greater excess of mortality, and diarrhœal diseases (with enteritis) appear to occasion less excess of mortality, than do diseases of all kinds without distinction of cause, among males as compared with females. Whooping-cough differs from all other maladies to which infants are specially subject by causing greater mortality among females than among males, and this not in 1896 only but for a long term of previous years. The births of males exceed the births of females in proportions which have ranged between 1033 to 1000 and 1041 to 1000 during the last sixteen years. In every one of these years the relatively excessive mortality among male infants has had the effect of nearly equalising the numbers in each sex who survive to one year of age.

In the year 1896 as many as 78,000 deaths, or 15 per cent. of the total mortality, were caused by zymotic diseases. There was a fall in the aggregate mortality from these diseases in 1896 as compared with the preceding year, and this fall was due to a marked decline in the mortality from influenza and from diarrhœal diseases. In England and Wales the deaths referred to small-pox in 1896 corresponded to a rate of 18 per 1,000,000 living as compared with rates of 49, 27, and 7 per 1,000 000 respectively in the three preceding years. Of the 541 small-pox deaths registered in England and Wales not fewer than 443 occurred in the registration district of Gloucester. Within the first two quarters of the year there were registered in the City of Gloucester from all causes 716 deaths, and of these as many as 421 deaths, or 59 per cent., were ascribed to small-pox. During the first half of the year 1896 therefore the mortality of that city was increased, on account of small-pox alone, by 143 per cent. Of the 541 persons whose deaths were caused by small-pox in 1896 only 8 per cent. were certified to have been vaccinated, whilst 22 per cent were unvaccinated, and with respect to the remainder no sufficient statement as to vaccination appeared in the certificates. In addition to the deaths definitely ascribed to small-pox 151 were attributed to chicken-pox and 42 to "effects of vaccination." These latter include not only the deaths directly referred to vaccination but also those which were stated in the certificates or were found on inquiry to have been caused by the entrance of any noxious material whatever at the site of vaccination. In the year 1894, the last for which the necessary returns are as yet available, the deaths under the heading "Effects of Vaccination" were in the proportion of 1 in every 12,583 children vaccinated. The year 1896 was one of unusually heavy mortality from measles, with one exception the death-rate from measles was higher than in any previous year on record. Scarlet fever was considerably less fatal than the average, although the rate was somewhat higher in 1896 than it had been in the preceding year. Taking England and Wales as a whole the mortality from enteric fever in the year under notice was below the decennial average. If a line be drawn across England from the Wash to the Dee, that part of the country which lies to the north of this irregular line showed in 1896 enteric fever rates which were markedly in excess of the average for England and Wales, whilst that part of the country to the south of the line experienced rates of mortality which were below the average. The deaths referred to diphtheria in 1896 were in the proportion of 292 per 1,000,000 of the population, which exceeded the proportion in any previous year with the exception of 1893–94. London showed the highest death-rate from diphtheria, the other counties with excessive rates in 1896 were Kent, Essex, North and South Wales, Warwick, Worcester, and Cheshire. Whooping-cough was the cause of a mortality in England and Wales during 1896 which was in excess of the average. In London and in 19 of the other English counties the rates were exceptionally heavy, whilst in the rest of the country the rates were below the average. Among constitutional diseases cancer and diabetes were more fatal in 1896 than the average in the preceding ten years, whilst phthisis showed a mortality which was the lowest hitherto recorded. Two important tables are inserted in the present report showing the mortality at different ages among males and females from cancer and from pulmonary consumption. The first of these tables shows that throughout the four quinquennial or decennial periods ending with 1895 the mortality from cancer both among males and among females at every age group from 35 years onwards had steadily increased and that in the year 1896 there had been a still further increase. The table further shows that whereas among males the mortality from cancer has increased in 35 years by 153 per cent. the increase among females within the same interval has been limited to 74 per cent. The second table shows that whereas the mortality from phthisis has decreased since the year 1861 by 40 per cent. among males the decrease among females during the same period has been equal to 54 per cent. The table further shows that at the present time men die from phthisis much more rapidly than women do, although in periods anterior to 1870 the reverse was the case.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-second meeting of the Royal Commissioners was held at the Council Chamber of the Westminster Town-hall on May 16th. With the exception of Mr. Cripps, Q.C., all the Commissioners were present. The first part of the sitting was occupied by taking the evidence of M. Gaston Cadoux, Chief of the Bureau of the Prefecture of the Seine, who gave evidence with regard to the water-supply of Paris. The latter part of the sitting was occupied by the re-examination of Sir A. Binnie whose evidence was not concluded at the end of the sitting.

M. GASTON CADOUX said that in his opinion the present system of administering the water-supply of the city of Paris was preferable to that which previously prevailed when the waterworks were owned and managed by a commercial company. Up to the year 1860 Paris was supplied with water by a single company—the Compagnie Générale des Eaux. The water was at that time derived from the rivers Seine and Marne. The whole of the property of the company was bought and the rate of charges which consumers had to pay was placed under the control of the city authorities. The witness did not know what the original capital of the company was or what amount was paid in dividends. The charges originally fixed by the municipality had been lowered more than once since they had undertaken the supply. The greater part of the water was supplied by meter. In the case of the poor inhabitants a charge of 20 francs a year was made for a supply not exceeding 125 litres a day.

Major-General SCOTT remarked that a water-supply of 125 litres was a small one.

The witness replied that poor people did not require much water and did not take baths. The flow of water was slow, the arrangement being that no more than the arranged quantity could pass to the consumer. The cost of the meter was paid by the consumer. The witness did not know what the cost of the meter was. After the property of the water company had been bought by the municipality a considerable amount was paid in obtaining water from springs. Recently steps had been taken against the pollution of the rivers; the work was now going on but it would not be completed for nearly two years. The question of river pollution was under the control of the Prefecture of the Police, but at present the Seine is polluted by sewage and by refuse from the factories which are situated on its banks. A law has recently been passed to prevent pollution, but the matter of control is found to be difficult. At the present time river water is only supplied for drinking purposes during periods of drought; for the last two years the water of the Seine has been

I.—TABLE SHOWING THE DAILY AVERAGE QUANTITY OF WATER PER MONTH DELIVERED FROM THE THAMES (INCLUDING THE HANWORTH GRAVEL BEDS) BY THE METROPOLITAN COMPANIES DURING THE YEARS 1896–97, AND THE PERCENTAGE OF THE DAILY AVERAGE SUPPLY FOR THE YEAR 1896–97.

(Compiled from the Water Examiner's Monthly Returns and put in evidence before the Commission by Sir Alexander Binnie.)

Month. 1.	1896. 2.		1897. 3.		1896-97. 4.	On 300 million gallons a day. 5.
		Percentage of daily average supply for year.		Percentage of daily average supply for year.	Percentage of daily average supply for year.	Million gallons.
January	108,393,376	93·9	105,437,515	92·9	93·4	280·2
February	105,656,479	93·2	108,301,037	95·5	94·4	283·2
March	105,072,590	92·7	107,848,471	95·1	93·9	281·7
April	107,025,403	94·5	108,767,332	95·9	95·2	285·6
May	121,045,981	106·8	117,814,749	103·9	105·3	315·9
June	128,656,399	113·5	118,806,483	104·8	109·2	327·6
July	135,111,359	119·2	130,664,474	115·2	117·2	351·6
August	119,144,724	105·1	123,612,581	109·0	107·1	321·3
September	111,228,831	98·2	115,642,180	102·0	100·1	300 3
October	110,352,889	97·4	114,419,476	100·9	99·1	297·3
November	105,822,276	93·4	107,127,314	94·5	93·9	281·7
December	103,765,108	91·6	101,849,282	89 8	90·7	272·1
Daily average	113,315,551	100·0	113,415,729	100·0	100·0	300·0

II.—TABLE SHOWING THE EFFECT PRODUCED ON THE NATURAL AND ACTUAL FLOW OF THE THAMES AT TEDDINGTON WEIR DUE TO THE AVERAGE ABSTRACTION OF 300 MILLION GALLONS A DAY BY THE STAINES SCHEME WITH RESERVOIR CAPACITY OF 28,000 MILLION GALLONS, AND A SUPPLY TO LONDON GIVEN IN THE MEAN PROPORTION OF THE YEARS 1896 AND 1897, THE MINIMUM FLOW OF THE THAMES AT TEDDINGTON WEIR BEING 200 MILLION GALLONS A DAY.

(Put in evidence before the Commission by Sir Alexander Binnie.)

Year.	Daily average flows per annum at Teddington.			Number of days during which the actual flow of Thames fell below 200 million gallons per day.	Number of days on which Thames would be drawn upon for supply or to fill up reservoirs.	Number of days Thames would be reduced to 200 million gallons over Teddington Weir.	Natural flow of the Thames during the period of minimum flow in col. 7.			Actual flow of the Thames during the period of minimum flow in col. 7			Rainfall for the year in inches.	Remarks on condition of reservoirs.
	Natural flow.	Actual flow.	Resultant flow under Staines scheme.				Average.	Maximum.	Minimum.	Average discharge at Teddington.	Maximum.	Minimum.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Million gallons.	Million gallons.	Million gallons.	Days.	Days.	Days.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Inches.	
1885	1174·8	1093·5	892 6	10	315	129	425 3	699·3	263 8	334·3	620·0	166·0	29·15	Reservoirs full up to June 17th, fell to 7130·6 million gallons on September 10th, and to 6716 million gallons on October 8th.
1887	1154·6	1066 5	867·6	10	348	153	422·9	677·7	255·0	328·1	596·0	153·9	21 32	Reservoirs full up to June 21st, fell to 4235·8 million gallons on October 29th.
1893	992·4	888·3	730 9	28	337	188	405·2	671 6	252·3	297·9	575·0	141·3	22·08	Reservoirs full up to May 31st, empty on October 8th and 9th, and bottom impurity drawn upon from November 8th to 15th to the extent of 820 million gallons.
1896	1087·2	973·0	796·4	33	336	127	421·9	722·8	243'4	296·5	605·0	108·1	25·82	Reservoirs full up to May 23th. Fell to 4886·8 million gallons on September 1st.
Averages...	1102·2	1005·3	821·9	20 2	334	149·2	418·8	692 8	253·6	314 2	598·7	142·3	28·5 mean of long period.	

III.—TABLE SHOWING THE EFFECT PRODUCED ON THE NATURAL AND ACTUAL FLOW OF THE THAMES AT TEDDINGTON WEIR DUE TO THE AVERAGE ABSTRACTION OF 300 MILLION GALLONS A DAY BY THE STAINES SCHEME WITH RESERVOIR CAPACITY OF 38,000 MILLION GALLONS, AND A SUPPLY TO LONDON GIVEN IN THE MEAN PROPORTION OF THE YEARS 1896 AND 1897, THE MINIMUM FLOW OF THE THAMES AT TEDDINGTON WEIR BEING 250 MILLION GALLONS A DAY.

(*Put in evidence before the Commission by Sir Alexander Binnie.*)

Year.	Daily average flows per annum at Teddington.			Number of days during which the actual flow of Thames at Teddington fell below 250 million gallons.	Number of days Thames would be drawn upon for supply or to fill up reservoirs.	Number of days Thames would be reduced to 250 million gallons over Teddington Weir.	Natural flow of the Thames during the period of minimum flow in col. 7.			Actual flow of the Thames during the period of minimum flow in col. 7.			Rainfall for the year in inches.	Remarks on condition of reservoirs.
	Natural flow.	Actual flow.	Resultant flow under Staines scheme.				Average.	Maximum.	Minimum.	Average discharge at Teddington.	Maximum.	Minimum.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Million gallons.	Million gallons.	Million gallons.	Days.	Days.	Days.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Million gallons.	Inches.	
1885	1174·8	1093·5	909·9	35	315	131	428·0	699·3	263·8	337·1	620·0	166·0	29·15	Reservoirs full till June 27th. Fell to 9,779·2 million gallons on Oct. 8th.
1887	1154·6	1066·5	889·2	29	348	160	430·5	727·7	255·0	335·8	620·0	153·9	21·32	Reservoirs full till June 19th. Fell to 6,186·2 million gallons on Oct. 30th.
1893	992·4	888·3	756·7	58	337	206	422·5	749·5	252·3	315·3	650·7	141·3	22·08	Reservoirs full till May 26th. Bottom impurities drawn down by 494 million gallons, Nov. 12th to 15th.
1896	1087·2	973·0	806·2	51	335*	136	434·2	731·1	243·4	309·6	617·2	108·1	25·82	Reservoirs full till May 4th. Fell to 7843·8 million gallons on Sept 1st.
Averages...	1102·2	1005·3	840·5	43·2	333·7	158·2	428·8	726·9	253·6	324·4	627·0	142·3	28·5 mean for long period.	

* Compensation given to river on July 28th of 6·6 million gallons.

filtered before distribution. When river water is distributed for drinking purposes a notice to that effect is placarded in the public places. The parks and gardens are watered by a supply from the Seine and for these places and for the chief streets—as, for example, the Rue de Rivoli and the Boulevards, where a considerable amount of water is used—the supply is conveyed in separate mains. When the river water is used for drinking purposes it is pumped from the river to one of the reservoirs which is usually used for the supply of spring water. The amount of water used per head is about 123 litres per day—that is, roughly, about 27 gallons.

In answer to Sir GEORGE BARCLAY BRUCE the witness said that industrial undertakings were included in this estimation but not the amount used for watering the roads. The spring water is derived from several sources. The first new source was that of Dhuis, from which place there is an aqueduct 131,162 metres in length. Water comes also from the Verdon and Surmelin valleys whence it flows by gravitation to the reservoir at Ménilmontant. The amount of water brought daily from this source is about 20,000 cubic metres. The total cost of obtaining this supply, including the purchase of the springs, compensation to the land-owners and mill-owners, and the amount paid for building the aqueduct, was 18,000,000 fr. The next source used was at Vanne; the work was begun in 1870 and was finished in 1874. The length of aqueduct is 173,000 metres and over a distance of no less than 16,000 metres the aqueduct is supported on arches. The cost was 39,000,000 fr. Between 1880 and 1888 water was derived from springs at Cocheysies. The cost was 3,180,000 fr. and the average amount of water obtained was 120,000 cubic metres. Between the years 1892 and 1894 a new supply of water was derived from the Vigne and the Avre. The cost of the undertaking was 35,000 000 fr. and the quantity of water obtained was 115 cubic metres daily; the length of the aqueduct is 102 000 metres. The work is not yet quite finished. The city has obtained power to bring water from the Loing and the Lunain. It is hoped that from 115,000 to 120,000 cubic metres will be obtained from these sources and that the work will be finished by the year 1900. The estimated cost is 25,000,000 fr. When the works of the water company were bought the company was still entrusted to supply the water for a period of fifty years. This period will end at the close of the year 1909. The city engineers deliver the spring water into the reservoirs and the company have nothing to do with this delivery of water to them, but they distribute it to the consumers. The rates charged depend on agreements made by them with the company, but regulations as to tariffs are passed by the municipal council and approved by the Prefect. The supply to public institutions is not in the hands of the water company; the quantity of these supplies is about one-tenth of the amount of the private supplies.

Sir ALEXANDER BINNIE, engineer-in-chief to the London County Council, put in a series of tables a consideration of which led him to the conclusion that the restricted flow of the Thames would be insufficient to cleanse the lower part of the river from the pollutions caused by the sewage effluents which discharge into the river at Barking and Crossness. The facts given in the accompanying tables are, from Sir A. Binnie's point of view, of the greatest importance and the tables represent the sum of his evidence in the smallest possible space.

THE BRITISH DENTAL ASSOCIATION.

THE annual general meeting of the British Dental Association was held at Bath on May 28th, 30th, and 31st, in the Assembly Rooms. A large gathering of members was present and the experiment of holding the meeting at Whitsuntide may be considered a great success.

General Meeting.

Sir EDWIN SAUNDERS, who took the chair at the general meeting in the enforced absence of the President (Dr. Stack),

referred in sympathetic terms to the illness of Dr. Stack and inducted Mr. W. A. Hunt of Yeovil, the new President, in the chair.

Presidential Address.

Mr. W. A. HUNT, in his presidential address, dealt chiefly with the two questions of the use of anæsthetics in dentistry and the legal protection of the dental profession. Commencing with the historical part of the former of these subjects he said that Horace Wells, a dentist of Hartford, Connecticut, demonstrated in his own person the practicability of nitrous oxide anæsthesia by having a tooth extracted under its influence on Dec. 11th, 1844. Wells then introduced nitrous oxide anæsthesia into general surgery and many surgical operations were performed with its assistance. The next development was that Morton, formerly his pupil and subsequently his partner, a year and nine months afterwards, at the suggestion of Jackson the chemist, used ether for the painless extraction of teeth. Surgical operations were performed under ether in the Massachusetts Hospital in October, 1846, and Dr. Bigelow of that hospital, writing from Boston, sent an account of the proceedings to his friend Dr. Boott in London, who communicated the discovery to Mr. Robinson, a dentist in Gower-street. Mr. Robinson administered ether to a patient and extracted a molar painlessly on Dec. 19th, 1846, which was the first operation of the kind in this country, and he sent a full account of it to Mr. Hunt, sen., of Yeovil, the speaker's father, who immediately had an inhaler made and is believed to have been the first man out of London to make use of ether. The term anæsthesia was suggested by Dr. Oliver Wendell Holmes. The employment of nitrous oxide in Europe was revived by Dr. Evans, the Paris dentist, who brought Mr. Colton with him from Paris to London in March, 1868, with a record of 25,000 cases in America and some in Paris without a death. Mr. Hunt continued as follows: "Thus history points with no uncertain finger to dentists as the originators of anæsthesia. ..... Gentlemen, with these matters of history to guide us, are we to be told that the production of anæsthesia is not within the ability of a duly qualified dentist? The very suggestion to my mind is preposterous. But, on the other hand, the safety, the life of the patient, is in the hands of the anæsthetist, and he should be carefully taught his responsible duty and should satisfy his examiners when seeking his diploma that he has the needful knowledge. Neither in the medical profession nor in our own is this done, and I consider it high time that steps were taken to alter this state of things." With respect to the legal position of the dental profession Mr. Hunt said that more than one-third of the practitioners on the Dental Register held diplomas approved by the General Medical Council, the remainder having no special diploma. While admitting that unregistered persons ought not to be allowed to act as dentists he was not in favour of immediately increasing the stringency of repressive measures, mainly because it seemed to him that the dental requirements of the public were in excess of the practitioners competent to supply them. In the course of his address Mr. Hunt made reference to the abundant Roman remains found in Bath, including a Temple of Minerva, and extensive hot baths 20 ft. below the level of the present city, small portions of which have been explored.

The Reports of the Honorary Secretary and Honorary Treasurer.

In the report of the honorary secretary attention was drawn to the fact that since the last annual meeting no legal proceedings had been undertaken, due in some measure to actions pending on the part of the General Medical Council and the Medical Defence Union. The report also mentioned the formation of a new branch under the name of the "South Wales and Monmouthshire Branch." The report of the honorary treasurer showed that the finances of the association were in a satisfactory condition, the amount invested standing at £1000.

The Meeting of 1899.

It was decided to hold the annual meeting next year at Norwich during Whitsuntide, and Mr. Wentworth White was nominated President-elect.

Papers.

Several interesting papers were read during the meeting. Mr. J. G. Turner gave the results of his investigations into the Pathology of Dental Cysts and showed that the large majority were distinctly epithelial in origin and were closely connected with adherent masses of epithelium met with in the dental ligament. Mr. J. F. Colyer contributed a paper on the Early Treatment of Crowded Mouths and pointed out the value of the removal in many cases of the unerupted first premolar. This paper was illustrated by lantern slides of the cases before and after treatment. Mr. G. Cunningham read a communication on the Immediate Regulation of Teeth and showed the models of various cases before and after treatment. Other papers were contributed by Mr. J. Smith Turner on Matters Connected with the British Dental Association; by Mr. Headridge, on Dental Education and Medical Qualifications; by Mr. Gartrell and Mr. Coxon, on Strengthening for Vulcanite Work; and by Mr. W. B. Ackland, on Cases of Secondary Affections due to Teeth.

The Microscopical Section.

The Microscopical Section was presided over by Mr. F. J. Bennett, who delivered a most interesting inaugural address. Papers were read by Mr. Hopewell Smith on Healing Processes in the Dental Pulp, by Mr. Storer Bennett on Erosion, and by Mr. Leon Williams on Structural Changes in Human Enamel with Special Reference to Clinical Observation on Hard and Soft Enamel. Mr. Arthur Underwood also showed some interesting slides in connexion with enamel. A collection of microscopical slides, specimens, and photomicrographs were exhibited during the meeting.

Entertainments.

The scientific and technical work of the meeting was agreeably diversified by a variety of social entertainments. On May 27th (the evening before the meeting) there was an informal reception of members by the President of the Western Counties Branch and reception committee in the Assembly Rooms; on the 28th there was a reception by the Mayor in the Pump Room and Roman Promenade; on the 29th (Whit-Sunday) the Mayor and Corporation invited the members to meet them at the Municipal Buildings and then to proceed to the Abbey, where Divine service was held; on the 30th the city architect gave an account of the ancient baths and showed the most recent excavations, Mrs. Dudley received ladies at an "At Home," and the annual dinner of the association was held in the Assembly Rooms; on the 31st there was a conversazione by the President at the Assembly Rooms; and June 1st was devoted to excursions to various places of interest.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6704 births and 3548 deaths were registered during the week ending May 28th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 18·4 to 16·4 per 1000, rose again last week to 16·5. In London the rate was 16·0 per 1000, while it averaged 16·8 in the thirty-two provincial towns. The lowest rates in these towns were 8·0 in Croydon, 10·1 in Wolverhampton, 10·4 in West Ham, and 11·1 in Brighton; the highest rates were 22·1 in Gateshead, 22·2 in Newcastle-upon-Tyne, 22·5 in Liverpool, and 23·2 in Sunderland. The 3548 deaths included 400 which were referred to the principal zymotic diseases, against 383 and 380 in the two preceding weeks; of these, 134 resulted from measles, 131 from whooping-cough, 55 from diphtheria, 34 from diarrhœa, 26 from scarlet fever, 19 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Brighton or in Swansea; in the other towns they caused the lowest death-rates in Nottingham, Blackburn, and Huddersfield, and the highest rates in Birmingham, Hull, Liverpool, Manchester, and Halifax. The greatest mortality from measles occurred in Bradford and in Halifax; from scarlet fever in Halifax; and from whooping-cough in Birmingham, Sheffield, Liverpool, Sunderland, Gateshead, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 27 in London, 4 in West Ham, 4 in Cardiff, 4 in Liverpool, and 3 in Leeds. One fatal case of small-pox was registered in Newcastle-upon-Tyne, but not one in London or in any other of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals.

The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday last, May 28th, was 2195, against 2271, 2247, and 2241 at the end of the three preceding weeks; 256 new cases were admitted during the week, against 209, 229, and 223 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 232 and 177 in the two preceding weeks, rose again last week to 216, but were 73 below the corrected average. The causes of 40, or 3·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the deaths were duly certified in Portsmouth, Nottingham, Salford, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·8 and 19·9 per 1000 in the two preceding weeks, further rose to 21·4 during the week ending May 28th, and exceeded by 4·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·8 in Aberdeen and 15·7 in Leith to 23·7 in Dundee and 26·2 in Paisley. The 647 deaths in these towns included 31 which were referred to whooping-cough, 29 to measles, 13 to "fever," 8 to scarlet fever, 6 to diarrhœa, and 4 to diphtheria. In all, 91 deaths resulted from these principal zymotic diseases, against 83 and 104 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·0 per 1000, which was 1·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The 31 fatal cases of whooping-cough corresponded with the number recorded in the preceding week, and included 18 in Glasgow and 4 in Edinburgh. The deaths from measles, which had been 32 and 27 in the two preceding weeks, rose again to 29 last week, of which 14 occurred in Glasgow, 7 in Edinburgh, and 6 in Dundee. The deaths referred to different forms of "fever," which had been 6 and 4 in the two preceding weeks, rose to 13 last week, of which 9 were recorded in Glasgow. The 8 fatal cases of scarlet fever showed a decline of 6 from the number in the preceding week, and included 3 in Glasgow, 3 in Edinburgh, and 2 in Aberdeen. Of the 4 deaths from diphtheria, 2 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 109 and 119 in the two preceding weeks, further rose to 125 last week, but were slightly below the number in the corresponding period of last year. The causes of 25 or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·5 and 24·0 per 1000 in the two preceding weeks, declined again to 23·1 during the week ending May 28th. During the past four weeks the death-rate in the city has averaged 23·5 per 1000, the rate during the same period being 16·1 in London and 18·7 in Edinburgh. The 155 deaths registered in Dublin during the week under notice showed a decline of 6 from the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 7 and 10 in the two preceding weeks; of these, 4 resulted from diphtheria, 3 from whooping-cough, 3 from "fever," 2 from diarrhœa, 1 from measles, 1 from scarlet fever, and not one from small-pox. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 2·1 in London and 3·2 in Edinburgh. The fatal cases of diphtheria, which had been 1 and 2 in the two preceding weeks, further rose to 4 last week. The deaths referred to different forms of "fever," which had been 2 and 4 in the two preceding weeks, declined again to 3 last week. The mortality from measles, scarlet fever, and whooping-cough exceeded that recorded in the preceding week. The 155 deaths in Dublin last week included 28 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were below those recorded in the preceding week. 5 inquest cases and 6 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 9, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEON MICHAEL JOSEPH MCCARTHY, M.D. R.U.I., has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Naismith has been appointed to the Medical Charge of the Station Hospital, Ayr. Surgeon-Major Clements has arrived for duty in the Home District, and Surgeon-Major Treherne has been posted to the Station Hospital, Western Heights, Dover. Surgeon-Major Hamilton has been posted to Fort George for duty in charge of the Station Hospital. Surgeon-Major Phipps has assumed medical charge at Landguard Fort.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant-Colonel Cornwall are placed temporarily at the disposal of the Government of Madras. The services of Surgeon-Captain Ricketts are placed temporarily at the disposal of the Foreign Department for employment on plague duty. Surgeon-Lieutenant-Colonel Swaine, Medical Officer, 6th Infantry, Hyderabad Contingent, is appointed to officiate as Sanitary Commissioner, Hyderabad Assigned Districts, during the absence on deputation of Brigade-Surgeon-Lieutenant-Colonel Little.

THE SPANISH-AMERICAN WAR.

According to the reports of Commodore Schley to the War Department at Washington it seems to be now definitely settled that Admiral Cervera's fleet is shut up within the harbour of Santiago with apparently little or no hope of escape without fighting; any advantage consequently which was gained by the Spanish Admiral's adroit manœuvring has been practically lost by his having entrapped himself there. Whilst the Americans were in ignorance of his whereabouts they could not, as we have always contended, attempt the landing of a force in Cuba, for the vessels of the Spanish fleet possessing the greater speed might at any moment inflict a disastrous attack on the transports carrying the United States troops and then steam away, but "bottled up" in Santiago and blockaded by a superior force, Admiral Cervera's fleet is apparently rendered powerless to do anything. If they come out they will probably be defeated or sunk, if they remain in Santiago they run the risk of being starved into surrender. Nor does it seem that the condition of the Spanish reserve fleet at Cadiz is such as to hold out much hope of any Spanish success from that quarter. But there still remain very great difficulties to be encountered by the Americans in their next move if, as is generally believed will be the case, this is to consist of the invasion of Cuba by a big military force, which must largely consist of trained soldiers. Soldiers cannot be made and trained in a day, however good the material, and various other preparations will have to be made on a large scale to secure the success of any such expedition. The United States were from the first, and still are, unprepared. There is a large Spanish force in Cuba, the island is unhealthy, and will become more so as the season advances, and any force which succeeds in effecting a landing and securing a fighting foothold will require to have at its back a large reserve to make up for its losses by sickness and fighting. We may be quite sure that all this is well known to the responsible naval and military authorities and the medical departments of the United States, although it is little heeded by impetuous and irresponsible people. That in determination, promptitude, and enterprising skill, as well as in numerical and financial strength, the United States have the power ultimately to achieve their purpose there can be very little doubt. The war is fast approaching its most critical stage and everything will depend upon the adoption of thoroughly well-considered and organised measures at the present time by the United States Government whether the Spanish-American campaign is soon to bewith in measurable distance of its end or not. Meanwhile there has probably never been a war about which such an amount of false, contradictory, and perplexing news has been published. The reader of the long war columns

spearing from day to day in the newspapers does not know what to believe and is left in a state of utter bewilderment.

SIR ROBERT RAWLINSON, K.C.B.

Army medical officers and all interested in sanitary engineering and practical hygiene will hear with much regret of the death of Sir Robert Rawlinson on May 31st, in his eighty-ninth year. Sir Robert Rawlinson was a distinguished man and did excellent service in his time in the cause of public health. He was one of the Sanitary Commissioners sent out to the Crimean war, where his labours were productive of great practical good and where he was severely wounded by a round shot. He was for twenty-eight years a member of the Army Sanitary Committee. Before that time he had made his mark in surveying and engineering work and in connexion with the Public Health Act, and he subsequently served on several important Commissions and as Chief Engineering Inspector under the Local Government Board. He always manifested a keen interest in sanitary and public health work and did a great deal to advance and apply our knowledge of these subjects in various directions both in civil and military life. He was a man of strong opinions, which he could not readily alter, but the value of his services must close all eyes to his unwillingness to march always with the times.

THE ROYAL NAVAL EXAMINATIONS.

The under-mentioned gentlemen, who competed on May 16th and following days at the Examination Hall, Victoria Embankment, for appointment as surgeons in the Royal Navy, have been granted commissions:—

	Marks.		Marks.
H. C. Whiteside	2646	H. J. Chater	2237
R. L Dickinson	2563	R. St. G. S. Bond, M.B.	2223
H. W. B. Shewell, M.A., M.B.	2539	C. C. Macmillan, M B....	2188
J. Martin	2521	F. C. B. Gittings, M.B.	2147
C. B. Fairbank	2494	R. M. Richards	2132
F. F. Lobb	2489	H. E. Raper	2119
G. B. Brown	2445	A. G. Eastment	2105
S. D. T. Halliday	2407	G. E. Duncan	2057
J. G. Corry, M.B.	2354	J. G. Watt	2022
L. B. Todd	2324	G. B. Glynn, B.A., M.B.	1973

THE PLAGUE IN INDIA.

The most important items of intelligence from India in our opinion continue to be those about the plague in that country. The recent outbreak in Calcutta has proved on bacteriological examination to have been true bubonic plague, but it has, we are glad to add, since disappeared—whether temporarily or not remains to be seen. The disease, chiefly in a sporadic form, nevertheless seems to have been widely disseminated in India, for cases have appeared in many parts of that country and the Punjaub.

THE TIRAH FIELD FORCE.

The following names, omitted in previous despatches, have been mentioned by General Sir William Lockhart as being those of officers specially recommended by the general officers under whom they served:—Surgeon-Major A. E. C. Spence, A.M.S.; Surgeon-Captain J. C. Jameson, A.M.S.; and Surgeon-Lieutenant M. Dick, I.M.S.

INDIAN FURLOUGH.

The Government of India have formally opened leave for the medical service. Local governments have been given power to sanction leave and furlough and are to make their own arrangements.

We are asked to announce that the Volunteer Ambulance School of Instruction has changed its address from 10, St. Benet-place, E.C., to 8, Portman-street, Portman-square, W.

UNIVERSITY OF CAMBRIDGE.—Dr. Alex. Hill, Master of Downing College, has been re-appointed Vice-Chancellor of the University for the ensuing academical year.—Dr. Joseph Griffiths, M.A., F.R.C.S., has been appointed to the new Readership in Surgery. A Lectureship in Chemical Physiology is about to be established in the University.—The honorary degree of D.Sc. is to be conferred on the President of the General Medical Council, Sir William Turner, F.R.S.—The following medical degrees were conferred on May 26th:—M.D. on M. Craig, Caius; A. Eichholz, Emmanuel; and C. E. Hedges, Sidney. M.B. on C. R. Skyrme, Christ's; H. D. O'Sullivan, Emmanuel; and E. M. Corner, Sidney. B.C. on F. A. Mills, Clare; H. D. O'Sullivan and E. M. Corner.

Correspondence.

"Audi alteram partem."

THE GENERAL MEDICAL COUNCIL: THE RIGHT OF MEMBERS TO INSPECT THE COUNCIL'S DOCUMENTS.

To the Editors of THE LANCET.

SIRS,—As in the leading article of your last week's issue on the General Medical Council you made a statement in reference to myself which is contrary to fact, I feel constrained (while deferring discussion of the subject as a whole) to dissipate by an emphatic disclaimer the erroneous impression which that statement is unintentionally calculated to produce. Your sentence in question, which referred to the arbitrary confiscation of the right of the members of the Council to inspect the papers of the Council, runs as follows; "*The question raised was one of great importance* [to which I unreservedly agree] *and later was settled in a sense satisfactory to Mr. Horsley and anyone wishing to make a reasonable use of the documents of the Council.*" From this I dissent in every particular, for (1) the question is *not* settled, it has but just begun; (2) I am not satisfied, as I shall certainly prove; (3) I cannot believe that those who *do* wish to make reasonable use of the documents of the Council can concur in a resolution which would make their power of doing so depend not on their existing rights but on the goodwill of an official. There may be some among the members of the Council who care so little for the rights of their position that the confiscation of the powers entrusted to them by Parliament for the faithful fulfilment of their duties can be acquiesced in by them in silence, but if so it is to be trusted they are but few in number, and I for one must protest against being thus publicly classed among them. I regard the act of the President as an action *ultra vires*, the resolution of the Council as also an action *ultra vires*, and the opinion of Mr. Muir Mackenzie, founded on a case of 70 years ago in which a *liveryman* of a company claimed the right of inspection of documents in the hands of the *Court* of a company, as not only irrelevant to the main issue but positively containing a saving clause which precisely confirms my contention. This will be proved, as your readers will see when you publish the opinion in your report. I may here mention that I took no part in either the discussion or the vote upon the resolution moved by Dr. Glover on this subject because, as I have just stated, it was an action *ultra vires*. I desired to disassociate myself entirely from it in order not to prejudice my legal rights in the matter.

There is one further point to which I would call attention. You state that the vote of confidence in the President, but which was really a vote of confidence in the opinion of Mr. Muir Mackenzie, was passed unanimously. This was not so, for I voted against it. The vote carrying Dr. Glover's resolution was also not unanimous, and on the motion to convert it into a standing order Dr. Glover himself did *not* vote in its favour.

Finally, this important constitutional point was relegated to absolutely the last moment of the session, when nearly half the Council had obtained permission from the President to depart and had left. It is a fitting ending to a session the opening of which was characterised by perhaps the most lamentable event in the annals of the Council.

I am, Sirs, yours faithfully,

Cavendish-square, W., May 31st, 1898. VICTOR HORSLEY.

"TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION."

To the Editors of THE LANCET.

SIRS,—May I, without entering in detail into the numerous misstatements contained in Dr. Shaw-Mackenzie's letter in THE LANCET of April 23rd, point out:

1. That William Fergusson in later years held exactly the same opinion upon his "Observations on the Venereal Disease in Portugal" as was expressed in my letter of March 5th. This fact did not become known to me until after the publication of the letter; it seems to prove the

correctness of my interpretation beyond doubt. Fergusson fully realised and frankly admitted the fallaciousness of the conclusions first drawn by him and still deemed "irresistible" by Dr. Shaw-Mackenzie. He no longer attributed the difference which he had observed between syphilis in the Portuguese and syphilis in the English to attenuation in the Portuguese, but to aggravation in the English, and the cause of this aggravation he recognised in the injudicious mercurial treatment enforced by him in accordance with the "utterly baseless creed" of his time—a treatment worse than Portuguese "apathy" because worse than the disease. Fergusson made the "staggering discovery" that by "murderous and unnecessary courses of mercury" he—to use the words he applies to Brown—had "committed havoc like a man of business."

2. That Thomas Rose's communication, although otherwise an "interesting contribution to the history of fallacies" (Virchow), was not a "corroboration" but a rectification of that of Fergusson. When Fergusson wrote his letter to the Royal Medical and Chirurgical Society he could not bring himself to believe that he had "lived so long in utter error" and he "durst not open his eyes to the whole truth." This was only done by the "bolder" Rose proving that the same "curability of syphilis" also existed in England. Thus Rose converted Fergusson from the fanatic belief in Hunterian heresies to the moderate and sound views of his later days.

3. That Aitken's "testimony" adduced by Dr. Shaw-Mackenzie is unavailable on this point because it is based on historical error. Fergusson as no time advocated non-mercurial treatment as Aitken pretends (although his observations became the starting point of anti-mercurialism). "The error lay in the abuse not in the use of the mineral" was his conviction. Much less did he "practise" non-mercurial treatment "during the Peninsular wars," on the contrary, according to his own statement, he "mercurialised to extremity," "even to death." This may explain why Dr. Shaw-Mackenzie in comparing Aitken's "testimony" with my "statement" found a "striking difference."

4. That apart from Fergusson's recantation all positive evidence we possess tends to show that neither in his time nor since has attenuation of syphilis existed in Portugal.

In his views on the pathology of venereal infection Dr. Shaw-Mackenzie is considerably behind Fergusson, who declared it to be "proved from the earliest records of time" that "gonorrhœa and syphilis are two distinct diseases." Dr. Shaw-Mackenzie, on the other hand, is "perilously perhaps but nevertheless instinctively" brought back "to Hunter's theory of unity of origin." Those not possessed of these "perilous instincts" will not be inclined to follow him in his retrogressive track, but will be reminded of the late Dr. Moxon's humorous saying that "poetic feeling produces no little of the reality as well as the pathology of syphilis."

I am, Sirs, yours faithfully,

Welbeck-street, May 22nd, 1898. GEORGE OGILVIE.

To the Editors of THE LANCET.

SIRS,—I am much obliged to you, with Dr. G. Ogilvie's permission, for an advance proof of his further letter. His original paper in the *British Journal of Dermatology*, November, 1897, seemed to me to discredit Fergusson apparently without acquaintance with his original communication and did not duly credit Rose and Mr. Lee with the principal arguments which Dr. Ogilvie himself relied upon. I in no way, therefore, regret the attention you have permitted me to draw to the original works of these authorities.

I readily admit I was not till now aware of any later published views of Fergusson and I admit in this "fragment intended to fill up a gap in the systematic treatment and history of syphilitic disease"[1] Fergusson fully testifies to the aggravation of syphilis in the British by the abuse of mercury. This admission does not detract from the fact of the curability of syphilis without mercury confirmed by him in the Portuguese and corroborated by him and Rose in the British, facts which appear to show mitigation rather than "idiosyncrasy" when compared with those cases which Fergusson further admits "have occurred and will occur in which the use of that remedy has been and will be found absolutely necessary." Moreover, it is impossible to accept that any ignorance of the uses of mercury will explain the difference between syphilis at the present time and the severity, rapidity of propagation (not always by contact), and fatality which the description of the disease showed at the close of the fifteenth century. Fergusson never denied other causes which might account for the difference in severity. He confirms his previous alternative theory of climate and intemperance, to which he adds mercurial abuse. He does not again refer to transmitted partial immunity, but it seems unreasonable to reject in the case of syphilis that which he himself pointed out in the case of other specific fevers and which is generally accepted. In a publication from which Dr. Ogilvie quotes in his last paragraph I have drawn attention to modified syphilitic symptoms in women. I am inclined to think that such cases throw light on acquisition of syphilis modified by hereditary taint. In any case I am convinced it would often be to the advantage of patient and practitioner if the syphilitic origin, as opposed to the gonorrhœal, and the "use" of mercury in many cases of suppurative and pelvic disease in the female and of chronic urethritis in the male, were more generally recognised.

I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE.

Grosvenor-street, W., May 24th, 1898.

*** This correspondence must now cease.—ED. L.

[1] Notes and Recollections of a Professional Life, by the late Wm. Fergusson, M.D., Edited by his Son, James Fergusson.

CONSTIPATION IN ADULTS AND INFANTS: AN ANSWER TO A REVIEW.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 26th there appeared what purported to be a review of my book on constipation (*Constipation in Adults and Infants, with special reference to the Mechanical Methods of Treatment, &c.* The Macmillan Co. 1897). As this is the age of free thought and everyone has a right to hold to his opinion I have no quarrel with the writer thereof if he objects to the methods of treatment, especially the mechanical, advocated in the book, and he is at liberty to treat his cases with colocynth co., with aloes, &c., and other favourite prescriptions of some ancient disciple of Æsculapius, even though it be contrary to what has been advocated by Englishmen (Wilson, Fox, Bristowe, and especially by S. B. Birch of the Medical School of Manchester in his book "Constipated Bowels," first edition, published about 1859) for the last forty years, even though it be contrary to what that eminent clinician Trousseau taught thirty years ago already, and even though it be contrary to the most advanced medical thought of to-day, (Nothnagel, Boas, Rosenheim, Mathieu, Le Marier).

I shall not attempt to controvert his opinion as to the illustrations—*de gustibus non est disputandum;* and as to the style, if he does not appreciate a clear, lucid exposition, so that he who runs may read, that is his affair, not mine. (If it be the personification of that sprite from Greek mythology that he objects to, more particularly in the sentence excerpted, he must call to account, in this world or the next, the same Dr. Birch already referred to. I found it apt and took it from him.) I would have been content to leave all this to the judgment of the English medical public, who are fully competent to judge for themselves and who may decide between us (here in America it is unanimously in my favour, and the book has been accorded a most flattering reception by the medical journals of all shades of practice), and would have held my peace; but I must defend the Latin, even though it be true that it is not the best of Latin, that I took it from an old writer and am therefore not responsible therefor. The defence thereof is brief. If the reviewer (he has probably become a little rusty in Latin—no disparagement—an old practitioner may become rusty in his Latin and Greek even with credit to himself) will kindly read the sentence thus, "Tollitur causa remotus effectus," he will find that all offence against the shades of the grammarians of ancient Rome had vanished.

In conclusion, allow me to say to the readers of your very valuable and highly esteemed Journal that if they will give the methods of treatment of constipation advocated in my book a thorough trial they will obtain excellent results.

I am, Sirs, yours faithfully,

New York, May 18th, 1898. DR. H. ILLOWAY.

"THE LIMITS OF PROFESSIONAL SECRECY."

To the Editors of THE LANCET.

SIRS,—Permit a lay employer a word on an aspect of this question which has hardly, I think, received its due attention. I am an employer who, I venture to hope, take as high a view as most of my duty towards those in my service, that duty including, as I conceive of it, the obligation of charity and kindliness. I also hold the strongest possible views on the question of professional confidence. But in the case of the medical attendant of a servant, questioned by an employer, it seems to me that a situation arises to which professional ethics can hardly be rightly applied in their strictness, and this not by any means because a servant has any less right to protection than his or her master, but because that protection is more afforded by openness than by reticence.

For a master's duty extends to *all* his servants—not only to the sick one; and not only to them, but to every member of his household. And if the illness of any one of them is of a nature dangerous, or indicative of danger, to the rest or any of them, it is his duty to them to remove the peccant one. On the other hand, if no such danger exist it is equally his duty to consider or overlook the otherwise objectionable nature of the disease. But to do this he must know its nature. And if he is simply told that "the complaint is one which the patient objects to my disclosing," what can he possibly do but assume that it is one which, if known, would entail dismissal—and act accordingly? Of course, I do not for a moment mean that if, after this has been pointed out, the servant-patient still insists on secrecy the medical man would be justified in violating it. But I cannot help thinking that, in his patient's own interests, he should deprecate that insistance to the very uttermost.

I am, Sirs, yours faithfully,

May 25th, 1898. AN EMPLOYER.

*** We print the above letter with pleasure, for it sets out with particular force the layman's side of a difficult question. It is because there are such strong arguments as these which "An Employer" uses that the limits of professional secrecy are so hard to define and the medical man's position often so delicate. We adhere to our expressed opinion.—ED. L.

"THE DIPLOMA OF THE APOTHECARIES' SOCIETY."

To the Editors of THE LANCET.

SIRS,—Your correspondent "G.P. and Physician" asks me to explain my letter. With your kind permission I will therefore do so. I stated that "an intolerable amount of snobbism" was going on in the present day with regard to the abuse of the designation "Physician and Surgeon," at which "G.P. and Physician" retorts: "I cannot for the life of me see why 'superior' persons should call him a snob for so describing himself." Now, Sirs, as a matter of fact I have not called, nor do I intend to call, anybody a snob, and if your correspondent chooses to twist my phraseology so as to apply such an offensive epithet to himself it is no fault of mine, as one would have thought it scarcely necessary to point out to him that there is a vast difference between speaking of any system as one of snobbism and calling a person directly a snob, because it is obvious that many persons of good breeding and culture are guilty of some act of snobbism (in fact, probably everybody is) which would not be sufficient *per se* to identify such person as a snob. All I can add, therefore, is that if any given practitioner chooses to inflate himself before the English public with such a puff and pompous title as "Physician and Surgeon" he is undoubtedly, to my mind, guilty of an act of snobbism, although in all other respects his environment, &c., may redeem him from being a snob. I could take your correspondent a rural stroll if so disposed and point out two graduates with "Physician and Surgeon" embedded or incised in marble after a sepulchral fashion, and I can show him a medicine label—one of many sown broadcast amongst the general public—where the aspirant, evidently preferring a title before his name to one after, has in conspicuous letters "Physician" So-and-so on each mixture. I therefore ask your correspondent whether all this is not snobbism, and, if not, let him say what is.

I am, Sirs, yours faithfully,

London, May 23th, 1898. M.R.C.S., L.R.C.P. EDIN.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XVI.—BRIGHTON.[1]

Reform at the Maternity Hospital.—Trivial Cases.—The General Dispensary and its Abuse.—The Sussex County Hospital's Investigation.—Great Increase of Hospital Patients.—The Hospitals Refuse to Assist in the Work of Reform.—Numerous Flagrant Cases of Abuse.

THE figures collected by Dr. F. J. A. Waring concerning the distribution of tickets for treatment at the hospitals of Brighton indicate most clearly that abuse prevails in that town as in so many other places. In 1894 no less than 38,113 tickets were given to intending patients and as some of these tickets were renewed they do not represent the full amount of charitable work done. That these charities are largely abused is clearly demonstrated by the experience of the West-street Lying-in Hospital. In 1894 there were at Hove and Brighton 3704 births registered. No less than 1240 of these births were attended by one charity. But other births were attended at the Brighton and Steyning Infirmaries and by the Merciful Society for helping fallen women. Thus more than one-third of the mothers at Hove and Brighton were in receipt of charity. It is obvious that in so prosperous a locality the proportion of mothers who really needed charitable help was not so high. Dr. Waring states that one of the midwives in the service of the Lying-in Hospital expressed her opinion that half the cases which she attended could well afford to pay. Many of these patients were assured in benefit societies which allow 30*s.* at the birth of each child. As a further proof of abuse it is shown that some years ago the number of patients was not so high, but a midwife was appointed who gained great popularity in consequence of her kindly manners and her skill. The number of applicants for admission to the hospital consequently increased rapidly. Now, however, this midwife has left the hospital and established a private practice of her own. The result is that she is at the present time treating, and receiving fees from, the very same persons who formerly were gratuitously delivered at the hospital. The fee charged by the midwife is 15*s.* and this is readily paid by the former patients of the hospital. These facts, it must be explained, are not new; they were brought so prominently forward in 1894 that action was taken and with good results.

Calling at the West-street Lying-in Hospital I was informed that a wage limit had been established. If the husband had no children and was earning £1 or more a week an inquiry was made. On the other hand, if he had several children then no inquiry was made. Patients, on applying, must bring a letter of recommendation from a subscriber. They are given a card in exchange for the letter and told to call again in a week. The details are entered in a book and shown to the medical officer in attendance and if he objects the secretary is informed and an inquiry is instituted. It will be seen that this is a weak system. Its success depends entirely on the accuracy with which the

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; (11) June 5th, 1897, Nottingham; (12) July 31st, 1897, Birmingham; (12 *continued*) Aug. 14th, 1897, Birmingham; (12 *continued*) Sept. 4th, 1897, Birmingham; (12 *concluded*) Sept. 18th, 1897, Birmingham; (13) Oct. 30th, 1897, Southampton; (14) March 5th, 1898, Glasgow; 14 (*concluded*) March 19th, 1898, Glasgow; and (15) March 26th, 1898, Bradford.

recommendation form is filled up. Under such circumstances it is not surprising that but few inquiries are instituted. I was informed at the hospital that not more than six or at most eight such inquiries had been made during the last two or three months. The very vagueness of this reply to my questions suggests that check is not very systematically applied. The medical officer in attendance on the day of my visit did not, however, think that there was much abuse. It was his impression that the husbands of the women usually earned only from 15*s.* to 18*s.* a week and that the greater number were cabdrivers or fishermen. Though this state of affairs can scarcely be considered as very satisfactory it is, with regard to the prevention of hospital abuse, the best that Brighton has to show and it has sufficed to bring about favourable results. In consequence of these measures, such as they are, to prevent abuse, and, above all, as a result of the departure of the popular midwife, the number of patients has considerably decreased. They amounted, as already stated, to 1240 in 1894. In 1895 there were 1172 patients; in 1896 only 1024 patients; and I am told that the figures for 1897, when published, will show a further reduction to 955. These figures are rendered more significant by the fact that the population has, at the same time, been steadily increasing.

As an example of the sort of abuse which has been checked a case was mentioned to me of a woman who applied to the Lying-in Hospital though her husband subscribed to the Hearts of Oak, which allows 30*s.* at each accouchement. Many members of this benefit society strive to be admitted to the hospital for nothing and in this they are often encouraged by people who ought to know better. Thus a man employed by a large dairy paid a fee of £20 for the operation of abdominal section performed on his wife. His employer reproached him for having expended so large a sum and told him that he should have sent his wife to the hospital, where the operation would have been done for nothing. Of the cases of abuse which have not been prevented that of a well-to-do shopkeeper was mentioned to me. It was necessary to induce premature labour for his wife and this was done at the hospital. Another case related to a patient who offered his usual medical adviser four guineas to attend his wife during her confinement. As, however, the patient in question lived a long way off the medical man refused to take the case and recommended a local practitioner whose house was close at hand. Subsequently, and on making inquiries, he found that the woman had been taken to the Lying-in Hospital in West-street, and yet her husband had offered to pay four guineas. In a paper read by Dr. Waring at a special meeting of the Brighton Medico-Chirurgical Society in November, 1895, there occurs the following passage: "Dr. A. H. Dodd and I have written to the following large towns for information—viz., Portsmouth and its adjoining towns, Worthing, Hastings, Eastbourne, Tunbridge Wells, Lewes, Maidstone, Ramsgate, Margate, Dover, Rochester, Red Hill, and Folkestone, covering a population of a little over half a million—and we find that they have no lying-in institutions among their charities. The married people in those towns study the principles of thrift. I firmly maintain that it is not right that a woman should be attended gratuitously in her first accouchement. People should certainly not be encouraged to marry who have not saved sufficient to pay for the expenses of the first little stranger's arrival. I am in possession of the names of men employed in large business firms and receiving wages of over £2 a week and adding to their income by letting apartments who have received from the lying-in charity that assistance for their wives which is only intended for the poor." But, as already remarked, the abuse of the Lying-in Hospital has been greatly reduced since these words were spoken; and as such reform can be achieved with regard to the maternity institution it makes it all the more pertinent to inquire why similar measures are not enforced at the other hospitals.

The Lying-in Hospital was not the only institution criticised and publicly denounced. It was pointed out that in 1894 there were at the Throat and Ear Hospital 55 cases of impacted wax and 14 of simple tonsillitis, and at the Sussex County Hospital 33 cases of circumcision. Such cases do not require long or special attention. Two or three visits from a local practitioner would have sufficed and circumcision could in most cases be deferred till the parents were in a position to pay a small fee to their ordinary medical attendant. Looking at the report for 1896 of the Throat and Ear Hospital I find that there were 63 cases of impaction of wax, and during the same year there were 44 cases of circumcision at the Sussex County Hospital. In 1895 Dr. Waring brought to the notice of the profession a certain number of incidents as examples of the sort of abuse which was prevalent. He said that a county cricketer was at that time sending his daughter to be gratuitously treated at the dispensary. A male patient of the same institution was renting a shop of at least £40 a year. He was a foreman at some works and his wife was also earning a livelihood. Another man in constant employment, earning from 35*s.* to £2 a week, with his son assisting in a shop and his wife letting apartments, sent his infant for treatment. A gentleman living in one of the best parts of Brighton subscribes 10*s.* a year to the dispensary; he sent a young lady relative who was living in his house to be treated for varicose veins and she took away with her elastic stockings, and the gentleman had still remaining after this tickets for four months' more attendance. A man who keeps a shop for which he pays £50 rent, and whose wife lets apartments, sent his children to the Sussex County Hospital. One of Dr. Waring's patients was suffering from cataract; he lived on a pension and had some savings. Dr. Waring offered to procure a surgeon to remove the cataract for the reduced fee of five guineas. The patient replied that he could well afford to pay that sum. Nevertheless, he went to the Eye Hospital, where the operation was performed gratuitously by the very same surgeon. The result of this state of things—and several other similar examples were given—was described by Dr. Waring in the following words: "I have seen no end of young medical men, gentlemanly in manner, well skilled and conscientious in the performance of their professional duties, come into the town with the just expectation of earning a living and leave after a few years' struggle utterly ruined. Some years ago a few doctors in Brighton and Hove together with one or two other philanthropists started a Medical and Surgical Home in Ellen-street and they advertised for resident patients and got some from different parts of the country. There was also a dispensary attached to it where the sick and injured could resort and by purchasing a ticket for one penny receive advice and treatment. Of course a large number flocked to it. A little prior to this a medical man came to Hove whom I knew slightly. I met him once in the street, and from what he told me and from my knowledge of him I knew that he was doing well and was able to support his wife and family; but some time afterwards I met him again and he was shabby in appearance and looked depressed. I asked him what was the matter and received the reply that the Medical and Surgical Home in Ellen-street, together with the General Dispensary, had ruined him."

Calling on a member of the honorary staff of this dispensary he informed me that undoubtedly many of the patients appeared to be in a good position. If inquiries were made it would often be found that the husband was an engine-driver; but the patients would argue that they had a right to come because they put a penny a week into one of the boxes which are known at Brighton as the "workmen's boxes." This is an old-standing practice. An employer sends the box round and with the pennies collected from his workmen he buys tickets which he gives to the workmen or their families. Of course the employer does not make any close inquiry into the position of his workmen, whose wives are often lodging-house keepers and thus make a good income. At the railway works there are many labourers and others who receive very low wages and are generally fit persons for a charity. But the skilled artisan whose wife lets lodgings can well afford to pay a few small fees for ordinary illnesses or he can join a provident club; and I am told that there are ten or twelve fully-qualified practitioners in Brighton who will take sixpenny fees. Indeed, the situation of the profession at Brighton is at present so deplorable that I was told that it would be inexpedient to attempt to raise the club fees. There are too many starving medical men ready to take the place of anyone who should complain. Another general practitioner, however, urged that the competition of the provident dispensaries was more disastrous than that of the hospitals. A medical man on the staff of the General Dispensary admitted to me that there certainly was some abuse, but not much. The medical officers had to report cases of abuse; but, of course, they could not do this very often. He

himself had reported a case of gonorrhœa on the ground that if a man could afford dissipation he could afford to pay a medical practitioner's fee. Besides there were medical men who undertook to attend a patient at his house for a whole week for only one shilling. In the face of such competition it was very difficult to act and he felt that if he attempted to prove cases of abuse he would become unpopular. One of his patients, a lady in receipt of an income of £500 a year, said that she was absolutely unable to pay £40 for a very serious operation, therefore she went up to London to get it performed at a cheaper rate. Many persons living in very good houses came to the dispensary, but in spite of appearances they were sometimes in very precarious positions. Lodging-house keeping is very hazardous and it often happened that all the furniture of persons so engaged was seized and sold. He did not think that the well-to-do tradesmen of Brighton were particularly prone to attend the hospitals; but nevertheless there was a widespread feeling that medical men were defrauded, but it was difficult to obtain positive proofs of the fact. Then the medical men had a great amount of gratuitous work to do for curates, governesses, and domestic servants.

The General Dispensary was founded in 1809, therefore it is a very old-established institution, and has so grown in importance that there are now a western branch and a northern branch besides the parent institution. At each of these there is a house surgeon attached who receives a salary of £140 a year but is debarred from private practice. Then there are four district medical officers who receive between them £280 a year. But apart from the paid staff there is an honorary consulting physician, an honorary consulting surgeon, an honorary visiting staff of twelve physicians and surgeons and two dental surgeons. This staff attended during the year 1896 no less than 15,078 patients and this was a decrease of 700 on the previous year. At the western branch there are wards and here 125 in-patients were treated in 1896. The number for the previous year was 113. There are fifteen beds at the western branch so that this constitutes yet another hospital. Patients are accepted at the General Dispensary on presenting a letter of recommendation and on paying a registration fee of 6*d*, but free letters are distributed in return for contributions from friendly societies and to the collectors of workmen's boxes. Subscribers of only half a guinea annually are entitled to recommend six patients, and of course a much larger number of recommendations are given in exchange for larger sums. The government of the institution is vested in benefactors of £10 10*s*. and upwards and in subscribers of £1 1*s*. or more annually, and they are entitled to attend the general annual meeting so as to elect the committee of management and all officers. For these meetings Masonic lodges, friendly societies and other institutions of a similar character which subscribe £3 3*s*. annually may nominate a representative. The house surgeons and the district medical officers have to visit at their homes such patients as are unable to attend at the surgery. Then there is a Samaritan fund for the purpose of providing patients with extra diet, &c. The in-patients are received at the western branch on the recommendation of the house surgeon or one of the branch honorary medical staff. But domestic servants or other workpeople employed by governors living in the district may be received as in-patients on the payment of not less than 12*s*. weekly. The income from all sources during the year amounted to £3800, of which £691 consisted of dividends on investments; the patients' 6*d*. registration fees amounted to £253 and the contents of the workmen's boxes to £309. The annual subscriptions amounted to £820. Then there were donations and life subscriptions to the amount of £495; congregational collections, £206; and legacies, £1022. I have omitted the shillings and pence. These figures show the importance of this institution and the population of Brighton is estimated for the year 1896 at 120,000. As an example of abuse a case was related to me concerning a man who is employed by the town and receives a salary of 30*s*. a week. Two or three of his children are in regular employment and his wife does a good business in letting apartments. Nevertheless she took her child to the dispensary to be treated for a fractured arm and when the surgeon in attendance expressed his surprise she replied: "Is not the dispensary a place for all accidents?" On another occasion a tradesman who pays £35 rent for his house and lets apartments obtained a dispensary ticket and took his child there to be treated for a slight injury to the forehead. Then another case was mentioned to me of a child who was a patient at the dispensary though the father earned as a gardener 27*s*. a week, owned a house worth £25 a year, and did a good business in letting apartments. It is generally felt that far too many letters of recommendation are given in exchange for small subscriptions.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Asylum Accommodation in Lancashire for Pauper Lunatics.

AT the recent quarterly meeting of the Lancashire Asylums Board, held in the County Hall, Preston, Mr. Shelmerdine (Liverpool), on behalf of the Lord Mayor of Liverpool, drew the attention of the board to the delay in the completion of the extra wards at Whittingham Asylum. The Lord Mayor had received a letter from Dr. Raw (the medical officer of the Mill-road Infirmary, Everton) complaining of the congested state of the insane wards in that institution, which were so crowded that it was impossible for him to give adequate supervision to dangerous lunatics. Eight lunatic cases were sleeping (at the time Dr. Raw wrote) in the ordinary wards, a state of things to be greatly deplored. The chairman of the Whittingham Asylum Committee said the work had been greatly hampered by strikes and other causes, but they were making every effort to hasten the completion of the necessary wards. The Lord Mayor of Liverpool takes an active interest in the matter, being a member of the West Derby Board of Guardians.

Hospital Saturday Workshops' Collection.

On Saturday, May 21st, the twenty-eighth annual collection in the workshops, warehouses, and other industrial establishments in the city on behalf of the medical charities took place. During the past twenty-seven years the sum of £80,172 has been raised by means of this agency. The collection in the streets called the "ladies' day" are fixed for June 11th, after which date the combined amounts will be advertised.

Hospital for Women, Shaw-street.

Dr. John E. Gemmell, the junior assistant medical officer, has been promoted to the post of acting medical officer, rendered vacant by the resignation of Dr. T. B. Grimsdale. Dr. David Smart has retired from the honorary staff of the hospital after eleven years' of devoted service. Much regret is felt both by the medical staff and committee at the severance of Dr. Smart's connexion with the hospital, for with all of them he was deservedly popular.

The Robert Gee Medical Scholarship.

Mr. Hubert Gordon Thompson, a former student of the Liverpool College, has been the successful candidate in the competition for the Robert Gee Medical Scholarship at University College, Liverpool. Mr. Thompson had previously matriculated at the University of London, having been placed in the first division.

Sir Henry Tate, Bart.

Mr. Henry Tate, formerly resident in Liverpool, who has been the recipient of a baronetcy on the occasion of the Queen's birthday, has been a generous benefactor to the city of Liverpool. He contributed £8000 to the funds of the Liverpool Royal Infirmary and generously assisted other local medical charities, besides contributing largely to the Royal Jubilee Nursing Fund. The spacious library in University College, Liverpool, was also one of Mr. Tate's numerous benefactions. His eldest son and heir to the baronetcy also takes an active interest in hospital work, being a member of several committees, notably of that of the Liverpool Royal Infirmary.

May 31st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Perils of the Medical Profession.

ANOTHER name has been added in Glasgow to the long roll of those who have fallen in the performance of duty. Mr. Thomas Henderson, son of Dr. T. Brown Henderson of that city, a student of medicine of much promise, has at the early age of twenty-two fallen a victim to blood-poisoning contracted in the pursuit of his hospital work as the result

of assisting at an operation (a case of osteomyelitis) in the Royal Infirmary. Seven weeks ago he became affected with blood-poisoning which seemed to have passed off satisfactorily, until Sunday, May 15th, after returning from church, fresh symptoms of blood-poisoning manifested themselves in the form of dark spots on the skin and also on the mucous membrane of the mouth and throat (purpura hæmorrhagica), and in spite of all that medical skill could do the disease proved fatal in seventy-three hours from effusion of blood on the brain. Mr. Henderson was of a singularly amiable disposition and was ardently devoted to his medical studies and much sympathy is felt for his father in the painfully sad circumstances. It is somewhat striking that several members of the profession in Glasgow have recently suffered from blood-poisoning similarly contracted, and we understand that one of these was an eminent surgeon who was infected from the case at which Mr. Henderson assisted when he received the blood infection. Only in Mr. Henderson's case, however, has a fatal result ensued, although in the case of the surgeon referred to the illness assumed for a time a serious character.

June 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Rotunda Lying-in Hospital, Dublin.

THE Lucina Bazaar and Fête, which was held in aid of the funds of the Rotunda Hospital, came to a conclusion on May 21st and proved most successful both as an entertainment and as a means of earning money for the funds of a great charity. The bazaar was formally opened by her Excellency the Countess Cadogan, who afterwards visited the performances in the gardens of the Rotunda on more than one occasion.

The British Dental Association and Dr. Stack of Dublin.

At the meeting of the British Dental Association, which took place at Bath on May 28th, a resolution was proposed by Sir Edwin Saunders, dentist to the Queen, that the following message, expressing the feeling of the assemblage, should be despatched to Dublin:—

That the members of the British Dental Association, now assembled at Bath for their annual meeting, desire to give expression to their heartfelt sympathy with Dr. Stack, and in doing so they would indulge in the hope that a further turn of rest may enable him to be restored to his family and to resume the duties and pursuits of active professional life.

Dr. Stack, the President of the British Dental Association and Professor of Dentistry at the Royal College of Surgeons in Ireland, occupies the very highest position in his branch of the profession here and is most deservedly popular not only among dentists but also with his colleagues at the College of Surgeons and elsewhere. Wide sympathy is felt with him in consequence of the severe attack of illness from which he now suffers. It is hoped, however, that he will soon be convalescent and able to resume his professional duties.

Hospital Saturday in Belfast.

Hospital Saturday in Belfast was held on May 28th, when about £400 was realised—that is, £80 in excess of 1897, and a larger amount than was obtained at any time during these last five years.

Queen's College, Cork.

The Cork College was very well represented at the recent medical examinations of the Royal University, as may be seen by the following statement:—Second Examination: Honours and exhibitions awarded to two students, one of whom was educated at Queen's College, Cork. Third Examination: Honours and exhibitions awarded to two students, one of whom was educated at Queen's College, Cork. Degree Examination: Honours and exhibitions awarded to two students, both of whom were educated at Queen's College, Cork. It will thus be seen that out of a total of six honours and exhibitions awarded at the various examinations four were won by students of Queen's College, Cork.

Dr. Thomas A. Kelleher has been appointed house surgeon to the Waterford City and County Hospital.

The Local Government Board for Ireland have appointed Mr. Edgar Flinn, F.R.C.S. Irel., D.P.H., of Kingstown, to be a medical inspector under the board.

June 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Agglutination of Tubercle Bacilli.

M. S. ARLOING made a communication to the Academy of Sciences on May 16th on the subject of the Agglutination of the Bacillus of Tuberculosis. He said that Koch's bacillus, like several other pathogenic microbes, may be made to agglutinate by certain serums. If to some drops of a homogeneous culture or emulsion of the bacilli there is added one-tenth of blood serum of a healthy goat which has never received any inoculation no agglutination is produced. If for this serum there is substituted that of a goat which has been submitted to a long series of subcutaneous injections of more or less virulent samples of either tuberculin or Koch's bacillus phenomena of agglutination soon make their appearance in an intense and complete form. The slight natural agglutinating power of the blood of the ass also increases considerably under the influence of such injections. The agglutinating power of normal serum of different kinds is in inverse ratio to the tendency of the respective animals to contract or to resist tuberculosis. It does not exist in the rabbit and the guinea-pig, which are easily rendered tuberculous; it is very slight in the goat, is more pronounced in the ox and the ass, and is very marked in the horse, which rarely becomes tuberculous. Serum rendered strongly agglutinating by subcutaneous injections of Koch's bacilli or tuberculin produces agglutination either in cultures growing in liquid media or in homogeneous emulsions of fowl tuberculosis, a phenomenon which tends to show a relationship between Koch's bacillus and the bacillus of fowl tuberculosis. The action of the agglutinating serum shows itself equally well in the case of bacilli growing in glycerinated bouillon. The agglutinating power may originate and develop in a very short space of time. Attempts to obtain agglutination in the diagnosis or prognosis of tuberculous disease in the human subject have given the following results: (1) the blood serum of persons affected or supposed to be affected with true pulmonary phthisis caused agglutination 94 times in every 100—complete agglutination 57 times and incomplete 37 times; (2) the blood of patients suffering from surgical tuberculosis caused agglutination 91 times in every 100—complete agglutination 35 times and incomplete 56 times; (3) the serum of various patients caused agglutination 32 times in every 100—very good agglutination 11 times and imperfect 21 times; and (4) the serum of persons supposed to be healthy caused agglutination only 22 times in every 100—very good agglutination 11 times and incomplete 11 times. The proportion of positive results gives reason to hope that the agglutination of Koch's bacilli may prove useful as a clinical method.

The Prophylaxis of Tuberculosis.

In the discussion on M. Grancher's report to the Academy of Medicine on the prophylaxis of tuberculosis, M. Gibert of Havre proposed at the meeting held on May 24th that the academy should represent to the executive the desirability of instructing the prefects to take measures for the disinfection of places occupied by persons who have died from phthisis, whether in town or in country. He remarked that in Havre there are streets inhabited by poor people where phthisis nevertheless does not exist, while, on the other hand, there are streets in which the death-rate from phthisis is 13 per 1000. As for phthisis among soldiers, he has constantly seen army surgeons pass into the service young men affected with tubercle and whom he had certified to be so affected. In order to avoid hurting the feelings of the army surgeons he thought that the medical men in attendance on such cases ought to communicate directly with the prefects and sub-prefects of the departments. M. Laveran said that latent tuberculosis was much more common in the army than was generally supposed. Some soldiers did not venture to go on the sick list and in this way might suffer for a long time from unrecognised tuberculosis; they might also be the means of imparting the disease to their comrades. With regard to such prophylactic measures as the use of spittoons and the damping of whatever has to be swept it has not been found possible to carry out these precautions efficiently, and sweeping is once more done in the ordinary way, raising clouds of dangerous dust. Although paraffin and coal-tar rendered flooring-boards impervious to unwholesome matter, these substances were nevertheless not used in the majority

of barracks. M. Ferrand said that the notification of contagious and infectious disease entails many difficulties. The law of 1892 is too seldom put in force as it is, but what would be the state of affairs if it were extended to tuberculosis? Up to the present time notification of infectious diseases has been made by only a small number of medical men—6 out of 25 in one department and 2 out of 13 in another. The duty of notifying ought not to be laid on the medical men, but on the family and on those who have the care of the patient. A satisfactory way would be for the medical man to have a book with counterfoils, from which book he could detach a page containing a notification and leave it with the family to be sent by them to the authorities. According to M. Collin the precautions taken in the army—namely, the use of spittoons and sprinkling with water before sweeping—are insufficient and ought to be supplemented by additional measures, such as the renewal of floors, the rendering of them non-absorbent, local disinfection, the construction of new mess-rooms, and the providing of infirmaries apart from the living-rooms.

Medical Men in the New Chamber of Deputies.

The last Chamber of Deputies contained 55 medical men. Of this number 7 did not offer themselves for re-election; of the 48 who sought re-election, 14 were not returned, while at the same time 14 new medical members have been elected, so that 48 medical men will have seats in the new Chamber—a reduction of 7 on the number in the preceding one.

The Tarnier Bequest.

The municipal council of Dijon has just received a copy of the will of Dr. Tarnier. He bequeaths sundry articles to the Dijon museum, and 100,000 francs (£4000) to the city, to be employed in some charitable work at the discretion of the city; he, however, expresses the wish, without imposing it as an obligation, that the money should be applied for the benefit of pregnant or lying-in women or newly-born children. The Council has decided to give the name of Tarnier bequest (*legs Tarnier*) to this fund, and one of the streets of the city will be called after the late eminent professor.

May 31st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Ether-Drinking.

IN the *Vierteljahrsschrift für Gerichtliche Medicin* Dr. Cohn, medical officer of health of the district of Heydekrug, draws attention to the fact that the habit of ether-drinking has become prevalent there. This district is situated in East Prussia, near the Russian frontier, and has recently acquired some notoriety in connexion with leprosy imported from the adjacent Russian territory. The population consists principally of Lithuanians, who are of Slav race and whose social and hygienic condition leaves much to be desired. They were formerly much addicted to spirit-drinking, and when spirits became expensive on account of an increase in the duties ether was substituted. It is said that a feeling of pleasurable exhilaration is produced more rapidly by ether than by alcohol, and that the subsequent depression and discomfort are less marked; unfortunately, however, this stage of exhilaration is only too transient. This use of ether causes chronic catarrh, fatty degeneration of the heart, atheroma of the great vessels, cirrhosis of the liver and cerebral troubles which may result in idiocy. The habit of ether-drinking has taken such a hold of the people that, according to Dr. Cohn, on market days when the peasants from the neighbouring villages are in town the smell of ether from their breath is perceptible everywhere. When a vehicle occupied by peasants is met on the high road a cloud of ether seems to float along. Both sexes equally have this failing and when the market is over men and women in nearly equal proportions may be seen intoxicated in the streets. The school-teachers report that mere children often come to school showing signs of having taken ether before leaving home. Mothers also give it to children suffering from abdominal pain. Ether may be easily obtained in the druggists' shops and licensed pharmacies, where it is sold without a medical man's order in the form of "Hofmann's drops" (ether 1 part, alcohol 3 parts). Dr. Cohn is of opinion that the injurious effects of ether warrant its being classed with opiates, arsenic, and other drugs which are only sold for medicinal purposes and on presentation of a prescription by a medical practitioner; he considers, therefore, that the amendment necessary for this purpose ought to be made in the instructions contained in the Pharmacopœia as well as in the regulations of the pharmacies.

The Berlin Accident Service.

An interesting trial of the efficiency of the Berlin ambulance and first-aid service was made on May 19th. At 7 P.M. the chief medical officer of the Berlin police, Dr. Wehmer, without previous notice ordered an urgent telegram to be sent from the central police-station to all the branch police-stations by the special police wires. The telegram was as follows: "Great disaster at Alexander-street. Alarm all the ambulances and surgeons of the accident service (*Unfall-Stationen*). You are strictly forbidden to mention that this is only a false alarm." When the police-stations had received this telegram they telephoned to the *Unfall-Stationen*, which at once sent vehicles to the scene of the alleged disaster. The surgeons were very much astonished when they found no dead or wounded, but only Dr. Wehmer and some other police and municipal officials. It was stated that ten minutes after the alarm was given two surgeons were in attendance with assistants and dressing material; five minutes later two horse ambulances appeared, and before long there were 10 ambulances and 25 surgeons on the spot—surely enough to attend a great many injured. The last ambulance from the most distant quarter of the city arrived about forty-five minutes after the alarm. The sight of so many ambulances driven rapidly through the streets brought a great crowd to the place of the alleged disaster. The excellence of the organisation of the first-aid service was fully proved by this sudden rehearsal.

Hygiene on Railways.

The Imperial Health Office has recently issued instructions with a view to prevent the spread of disease by railway traffic. The regulations are especially intended for the lines leading to and from health resorts which tuberculous patients are in the habit of visiting. It is recommended that the sides of the sleeping-cars of these lines should be as smooth as possible and without corners so that they may be easily cleaned. Velvet should not be used for the cushions, which, moreover, should be capable of being easily removed for the purpose of disinfection. Every compartment ought to be provided with covered spittoons. The floors of the waiting-rooms in the stations ought to be washed every day and the walls at short intervals. The walls are to be painted with oil paint which can be frequently washed. When new premises are to be constructed special attention must be paid to matters of hygiene. The Minister of Public Works, who has the control of the railways, has communicated these recommendations of the Health Office to the railway authorities and has ordered them to be adopted.

May 27th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrimage declared Foul.

THE Quarantine Department in consequence of the existence of plague in the holy places has now declared this year's pilgrimage to be infected. It is difficult to see how they could have taken any other course. The troubles of an International Quarantine Council are, however, interminable, for every nation insists on its own interests being studied and it must be assumed officially that all are equally honest and interested in modern hygiene to the same degree. A case has just occurred which illustrates this official difficulty and also the importance of trying to foresee the possible negligence of any one quarantine inspector. Some members of the board recently desired to put the whole of the west coast of Arabia into quarantine because of plague at Jeddah, and presumably at other ports of the Hedjaz. Moreover, it was felt that a Turkish military cordon round any given place constituted no real safety that disease could not leak through it. The Turkish representative protested and cited as an argument that when plague exists at Bombay or Karachi the whole of the western coast of India is not declared infected. The official number of Egyptian pilgrims this year is 4541.

Case of Imported Plague at Suez.

A vessel belonging to the Khedivial Postal Steamers, which run every fortnight between Suez, Yambo, Jeddah,

and Suakin, is now the centre of some interest. It appears from the official reports that the ss. *Mehallah* left Suez with mails and passengers in the ordinary way on April 19th, left Tor on April 20th, and arrived at the outer harbour of Jeddah on April 23rd, where she stayed for two and three-quarter hours to discharge mails, but did not receive anyone or anything on board from Jeddah and never entered the inner port. The same day, April 23rd, she stopped at Ras el Aswed, the temporary port for Mecca, south of Jeddah and its neighbouring islands, and of course on the west coast of Arabia in Turkish territory. Here she stayed two and a half hours to disembark 67 Egyptian pilgrims from Suez. Their baggage was landed by means of a winch and crane; no person from the shore or boats came on board and no person on board went into the boats or ashore. In fact, it is stated, both here and at Jeddah, that there was no personal communication. I give merely the official story, but I may state here that the captain, doctor, and crew of the vessel are Egyptians. Later the *Mehallah* called at Suakin and returned to Suez on April 30th, where the quarantine officer, Dr. Hodgson, gave her free pratique because there was no illness on board and because she had come from ports which were officially clean. That is to say, the quarantine officials in Alexandria, in spite of plague at Jeddah, had not decreed that the outer harbour of Jeddah and Ras el Aswed were officially infected. For the same reason the crew and passengers of the *Mehallah* were not specially examined for possible plague and they were naturally allowed to land at Suez and disperse to their homes. On May 1st the Egyptian stoker of the steamer suddenly became ill with rigors, fever, headache, vomiting, and swelling and pain in the right groin. The following day the native doctor from the steamer visited him at his house to see why he did not come on board and reported that he was too ill to do so; and this visit was repeated on the 3rd. Fortunately, on the 4th, about noon, the patient invited Dr. Creswell of Suez to see him. Dr. Creswell at once recognised that it was a case of plague, removed the man to the Infectious Hospital in the desert outside the town, disinfected the house, destroyed or sterilised the effects, and placed the patient's household under observation. The whole incident has been the cause of trouble and anxiety, but this has been minimised to a great extent by Dr. Creswell's ready diagnosis and prompt action. The Sanitary Department in Cairo at once despatched Dr. Bitter to Suez to examine the matter bacteriologically and Surgeon-Captain Garner to carry out all necessary hygiene. The crew of the vessel were all reclaimed from their homes in Suez and, though all healthy, were put on board the *Mehallah* in the dry dock and eventually despatched to Moses' Wells, where they remain under the charge of the quarantine officials. The families of the crew are also being kept under observation. The 17 passengers landed at Suez were next traced by the police, some having already reached Upper Egypt. 16 are all healthy and are being kept under police inspection. As they all came from Suakin and not from Jeddah there cannot be any risk of primary plague among them. The remaining passenger died at Suez in the French hospital soon after landing and this naturally excited some comment, but it is now known that he died from phthisis, that he had been ill for four months, and that he made this voyage in order to consult Dr. Zachariades at Tor, who knew him as a former patient in the last stage of tuberculosis. Dr. Creswell on examining the stoker found that he had a small wound outside the right ankle, which may have been the site of the entry of the bacilli; his femoral and inguinal glands were enlarged and he had severe headache, weak and rapid pulse, albuminuria, and fever (102·6° F., rising to 104° that night). On May 5th, when seen with Dr. Bitter, he had a characteristic tongue; his temperature was 102·2°, his pulse was 110, and one of the right femoral glands was red and as large as a pigeon's egg but without fluctuation. Dr. Bitter decided it was a simple bubonic case and at once pricked the gland. Many staphylococci and some degenerated plague bacilli were at once seen under the microscope and later cultures were developed in the ordinary way. Since then Dr. Bitter has kindly shown me in Cairo the plague cultures from this case. The last news of the stoker is that his bubo has discharged a few drops of pus and that he himself is convalescing satisfactorily. Suspicion has now fallen upon a sailor on the *Mehallah*, reported by Dr. Hodgson to have a temperature of 100·4°, a pulse of 100, and a gland in the left axilla as large as a turkey's egg. The diagnosis in this case is not yet made. The health of Suez is now very good, the town is fairly clean, and there is an energetic governor who under English pressure will make it cleaner still. Dr. Ardouin, Dr. Legrand, and Dr. Morrison have also visited Suez, being respectively the Inspector-General, the French doctor, and the British delegate on the Quarantine Board of Alexandria.

Mysterious Importation.

How did this patient get plague? We know that there is no plague at Suez, Tor, or Suakin; we are told there is none at Ras el Aswed; and we know it exists at Jeddah. If we are impolite enough to discredit the official story and assume instead that either at Jeddah or Ras el Aswed, presumably the former, the stoker imported rags, clothes, carpets, or something which contained plague bacilli the case becomes less mysterious. The premonitory symptoms of the illness appeared seven or eight days after the steamer left Jeddah. Now, observers at Hong-Kong and in Bombay have told us that the incubation period is from three to five or even ten days. In cases of direct contagion, such as a nurse catching the disease from a patient, we know (in Bombay) the incubation period may be as short as three days. But it is fair to assume that weakened bacilli lying dormant in clothing may take longer than five days to develop; also we cannot tell whether the unfortunate stoker infected his ankle the same day on which he visited the coast of the Hedjaz or later.

Cairo, May 11th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

A National Society for the Study of Epilepsy and the Care and Treatment of Epileptics.

IT is proposed to establish a national society for the study of epilepsy. It has been roughly estimated that there are 140,000 epileptics in the United States. There is not at the present time any organised body—scientific, professional, lay, or philanthropic—for the study of epilepsy and the care and treatment of the epileptic. It would seem that a national society or association for the study of epilepsy and the care and treatment of epileptics might serve a useful purpose and do the greatest good, but it should be organised along broad and comprehensive lines. A summary of its proposed work may be stated as follows: 1. The scientific study of epilepsy. 2. The rational treatment of the disease. 3. The best methods of caring for dependent epileptics, including (*a*) the construction of proper homes based upon a study of the epileptic's need as to classification and environment; (*b*) the study of the utilisation of the epileptic's labour for economic, scientific, and ethical reasons; and (*c*) the study of the best educational methods to be employed, including manual, industrial, intellectual, and moral forms and forces. In such a society, science, philanthropy, and practical charity may well combine for a common purpose.

Eucaine.

The latest anæsthetic preparation is eucaine, prepared from a South American plant, and in its local action similar to cocaine, but without any of the poisonous effects of the latter, even though employed in much larger doses. The severest test as yet reported was the amputation at the lower third of the leg of a man, sixty-eight years old, without the use of chloroform or ether, followed by rapid and painless healing of the stump. As much of the eucaine was put into two or three tablespoonfuls of water as the water would dissolve and with a hypodermic syringe a few drops of the solution were injected under the skin; about 1 in. from the centre of the injection another was made, then another, until the limb was girdled by them at the place where amputation was intended. After waiting five minutes to allow the superficial tissues to become insensible the needle was thrust deeply into the muscles and injection made; in a few minutes all that portion of the leg, including 3 in. or 4 in. above and below the ring of injections, was found to be destitute of feeling, and the operation of cutting off the limb was proceeded with exactly as with chloroform. When the deeper tissues were cut into a slight smarting sensation was experienced a few times, but immediately relieved by the application of a little more of the solution to the seat of the discomfort.

The National Conference of Charities and Correction.

This conference celebrated its twenty-fifth birthday in New York on Wednesday, May 18th. The conference was organised in 1874 and has met annually since that time. It is composed not only of the representatives of charitable and correctional institutions and societies, but also of men and women who are interested in the broad field of charity in the United States, Canada, and Mexico, and has at the present time nearly 1200 members. The meetings of the conference bring together a large body of people who are earnestly interested in good works and who constitute a congenial fellowship. The conference continues for a week. General meetings are held daily and section meetings are held for the discussion of social subjects, such as charity organisation, dependent children, insanity, juvenile reformation, prison reforms, municipal and county charities and college settlements. The conference has no tests of membership. It offers a free forum to all who are interested in these branches of sociology.

Conditions favouring Tuberculosis.

The Massachusetts Board of Health, in its conclusions relating to the prevalence of tuberculosis in the State, emphasises as one of the chief conditions favouring the production of that disease the continuous and habitual breathing of unrenewed air; consequently in workshops, factories, schoolrooms, public buildings, halls, churches, and the inhabited apartments of dwellings and tenement-houses the absence of adequate means of ventilation must conduce to augment the danger. Of course, dampness of soil on which a house stands and dampness of the immediate neighbourhood tend to the same result, as does, naturally, the occupancy of living- or sleeping-rooms or apartments which are constantly damp or are partly or wholly underground. Another factor inducing the spread of this disease was found to be the presence of dust in the air of apartments, factories, mills and workshops; hence, necessarily, occupations or trades in which men, women and children are exposed to the inhalation of irritating dust must increase the liability to contract phthisical ailments.

May 19th.

Obituary.

JOHN BARRITT MELSON, M.D. CANTAB.

AT the advanced age of eighty-seven years Dr. Melson passed quietly to his rest on May 30th at his country house at Lapworth, near Birmingham. For many years Dr. Melson was widely known in the Midland counties, not only as a physician of high scientific and cultured knowledge, but also as an eminent and powerful preacher in the Wesleyan cause. In this direction he attained a celebrity which overshadowed his professional duties and led him to the pursuit of theology more than that of medicine. The son of a Wesleyan minister, Dr. Melson was born in Forfarshire in 1811. At the age of fourteen years he was apprenticed to a Mr. Harris, a surgeon in Birmingham, where for several years he learned the practical part of his profession. Proceeding thence to Trinity College, Cambridge, he took, after five years' residence, the degrees of Bachelor in Arts and Doctor in Medicine; here, too, he was on account of special merit elected a Fellow of the Cambridge Philosophical Society. At the age of twenty-four years he returned to Birmingham and at once began practice as a physician, and on the founding of the Queen's Hospital he was appointed on the staff. About the same time he became Professor of Natural and Experimental Philosophy and Clinical Medicine at Queen's College. At this period, too, he lectured upon physics and electrodynamics at the Philosophical Institution, having among his pupils the late Archbishop of Canterbury (Dr. Benson) and the present Bishop of Durham (Dr. Westcott). At the first meeting of the British Association in Birmingham Dr. Melson and Dr. Golding Bird were joint secretaries of the chemical section. Faraday was also a friend of his and entrusted him with complicated problems to solve in the way of his scientific knowledge. At an early age he was appointed a justice of the peace for the borough and he discharged these duties with painstaking care for many years, long remaining the senior magistrate on the local bench. A man of conspicuous abilities, of high scientific attainments, and of wide and profound classical and general learning, he devoted his energies to the promotion of good works and to the advancement more particularly of the Wesleyan cause. Tall and commanding in person, dignified in bearing, of genial and kindly manners, his presence will be greatly missed, his death causing the breaking of a link in the long chain of the past. He leaves three sons and three daughters, having married in 1836 Miss Waller, of Luton, Beds, who died in 1879.

HENRY HAYMAN, F.R.C.S. ENG.

BY the death of Mr. Henry Hayman, which occurred on March 21st last, at the age of eighty-six years, there has passed away one of the few remaining representatives of what in its best sense is understood as the old school of general practitioners. Descended from good old Devonshire families through both parents, Henry Hayman was born at Axminster in 1812, where his father conducted an extensive practice for many years. Educated at Blundell's School, Tiverton, he became a student at St. Bartholomew's Hospital, where he was contemporaneous with such men as Paget and Holden. He passed his M.R.C.S. and L.S.A. examinations in 1834 and had the Fellowship of the Royal College of Surgeons of England conferred upon him in 1858. Commencing practice at Chelsea and afterwards at Margaret-street, Cavendish-square, he was for some years consulting-surgeon to Queen Adelaide's Royal Lying-in-Hospital. In 1848 he returned to Ottery St. Mary, where under the strain of a large general practice his health broke down; but after a period of rest he again entered upon active practice in 1868 at Stokenchurch, Oxfordshire, from which he retired and finally relinquished practice in the year 1884. Whilst at Stokenchurch he won the gratitude of the people by securing for them a public water-supply in the face of bitter opposition from some of the owners of property. Here he also founded a lodge of the Oddfellows Society known now as "Court Hayman," the members of which have testified their lasting gratitude to him in a recent letter to the family. A staunch Churchman, he was a man of high culture and genial disposition, of fine physique with a handsome face, rich voice, and possessing a keen sense of humour and an almost inexhaustible store of anecdotes gleaned through a long life of active and varied intercourse with his fellow-men.

THOMAS GIORDANI WRIGHT, M.D. LEYD., M.R.C.P. LOND.

DR. THOMAS GIORDANI WRIGHT, who died in Wakefield on May 27th, had been in practice in that city for the long period of sixty-five years. He was born in February, 1808, at Stockton-on-Tees, where his father and grandfather were organists at the parish church. Dr. Wright received his medical education at University College, London, and also in Edinburgh. He became qualified as L.S.A. in 1830; in the following year he was admitted M.R.C.S. Eng. and graduated as M.D. at the University of Leyden. In 1841 he became a Licentiate of the Royal College of Physicians of London and a Member in 1859. He was present at the opening of the Stockton and Darlington Railway in 1825, and was one of the original members of the British Association for the Advancement of Science.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Johannes Alexander Garten, *privat-docent* of Surgery in Leipsic, and formerly for many years assistant in the Surgical Clinic of the University.—Professor Friederich Jacob Trier, a well-known Copenhagen physician and author. He was one of the editors of two important Scandinavian medical journals. His father, Dr. Seligman Meyer Trier, took an important share in the work of introducing a knowledge of auscultation and percussion into Denmark.—Dr. Dezanneau, Professor in the Medical School of Angers.—Dr. Neudörfer, *privat-docent* of Surgery in Vienna.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THURSDAY, MAY 26TH.

THE Council met again to-day, the PRESIDENT, Sir WILLIAM TURNER, being in the chair.

The Case of William Masson.

The Council proceeded to the consideration of the case of William Masson of Cottingham, E. Yorks, registered in Scotland Dec. 12th, 1888, as M.B., Mast. Surg. 1888, Univ. Aberd., who was summoned to appear before the Council on Nov. 26th, 1897, to answer the following charge on the complaint of Mr. Edward Ball of Southport, registered as Lic. R. Coll. Phys. Edin. 1886; Lic. R. Coll. Surg. Edin. 1886; Lic. Fac. Phys. Surg. Glasg. 1886:—

That he had acted and acts as cover to an unqualified person named George Watson, who, acting and purporting to act as his unqualified assistant, was and is permitted, authorised, and enabled by him to carry on medical practice and administer treatment to patients as if he (Watson) was a duly qualified and registered practitioner.

It was particularly alleged against him (Masson) that George Watson attended a woman named Higgins in her confinement, using instruments upon her, and that on the death of the woman he (Masson) signed and gave a death certificate purporting to certify that the woman had died from eclampsia. At the conclusion of their deliberations the Council determined: "(1) that the charge made against Dr. William Masson had been proved to the satisfaction of the Council; and (2) that the further consideration of the charge proved against Dr. William Masson be adjourned until the next session."

The PRESIDENT, addressing Dr. Masson, said: I may remind you of your position. The charge which was made against you was fully inquired into in November last and at the conclusion of the Council's deliberations it was determined that the charge had been proved but that the further consideration of it should be adjourned until the present session. So now I have to ask you if the unqualified person, George Watson, is still in your employ.

Dr. MASSON: No, sir; I told you when I was here before that I had already discharged him.

The PRESIDENT: Have you any unqualified assistant in your employ?

Dr. MASSON: I have not.

The PRESIDENT: Will you give the assurance that in the future you will not employ an unqualified assistant?

Dr. MASSON: Certainly I do.

The PRESIDENT: You give the assurance.

Dr. MASSON: Yes.

The Council then deliberated *in camerâ* on the case and when Dr. Masson was recalled

The PRESIDENT addressed him as follows: The Council has further considered your case and the following resolution has been come to:

The Council having further considered the charge against William Masson it does not judge him guilty of infamous conduct in a professional respect.

I may tell you that the Council has come to the decision relying upon your statements that you have ceased to employ an unqualified assistant and that you have no further intention of employing an unqualified assistant. The matter, therefore, is now at an end.

The Case of Julius Mostertz.

The Council next dealt with the case of Julius Mostertz, of 13, Salisbury-road, Noel-park, N., registered in London as Lic. Soc. Apoth. Lond. 1893, who was summoned to appear before the Council on Nov. 27th, 1897, to answer the following charges:—

(1) The complaint related to a dispensary or establishment carried on or conducted at 13, Salisbury-road, Hornsey, under the title of the Noel-park Dispensary.

(2) The complaint was that Mr. Mostertz, being a registered medical practitioner, acted as cover to an unqualified person named George W. Johnson, who, purporting to act as his assistant, carried on at the said Noel-park Dispensary a medical practice and who under cover of Mostertz's name, presence, and assistance was enabled to and did attend on and administer medical treatment to patients and carried on such medical practice as though he were a duly qualified and registered medical practitioner.

(3) The complainants were the Medical Defence Union, Limited.

At the conclusion of their deliberations the Council determined: "(1) That the charge against Mr. Julius Mostertz had been proved to the satisfaction of the Council; and (2) that the further consideration of the charge proved against Mr. Julius Mostertz be adjourned until the next session."

The following letter had been received from Mr. Mostertz:

27, Lordship-lane, Wood-green, N.,
Dec. 13th, 1897.

SIR,—I am in receipt of your letter of Dec. 4th, 1897, and beg to inform you that, in obedience to the order made by the Council on Nov. 27th last, I have dispensed with the services of the unqualified assistant forthwith and have discharged him.

As Mrs. Johnson on her part refused to send him away I have judged it to be the wisest course to sever my connexion with the place altogether.

I beg, therefore, to inform you that from to-day I no longer attend at 13, Salisbury-road, but carry on my practice from 27, Lordship-lane, Wood-green, N.

Yours obediently,
JULIUS MOSTERTZ, L.S.A.

Mr. FARRER, solicitor to the Council, said that the Medical Defence Union, who were the complainants in the case, had been communicated with and they had no further complaint to make. They said they had reason to believe that Mr. Mostertz had severed his connexion with the unqualified person.

Mr. MOSTERTZ appeared before the Council and bore out the statements in his letter. He announced that he had changed his address to 78, Lordship-lane and 1, Salisbury-terrace, which was one house, a corner house. He also gave the assurance that he had no intention of employing an unqualified assistant.

The PRESIDENT, after the Council had deliberated in private, intimated to Mr. Mostertz that, relying on the statement in the letter that he had severed all connexion with the people whose names were mentioned in the original complaint and that he had no intention of undertaking any similar association with unqualified persons, the Council had passed this resolution:—

That the Council, having further considered the charge proved against Julius Mostertz, does not judge him guilty of infamous conduct in a professional respect.

The charge, therefore, against him was at an end.

Unqualified Assistants.

Mr. TEALE moved:—

That the petitions and communications relating to unqualified assistants referred to the General Council by the Executive Committee be now referred to a committee for report thereon to the Council during its present session.

The petitions and communications in question were described as follows:—

(*a*) From 339 registered medical practitioners residing in various districts, desiring that special examinations should be held during the present year for unqualified assistants who have gone through a complete medical curriculum and are over forty years of age.

(*b*) From the Mayor of Wisbech, forwarding a petition, stated to be signed by 3449 persons, praying that Mr. Henry Thorns may be reinstated in his position as an unqualified assistant.

(*c*) From Mr. B. E. Reeves, late an unqualified assistant, seeking permission to continue the practice of midwifery under the supervision of his late principal.

(*d*) From a committee of medical practitioners in Leeds, signed by 138 persons, suggesting that the General Council might modify its recent action in regard to unqualified assistants in view of the fact of the difficulty which is being experienced in obtaining the services of a sufficient number of qualified assistants.

(*e*) T. V. de Denne, who represents that he is unable at the present time to procure the services of a qualified assistant either through friends or agents.

(*f*) From Robert Hugh Wilkin, a registered practitioner, Mem. R. Coll. Surg. Eng. 1893, Lic. R. Coll. Phys. Lond. 1893, on behalf of his father, aged sixty-three years, who all his life has been engaged in medical work, having been apprenticed in 1850, and who was prevented from qualifying by the necessity of immediately assisting his father, whose health had broken down. Latterly the petitioner, who has taken a country practice, has employed his father in a perfectly legitimate manner as an assistant, but now finds himself in the painful position of being no longer able to thus assist his father, and owing to the increased expense of engaging someone else to terminate the career of a brother whom he has been supporting during his course at Edinburgh.

(*g*) From C. Dugdale, who is over sixty years of age, and out of employment in consequence of the resolution of the Council, seeking permission to be allowed to continue his work. He was apprenticed to a medical man in Accrington and went through a regular course of study at University College, London, but owing to family circumstances was unable to go up for the examination. He has assisted in one practice for thirty-five years and can produce testimonials as to his efficiency.

(*h*) From Samuel Whitaker, aged thirty-nine years, son of a late medical practitioner, seeking permission to continue his employment. His hospital course at Guy's was interrupted after two or three years by illness, for which he was sent abroad. On his return he completed his course, but, funds failing him, was unable to go up for examination and since then has been acting as an assistant.

(i) From W. P. Thomas, aged forty years, who has acted as an assistant for twenty-two years to leading practitioners in Wales, desiring permission, in order that he may support a wife and family, to commence business as a chemist or be allowed to pass an easy final examination.

(k) A letter from the secretary of the Committee of Medical Practitioners in Leeds requesting that the committee would receive a deputation.

Mr. TEALE said he thought the Council would agree with him that it was very desirable that these various documents should not be discussed until they had been fully considered by a committee. Evidently this was not a question which the Council could put aside as of no moment; it was a question of very great moment to a large number of practitioners throughout the country.

Mr. BROWN, in seconding the motion, said that the resolutions of the Council on this subject had agitated the mind of the profession to an extent which no resolutions he knew of had done. He could not but think that the Council was to some extent to blame for not having laid down a little more decisively its principles in this matter. A large number of medical assistants had been peremptorily dismissed from employment because it was feared that the attendance of an unqualified assistant even upon an emergency case would bring the principal under the notice of the Council. For himself he thought it must be admitted that now and again an unqualified assistant was necessary in dispensary and ordinary surgery work.

Dr. MACALISTER said that while he was prepared to support the motion he thought it a pity that the report should be prepared and drafted and delivered before their eyes before the committee had met.

A suggestion was made that the words "if possible" should be inserted because it was felt by some members that the committee might not be able to report during the present session. Instead, however, of inserting these words the Council decided to delete "during its present session" and with these words deleted the motion was adopted.

Dr. CHURCH, Dr. MACALISTER, Dr. BRUCE, Mr. BRYANT, Mr. BROWN, and Mr. TEALE were appointed to the committee, Mr. TEALE to be chairman.

The Apothecaries' Hall of Dublin.

On the motion of Dr. GLOVER, seconded by Sir DYCE DUCKWORTH, it was agreed to reappoint Dr. Sidney Coupland as Inspector of the Examinations of the Apothecaries' Hall of Dublin.

The Case of George Hamilton Wyse.

The Council then proceeded to the consideration of the case of George Hamilton Wyse of 51, Talbot-street, Southport, Lancashire, registered in Ireland June 27th, 1871, as Lic. Apoth. Hall, Dubl. 1871; Lic. R. Coll. Phys. Edin. 1871; Lic. R. Coll. Surg. Edin. 1871, who on November 25th, 1897, was summoned to appear before the Council to answer the following charges on the complaints of the Medical Defence Union and the Wigan Medical Guild:—

The complaint related firstly to the medical practice carried on under his name at 88, Adelphi-street, Preston, in the county of Lancaster, and secondly to a medical practice carried on under his name at 95, Wallgate, Wigan, in the same county.

1. The charge against him in respect of the practice at 88, Adelphi-street, Preston, was that he covered an unqualified person named George Wyse, who was, or purported to act as, his assistant, and whom he permitted and enabled, under cover of his presence, name, and qualifications, to attend on and administer medical relief to patients and give medical certificates and generally to carry on at the said place a medical practice as if he (George Wyse) were a duly qualified and registered practitioner.

2. The charge against him in respect of the medical practice at 95, Wallgate, Wigan, was that he covered an unqualified person named Cowan, whom he permitted and enabled, under cover of his name and qualifications, to attend on and administer medical relief and treatment to patients and give medical certificates and generally to carry on at the said place a medical practice as if he (Cowan) were a duly qualified and registered practitioner.

The complainants were, in the matter of the covering of George Wyse, the Medical Defence Union, Limited; and, in the matter of the covering of Cowan, the Wigan Medical Guild.

At the conclusion of their deliberations the Council determined: "(1) That the charge made against Mr. George Hamilton Wyse, in respect of the practice at Preston, had been proved to the satisfaction of the Council; (2) that the charge made against Mr. George Hamilton Wyse, in respect of the practice at Wigan, had been proved to the satisfaction of the Council; and (3) that the further consideration of the charges proved against Mr. George Hamilton Wyse be adjourned until the next session."

The following letter had been received from Mr. Wyse:—

51, Talbot-street, Southport, April 7th, 1898.

DEAR SIR,—I beg to inform you that on the 30th of March I disposed of my practice which I had carried on at 95, Wallgate, Wigan, so that now I have no practice there and have not in my employment any assistant whatever.

I will be glad if necessary to submit proofs that this is the case.

I remain, dear Sir, yours faithfully,
GEO. H. WYSE.

H. E. Allen, Esq.,
Registrar of the General Medical Council.

In this case further complaint is made by the Wigan Medical Guild that Mr. Wyse still employs his unqualified assistant. That he had acted contemptuously towards the General Medical Council in not at once complying with their instructions. It was common knowledge to the members of the Guild that the conduct of Mr. Wyse had not materially improved since he was admonished by the General Medical Council and that the unqualified man Cowan still continued to prescribe for and visit patients as formerly. That owing to the fact that Mr. Wyse still resided at Southport, about sixteen miles from his dispensary at Wigan, he had not or could not exercise that control and supervision over his practice which was required by the General Medical Council.

Mr. Wyse appeared before the Council with Mr. Acland, barrister, as his legal representative.

The PRESIDENT pointed out that the case was not now quite on the footing on which it was left last November, because certain additional documents had been received—certain statutory declarations.

Mr. ACLAND said that copies of these documents had been sent to Mr. Wyse. The answers of Mr. Wyse were sent in the first instance to the Medical Defence Union and afterwards to the Wigan Medical Guild, but the Wigan Medical Guild had made no reply and were not represented on the present occasion.

Mr. FARRER and Mr. MUIR MACKENZIE then read the documents to the Council.

In his declaration Mr. WYSE said that on the same day as he appeared before the General Medical Council—namely, Nov. 25th, 1897—he determined to give up his practice at 95, Wallgate, Wigan, and instructed an agent to sell it. No sale, however, was effected until March 30th, when the practice was transferred to a gentleman named Mr. Hamilton. He also informed Mr. Cowan that he could not retain him and notified to him that his engagement must terminate on March 31st. When he did so he warned him that during the currency of the notice he must simply act as a dispenser and must conform to the requirements of the General Medical Council. At the present moment he had no surgery save that at Southport, where he resided, and since March 31st he had devoted the whole of his attention to the work there.

Mr. WYSE entered the witness box and in reply to questions by members said that his son who was mentioned in the complaint had not been associated with him since February of last year. He admitted that Cowan had given a certificate on one occasion, but it was contrary to his instructions and Cowan had been severely reprimanded for what he had done. He had printed forms for certificates, but whenever he gave a certificate he initialled it and Cowan had instructions from him not to use the forms.

Mr. ACLAND submitted that the person who got the certificate from Cowan had been sent for that purpose and no other, and that something more than this was required to justify the Council in taking action against Mr. Wyse.

The Council sat *in camerâ* for a considerable time.

The PRESIDENT thereafter announced that they had judged Mr. Wyse guilty of infamous conduct in a professional respect and had directed the Registrar to erase his name from the Medical Register.

The Case of J. Hamilton Hart.

The Council next proceeded with the consideration of the case of Joshua Hamilton Hart, of Cliff Cottage, Morley, near Leeds, registered in Scotland, December 31st, 1891, as Lic. R. Coll. Phys. Edin. 1891, Lic. R. Coll. Surg. Edin. 1891, Lic. Fac. Phys. Surg. Glasg. 1891, who had been summoned to appear before the Council to answer the following charge on the complaint of Hugh Woods, of 11, Archway-road, Highgate, registered as M.B., M.D., Bac. Surg. 1886, M.A.O. 1887, Univ. Dubl., President of the Incorporated Medical Practitioners' Association:—

That he as a registered medical practitioner had been guilty of infamous conduct in a professional respect in connexion with certain quack remedies which were styled and extensively advertised as "Munyon's Homœopathic Home Remedies." The particulars of the complaint against him were:—

1. That he associated himself with and was a party to the sale and dissemination and advertisement of these quack remedies.

2. That he acted as consulting physician at the place where such quack remedies were administered and sold and permitted his name and qualifications to be advertised as those of the consulting physician at such place.

On the foregoing being read by the REGISTRAR,

Mr. BROWN intimated that as he was a member of the society whose President made the complaint he would take no part whatever in the proceedings.

The PRESIDENT: Very well; I think that should be minuted.

Dr. MACALISTER: The Incorporated Association is not the body prosecuting in this case.

Mr. BROWN: I believe that is so. At the same time I am a member of the body and I shall take no part in the case.

The PRESIDENT: I think that is very proper.

Dr. Hugh Woods, the president of the association, and Mr. Richard Robert More Madden, its secretary, attended in support of the charge. Mr. Hart appeared in answer to his summons, together with his counsel, Mr. W. H. Clay, and his solicitor, Mr. P. E. Vanderpump.

Mr. CLAY wished at the outset to say that he did not think there was any dispute in regard to the facts. But owing to the late period at which Mr. Hart had received the Council's summons, and his solicitor being resident in Bristol, he had been unable to send to the Council an answer to the charge. That he (Mr. Clay) now held in his hand and if the Council wished it he was now prepared to put it in.

The PRESIDENT: I think that will come later.

Dr. WOODS was then asked to proceed. He mentioned that as lately a large number of commercial bodies had been advertising medical remedies the association of which he was President set themselves to inquire to what extent they were *bonâ-fide*. The association had their attention called to Munyon's Homœopathic Home Remedies, the advertisement of which professed to supply a cure for each separate disease, and they resolved to make an official call at the Munyon business premises at 121 and 123, Shaftesbury-avenue, London, with the view of ascertaining what the so-called remedies were. The secretary of the association, accompanied by another person, went to the Munyon offices. There they met the manager of the company and they put to him several questions. They asked him what the nature of the remedies was. The manager could not tell them. The remedies were sent from America from Professor Munyon or the head-quarters in America. The manager, however, mentioned that *Science Siftings* had declared the remedies consisted simply of sugar. He was unable himself to say whether this was or was not the case, but he thought the representatives of the association ought to see the "doctor" who was a qualified man. They were introduced, but the gentleman—it was not Mr. Hamilton Hart—did not appear very much pleased at being interviewed and only on being pressed did he answer the questions put to him as to the nature of the remedies, though the utmost information that could be obtained from him was that they contained vegetable extracts. He appeared to consider it great impertinence that he should be questioned at all and finally he flatly refused to give his name. As a result of the interview it was concluded by the association that there must be something amiss. Having failed to elicit the name of the "doctor" the association, in order to find out whether it was the case that there really was a whole staff of medical men employed at Munyon's adopted other methods of inquiry. They had been told that one or more registered practitioners were connected with the institute and they took steps to get letters addressed to them by seeming patients. The result was that there came into the hands of the association a letter signed by Mr. Joshua Hamilton Hart. That letter was dated Jan. 22nd last, and was written under the decorative heading of Munyon's establishment. It was addressed to a "Rev. and Dear Sir" and set forth that the writer was consulting physician "here" and would be glad to arrange a personal interview on hearing from the correspondent again. The writer of the letter stated that his residence was some miles away from town, but that he should be prepared to meet his correspondent at any hotel he might name. That letter appeared to afford proof that at least one of the "doctors" associated with Munyon's remedies was Mr. Joshua Hamilton Hart. He (Dr. Woods) thought it was unnecessary to prove that the remedies in question were quack remedies. They were advertised in newspapers all over the kingdom and the fact that they professed to be sufficient to cure each separate disease was sufficient for their condemnation by practical men like the members of the General Medical Council.

Mr. MORE MADDEN then gave evidence which confirmed the statement of the case. Witness added that he had been unable to ascertain of what science Professor Munyon was professor. The manager of the institute had said there was a medical man in attendance. He did not say that that man was a registered medical man, but the "doctor" to whom he was presented said he was a medical man registered in this country.

The PRESIDENT: He was not Mr. Hart.

Dr. WOODS said he wished to show that there was a policy of concealment. The "doctor" seen admitted that he was a registered medical practitioner, but declined to give his name, and he thought that went to show that the establishment was a quack affair which could not be recognised by the General Medical Council.

The PRESIDENT: Confine your questions as to what the remedies are.

Witness, in answer to further queries, said he was informed that the remedies were composed of vegetable extracts. As to the cures they had effected he was referred to the testimonials. The Munyon representatives who were seen knew that he and the person with him represented the Incorporated Medical Practitioners' Association.

Asked by Dr. MACALISTER if the so-called manager of Munyon's stated that he had medical men on the premises, witness answered in the affirmative and said that the gentleman to whom they were introduced as the "doctor" stated twice that he was registered in this country, though he refused to give his name or state what his qualifications were.

The PRESIDENT (to Dr. Woods): Have you advanced all the proofs you wish to submit to the Council?

Dr. WOODS: The chief proof is the letter.

Mr. CLAY: I do not deny that the letter was written by Mr. Hart.

The case for the charge was then closed.

Mr. CLAY, in stating the case for his client, said he was not prepared to discuss what were quack remedies. Those in question were homœopathic remedies and as such were outside the cognisance of the Council by statutory provision. What Professor Munyon's qualifications were he did not know, but the Professor — he would use the American appellation—had been certainly fortunate in hitting upon remedies which, according to his view, had conferred benefits on his fellow creatures, and after being successful in America he appeared to have come over here and established a business. And having done so he was extremely desirous that the persons who applied to him should have the best assistance he could procure. Counsel believed it was the fact that the Professor had obtained the assistance of several persons who were qualified as medical practitioners and he should think that in all probability the gentleman who represented himself as a medical man to the witness who had just given evidence was one of those gentlemen. It was only in October last that Mr. Hart was brought into connexion with the Munyon Company. In that month he saw Professor Munyon himself and entered into an engagement with him, which still subsisted, under which he was to attend daily at the offices in Shaftesbury-avenue and examine the very large correspondence which came in from applicants for the cures. The public might be exceedingly misguided in wanting the cures, but it did seem as if there were a large number of people who were anxious to try any strange or unusual remedy offered to them, and they apparently derived satisfaction from using it. Mr. Hart was employed to see what these applicants said. A large number of persons wrote describing their symptoms and asking for remedies and he (counsel) as a layman should say that it was a very reasonable action on the part of Professor Munyon to try to get a competent person to examine these letters. Mr. Hart's duty was to examine these letters and report. He made an endorsement on each letter as to the kind of cure which it was desirable to send. He did not know if Mr. Hart went on the principle that he should recommend what did the least mischief or that which should do the most good. Mr. Hart had to examine the letters and suggest what answers should be sent and according to his endorsement on the letters the cures were sent. But Mr. Hart had nothing to do with that. Where remedies were not sent and replies to correspondents were sent the latter were

typewritten and signed on behalf of the company. Mr. Hart's name did not appear, and so far as Mr. Hart knew nobody knew that any practitioner was engaged in doing the work which Mr. Hart was doing. Mr. Hart was in no way or degree responsible for the advertisements. As to the specific charge, that of being consulting physician to the Munyon Institute, the term used in the letter produced was an unfortunate term. It would have been better if Mr. Hart had abstained from using it. The letter was written really in his private capacity and was meant to explain how that to which it was an answer had come into his hands. He had no intention of suggesting that the Munyon remedies should be associated with the name of a registered medical practitioner. So far as the particular instance in question went Mr. Hart wished through him to express regret and to give the undertaking that he would not make public his connexion with the Munyon Company.

Mr. HART then submitted himself to examination. In answer to Mr. CLAY he said he was brought into communication with Professor Munyon by advertisement and met the Professor at the Hotel Cecil, where he entered into the engagement with him. He attended at the Munyon Institute daily. His duties consisted of reading the letters that arrived and writing on them what from the symptoms described he assumed to be the organ affected. If the description was insufficient he wrote on the letters words to the effect and advised that a question paper should be forwarded to the writers. His name never appeared in the correspondence. He was paid a weekly salary for the work he did. He had nothing whatever to do in connexion with the advertisements. He could not say that he had ever read one of them and he did not know whether they were drawn up at Shaftesbury-avenue or in America. So far as he knew his name had never been connected with Munyon's remedies except in two cases, one the letter produced, and the other where, writing in his private capacity, he offered to receive a patient into his private residence. The letter, to which that of Jan. 22nd was a reply, professed to come from a curate at Bristol suffering from a disease of a private nature and seeking a night interview after a church meeting he was to attend because he could not get away for a consultation during the daylight. Witness had replied out of sympathy with the writer. He was perfectly willing to undertake that he would not write in the same way again. As in the case of the advertisements he had nothing whatever to do with the remedies.

In cross-examination Mr. HART admitted that he was consulting physician to the institute in so far as that was to be inferred from the duties he discharged. He had practised at Cliff Cottage, Morley, but it was through Munyon's that he received the Council's summons. Asked if he had the degrees Bachelor of Medicine and Master of Arts, as he used the abbreviations for those degrees at the end of the letter produced, he said that the "M.B., M.A." following his signature in the letter stood for "Member of the British Medical Association." Questioned as to whether he was a member of that association he replied that he had been but his subscription had not been paid for this year or last. Asked if it was the fact that there were medical men other than himself associated with the institute he said he did not know.

How do you know that Professor Munyon is not yourself?—Because I profess to be Joshua Hamilton Hart.

In answering a question by the PRESIDENT Mr. HART said he went to Edinburgh in 1878 and he claimed to be an old schoolfellow of Sir William Turner.

The PRESIDENT: I do not recollect you.

Replying to further questions by members of the Council Mr. HART stated that he did not prescribe except where a special prescription, apart from Munyon's remedies, was asked for. He knew nothing about the nature of the remedies. If people were examined in Munyon's Institute that did not take place in his department. He did not know if there was any other qualified man on the premises. The remedies were issued in accordance with what he wrote on the letters. He supposed it was the secretary who despatched them. So far as Mr. Hart knew the secretary was not a qualified man.

Do you regard yourself then as helping an unqualified man in prescribing or advising people as to what remedies they should take for certain diseases?—I never looked at it in that light at all.

You say you are consulting physician?—It was a very stupid expression that.

You take patients into your house?—Yes, medical and surgical.

Questioned as to whether he had any address Mr. Hart explained that letters would reach him if sent to Cliff Cottage. At present he was staying in an hotel. Till Saturday last he had a house at Hampton Wick and was going into one on Saturday, the 28th, in the Regent's Park district.

The Council then deliberated in private for from ten to fifteen minutes and it was resolved:—

(*a*) That the Council do proceed at once to pronounce its judgment on the case. (*b*) That the charge made against Mr. Joshua Hamilton Hart has been proved to the satisfaction of the Council. (*c*) That the Council do now judge Mr. Joshua Hamilton Hart to have been guilty of infamous conduct in a professional respect and do direct the Registrar to erase from the Medical Register the name of Mr. Joshua Hamilton Hart.

Strangers and Mr. Hart having been readmitted the PRESIDENT announced the decision of the Council.

The Council adjourned.

FRIDAY, MAY 27TH.

The Council resumed to-day, Sir WILLIAM TURNER presiding.

The Council and Mr. Gladstone's Funeral.

The PRESIDENT intimated that he had received a letter from the office of the Earl Marshal saying that the limits of space made it impossible to offer admission to the Council to Westminster Abbey on the occasion of the funeral of Mr. Gladstone. Therefore there were no tickets either for the President or any of the members of the Council.

Dr. MCVAIL moved:—

That it be remitted to the Executive Committee to take the steps that may be necessary to secure that the General Medical Council shall receive due recognition and representation in national functions and ceremonies.

There could be little doubt, he said, that this unfortunate refusal to recognise the Council was due simply to the circumstance that the Council had never taken any steps to hold its proper position in national ceremonies in the past and he was quite sure that the matter only required to be brought to the notice of the Government or the departments of the Government which had to do with State ceremony to be put right. It certainly must look to the profession and the public an extremely singular circumstance that the President of this Council, the only person who could be recognised as the official head of the whole profession of the United Kingdom, did not receive, whatever might be the case of the other members of the Council, an invitation without any application whatever, as a matter of right to be present at the great national ceremonial such as this ordered by Her Majesty the Queen.

Dr. HERON WATSON asked whether on the occasion of either of the Jubilee celebrations any recognition of the Council took place.

The PRESIDENT said he believed there was no recognition.

Dr. PHILIPSON seconded Dr. McVail's motion.

Mr. CARTER said he thought the Executive Committee might perfectly well accept the responsibility which this motion proposed to put upon them and suggested that the course for them to pursue would be to make application through the College of Arms and the Earl Marshal that the Council might have proper recognition and a definite precedence.

The motion was then agreed to.

The Bust of the late Sir Richard Quain.

The PRESIDENT said that the bust of Sir Richard Quain, presented by his daughters, was now in the council chamber. He gathered from what he had heard in more than one quarter that the bust was really modelled in order that it might be presented to the Council, that the late President had it in his mind when he sat for the bust that it should have its home with them, and he knew that the daughters of Sir Richard Quain were greatly pleased that it should find its home with the Council. There was no special legacy, but these ladies gave the bust to the Council because it was their father's intention that it should come to them. He proposed:—

That the hearty thanks of the General Medical Council be given to the daughters of Sir Richard Quain, baronet, for their valuable and most acceptable gift of a bust in marble of their father, the late esteemed and respected President.

It would be left to the treasurers, Sir Dyce Duckworth and Mr. Bryant, to arrange where the bust should be placed.

Medical Aid Associations.

Dr. GLOVER presented the following interim report from the Committee on Medical Aid Associations, viz. :—

The Committee have had under their consideration at various meetings memorials to the General Medical Council on the subject of medical aid associations or medical institutes, especially those from Norwich, Yarmouth, and Beckenham. They have endeavoured, by correspondence and conference with the memorialists and with officers of the "institutes," to ascertain the causes of friction and complaint in connexion with these bodies with a view to their removal and they are not without hope of some success. They acknowledge with pleasure the readiness of all parties to help in the elucidation of the subject. They are still engaged in such endeavours and are as yet unable to present more than an *ad interim* report. Their investigations so far confirm the conclusions of the committee of 1893 as to the evils incident to the present system of working such institutions which, when composed of *bonâ fide* members of friendly societies and managed on sound principles, are entitled to, and have always received, the friendly consideration of the medical profession.

Pending their final report the committee would venture to suggest to all concerned—managers, their medical officers, and members of the medical profession generally—a suspension of judgment on questions in dispute and the use of local efforts to adjust differences in a spirit of conciliation.

He asked the Council to receive the report and enter it on the minutes. He might tell the Council that the committee had had a second interview with the committee representing the friendly societies. They met in that chamber and there was a disposition upon both sides very seriously to try to find out some way of meeting the objections of the profession and removing the causes of complaint. The representatives of the friendly societies told them that they would not have an opportunity for a few months of bringing the facts of the case before the bodies, so that necessarily the settlement of the question must stand over for the present. He would, however, ask the Council to be assured that there was a disposition on their part as well as on the part of the committee to set at rest all matters of difficulty and to come to a harmonious settlement with this Council as representing the profession. The questions submitted to the committee were essentially ethical questions and to these questions they had not decided upon a formal answer; they wished to see first whether the thing of which complaint was made could not be mended.

Mr. TEALE seconded the motion.

Mr. BROWN called the attention of Dr. Glover and the committee to a report of the proceedings at the annual meeting of the Coventry Provident Dispensary, where the question of a wage limit was discussed, and appealed to these gentlemen not to allow dust to be thrown in their eyes by any mere verbal alteration of rules.

Dr. BRUCE repudiated the idea of any of the managers of the friendly societies attempting to throw dust in their eyes; they had met them in an open, frank, and gentlemanly manner and were entirely disposed to discuss the question in the most liberal light.

Sir RICHARD THORNE expressed doubt about the last sentence in the report, saying that he thought it required revision.

Mr. HORSLEY said this sentence seemed like a piece of parental advice to many of the practitioners in the country and he was afraid it might be misunderstood. His view was that it was not really required.

Dr. GLOVER said he did not think the sentence could do any harm. Some of the memorialists from Norwich and Yarmouth were disposed to think that they could by local effort settle these matters, and there was surely no reason why they should not try. As to parental advice, he thought there were occasions when this Council might indulge in it. The point really at issue raised by these memorials was the refusal of all professional intercourse with the members of these societies. Was the Council, was Mr. Horsley, prepared to give the sanction of the Council to that blank refusal at this stage of the proceedings?

Mr. HORSLEY replied that he had not the means of deciding that question in the absence of the report of the committee on the subject.

Dr. GLOVER said he had all the means possessed by the committee. Was he prepared at this stage of the negotiations—altogether friendly at present—to recommend that this Council should advise the men of Norwich and Yarmouth to refuse to meet in consultation in any urgent circumstances, in any case, the members of these societies?

Mr. HORSLEY said he was a member of the Council and had certain responsibilities as such. Before he became a member of the Council he held very strong views upon this subject and he did so still. But now that he was here and a committee had been appointed to consider the question he was suspending his final judgment until he saw the report of the committee. Until he received the report he was not prepared to answer any such question as that now addressed to him.

Dr. GLOVER, accepting this view of the situation, said that all the committee asked was that the members of the profession should also suspend judgment.

Dr. MCVAIL took exception to the construction of the last sentence.

The PRESIDENT said that he thought that all those who attended the conference would appreciate the reference to the use of local efforts to adjust differences. He did not think he ever attended a meeting where there were two opposite parties brought into personal contact with each other with a view to the exchange of opinions which produced so strong an impression upon him as this meeting with the five gentlemen representing some of the greatest friendly societies in the country. These gentlemen interchanged their views with the committee with the greatest freedom and he was satisfied; without any pressure they stated plainly what they thought friendly societies could do and what they thought they could not do. He appealed to members of the committee who were present whether they did not show a strong desire that the questions in dispute should be amicably settled and a strong conviction that they could be so settled. He would suggest that a good thing to do might be to leave out the words "a suspension of judgment on questions in dispute and."

This suggestion was at once accepted by Dr. Glover and the words having been deleted the report was received and entered in the minutes.

Dental Education and Examination.

Mr. BRYANT presented the following final report by the Dental Education and Examination Committee :—

In November last, when the third report of the committee "was brought before the Council, it was remitted to the committee to draw up their recommendations in the form of a series of propositions, each dealing with a single subject, in order that the Council might be enabled in May to come to a definite decision on the questions before them."

This has consequently now been done and it is to be hoped that this report in its present shape will be found to be both intelligible and satisfactory to this Council.

The committee have also to report that the dental curriculum, as now brought before you, has received the support of all the dental schools (except Manchester and Dublin, which have not yet spoken), as witnessed by the petitions which are appended to this report, and in which the petitioners express an opinion that it is undesirable to reduce the present scope of the curriculum and examination in general subjects, which they regard as a minimum necessary for the satisfactory qualification of a dental surgeon.

RECOMMENDATIONS OF THE DENTAL EDUCATION AND EXAMINATION COMMITTEE.

The Dental Education and Examination Committee, in accordance with the Council's Resolution of November 30th, 1897 (Minutes, vol. xxxiv., p. 158), beg leave to present their Recommendations to the Council in the following revised form. If these are adopted by the Council they may be at once issued for the guidance of the Licensing Bodies and of Candidates for Licences in Dentistry or Dental Surgery.

RECOMMENDATIONS AS TO THE COURSE OF STUDY AND EXAMINATIONS TO BE REQUIRED OF CANDIDATES FOR LICENCES IN DENTISTRY OR DENTAL SURGERY.

A. Preliminary Examination and Registration.

1. That every dental student shall, at the commencement of his studentship, be registered in the manner and under the conditions prescribed for medical students.

2. That no person shall be registered as a dental student who has not previously passed one of the preliminary examinations in general education recognised by the Council, unless before July 22nd, 1878, he commenced professional study by apprenticeship to a dentist entitled to be registered or by attendance on professional lectures.

B. Professional Study.

3. That every candidate for a licence in dentistry or dental surgery shall be required to produce certificates showing:

(1) That he is at least twenty-one years of age.

(2) That he has been registered as a dental student.

(3) That he has subsequently to the date of registration been engaged in professional study for at least four years.[1]

(4) That he has attended courses of instruction in the following *general subjects* at a recognised medical school: (*a*) [2] Chemistry and physics (with practical laboratory work) for six months; (*b*) Human anatomy for six months; (*c*) dissections (with demonstrations) for twelve months; (*d*) physiology for six months (with practical laboratory work or a separate course of practical physiology); (*e*) principles of surgery (including the elements of surgical pathology) for six

[1] Not more than one year of *bonâ fide* apprenticeship to a registered dentist, if served subsequently to the date of registration, may be reckoned as a portion of the four years of professional study required.

[2] This instruction may be obtained at the science school recognised by the licensing body.

months; (*f*) principles of medicine (including the elements of general pathology) for six months; (*g*) clinical surgery and clinical medicine (at a recognised general hospital) for twelve months.

(5) That he has attended courses of instruction in the following *special subjects* at a recognised dental school: (*a*) dental anatomy and physiology, human and comparative (with practical work and demonstrations in dental histology), for [three] months; (*b*) dental surgery and pathology for [three] months, including materia medica and therapeutics applicable to dental surgery; (*c*) dental metallurgy (with practical work and demonstrations) for [three] months; (*d*) dental mechanics) with practical work and demonstrations) for [three] months.

(6) That he has for two years attended the practice of a recognised dental hospital or of the recognised dental department of a general hospital.

(7) That he has, before or after registration as a dental student, received for three years[3] practical instruction in mechanical dentistry from a registered dentist or in the mechanical department of a recognised dental school and hospital.

C. Professional Examinations.

4. That the examinations for a licence in dentistry or dental surgery shall be partly written, partly oral, and partly practical, and shall include the following subjects: (*a*) chemistry and physics; (*b*) practical examination in dental mechanics and metallurgy; (*c*) dental surgery, pathology, and therapeutics; (*d*) practical examination in dental surgery; (*e*) general anatomy and physiology;[4] and (*f*) general surgery.[4]

5. That the prescribed subjects of examination may be combined or distributed at the discretion of the licensing bodies and may be taken at two or more successive examinations during the course of professional study, provided that no candidate shall be admitted to any final examination in dental surgery and mechanical dentistry until he shall have completed the required four years' course.

Communications from Dental Schools as to the Extent of the Curriculum

22A, Cavendish-square, W., Feb. 1st, 1898.

DEAR MR. ALLEN,—I have the pleasure to send with this note petitions upon the subject of the "general side" of the Dental Curriculum from a very large number of the dental hospitals (with schools) in Great Britain.

I hope that such an expression of opinion may help both the Dental Education and Examination Committee and also the General Medical Council in arriving at a conclusion upon the subject of dental education.

The Victoria Dental Hospital of Manchester will send their petition direct to you.

I also send with this a letter from the Dean of the Newcastle School saying that the staff of that hospital prefer not to sign such a petition.

It is only fair that the Council should know that the Newcastle Dental School have been in existence as a recognised dental school for a short period of time only.

When Manchester has returned its petition all the English Schools will have expressed their opinion. Edinburgh and Dublin have not yet answered my letter sending them the petition to sign; if they are sent to me I will forward them to you at once.

Yours truly,
MORTON SMALE.

(1) *From the Dental Hospital of London.*

To the GENERAL MEDICAL COUNCIL.—We, the undersigned, being, as Deans and Teachers of Dental Schools, fully conversant with the requirements of the Dental Student, in order that he may obtain a range of knowledge sufficient to enable him intelligently to practise his profession, are strongly of opinion that it is undesirable to reduce the present scope of curriculum and examination in general subjects, which we regard as a minimum necessary for the satisfactory qualification of a dental surgeon.

STORER BENNETT,
Chairman of Medical Committee, Dental Hospital of London;
MORTON SMALE,
Dean Dent. Hosp. of London.

Signed also by 26 other members of the staff of the hospital.

Petitions in identical terms were also forwarded from the following dental hospitals:—

(2) From the National Dental Hospital of London.
Signed by 19 members of the staff.
(3) From the Dental School, Guy's Hospital.
Signed by 18 members of the staff.
(4) From the Dental Hospital of Liverpool.
Signed by 12 members of the staff.
(5) From the Dental Hospital of Birmingham.
Signed by 14 members of the staff.
(6) From the Dental School of Edinburgh.
Signed by 7 members of the staff.
(7) From the Dental Hospital of Glasgow.
Signed by 15 members of the staff.

The following is the communication referred to by Mr. Smale as forwarded to him by the staff of the Newcastle Dental School:—

9, Eldon-square, Newcastle-on-Tyne, Jan. 14th, 1898.

DEAR MR. SMALE,—At a meeting of the teaching staff of the Newcastle-on-Tyne Dental Hospital and School held last evening, at which your letter of the 5th with enclosed petition was read, the following resolution was passed: "That having read the petition sent by Mr. Morton Smale, and having discussed the report of the General Medical Council meeting, we are of opinion that the question of the dental curriculum should be left to the Dental Education and Examination Committee as suggested by Dr. MacAlister in his amendment." I am, yours truly,

R. W. MARKHAM,
Dean of the Newcastle-on-Tyne Dental Hospital and School.

[3] No portion of this instruction which is anterior to the date of registration shall be reckoned as a portion of the four years of professional study required.

[4] It is recommended that a synopsis of the scope of the examination in these subjects be issued by the licensing bodies.

Mr. BRYANT reminded the Council that this subject was started on May 26th, 1894, when the Council decided upon the appointment of an inspector who should visit and report upon the examinations of the four bodies granting qualifications in dentistry and when Mr. Tomes was appointed inspector. He should like to take this opportunity of congratulating Mr. Tomes on his appearance among them as a member. It was the first time the Council had included a representative of dental surgery and he thought they would all agree that it was high time such a representative existed and he personally felt grateful that Mr. Tomes was here now, because he would be able to assist the committee very much.

The Council decided to go into committee for the consideration of the recommendations in the report.

Sir RICHARD THORNE said he would like to know what the committee meant by a "dental surgeon." He had always understood that a dental surgeon was a surgeon who was a dentist, but he could not find the term in any Act of Parliament.

Dr. MACALISTER said that a dental surgeon was a person entitle to practise dental surgery under the Dentists Act.

Mr. HORSLEY suggested they should adhere closely to the Act and substitute for "dental surgeon" the word "dentist."

The PRESIDENT pointed out that the Act spoke of a Licentiate in dental surgery or dentistry.

After some further discussion it was agreed that the term used throughout the report should be "dental practitioner."

The first recommendation was adopted without debate.

The second was also adopted, but it was agreed to add a footnote explaining that the examinations in question were those recognised by the Council for admission to the Students' Register.

Coming to the third recommendation the Council approved Sections 1, 2, and 3. To the fourth section they added the words, "for at least the period specified."

The Council then proceeded to deal with Subsection A.

Dr. MCVAIL said that this proposal would occasion difficulty in Scotland because there chemistry and physics were taught in separate classes. In fact, he felt certain that the proposal would be unworkable in Scotland.

Mr. HORSLEY suggested that though the subjects might be taught in separate classes the student might take both classes during the same session.

Dr. REID said that would not be possible in the case of Aberdeen.

Dr. PETTIGREW insisted that the proposed arrangement would handicap very much the Scottish student.

Dr. MACALISTER pointed out that in this matter the Council were only recommending what was to be regarded as the minimum amount of study.

Mr. TICHBORNE, seconded by Dr. PETTIGREW, moved that the sub-section read thus:

Chemistry, theoretical and practical course, six months; physics, three months.

This amendment was lost.

Sir CHRISTOPHER NIXON, seconded by Sir WILLIAM THOMSON, moved that it read:—

Physics, a three months' course; chemistry, a six months' course of theoretical chemistry and a three months' course of practical chemistry.

This amendment was also lost and thereafter the original motion was put and carried.

The further consideration of the recommendations was postponed.

Prosecutions.

The Council sat for the rest of the day *in camerâ*, the business under consideration being a report by the solicitor in regard to the prosecutions directed by the Council last November.

SATURDAY, MAY 28TH.

The Council met again to-day, Sir WILLIAM TURNER presiding.

Sir JOHN BATTY TUKE made his appearance at this sitting, much to the pleasure of his fellow members, nearly all of whom tendered him their congratulations.

The Charge against Mr. H. K. Hunter.

The first item on the programme of business was the following notice of motion in the name of Mr. BROWN:—

(*a*) That a copy of the information laid against Mr. H. K. Hunter, the report of the legal advisers of the Council thereon, and copies of all correspondence with Mr. Hunter relating to the charges made against him be presented to the Council and entered on the minutes.

(b) That all legal expenses connected with any proceedings that may be necessary to obtain the opinion of the superior courts as to the legality of Mr. Hunter's conviction at the Caxton petty sessions in April last for describing himself as a physician and surgeon be defrayed by the Council.

(c) That the Council vote Mr. Hunter a sum sufficient to defray any law costs he may have incurred in defending himself in the proceedings taken against him by the Council.

Mr. BROWN said that in deference to the opinion expressed by Mr. Muir Mackenzie while the Council was sitting *in camerâ* he would ask leave to withdraw these motions at the present time.

Leave being given, the motions were accordingly withdrawn.

Proceedings in camerâ.

For nearly three hours the Council sat *in camerâ* and when the public were readmitted,

The PRESIDENT announced that petitions for admission to the Dentists' Register had been received from A. P. Merrill, T. E. Bush, E. L. Oldfield and W. E. Royce, and the Council had decided not to accede to the petitions; that with regard to a charge made against Isaac Cohen it had been decided that no further proceedings be taken in the case; and that Mr. H. E. Allen had been reappointed General Registrar.

The Council then adjourned until Monday.

MONDAY, MAY 30TH.

The Council met again to-day with Sir WILLIAM TURNER in the chair.

Saturday's Proceedings.

The minutes contained the following references to the proceedings *in camerâ* on Saturday, viz.:—

(a) Certain of the recommendations of the Penal Cases Committee as to prosecutions were adopted; (b) a prosecution which was suggested by a member was agreed to; (c) attention was called by a member to the practice of unqualified persons obtaining registration under the Companies Act, and trading as apothecaries, physicians, and surgeons; and (d) a communication was read from the Apothecaries' Society of London in regard to its powers of restoring names to its list of Licentiates.

The minutes also stated that the following communication had been received from the solicitor of the Apothecaries' Society of London, viz.:—

Society of Apothecaries, London, E.C., May 25th, 1898.

Sir,—The names of the two Licentiates erased by the Society and restored to their list after the Medical Council had restored them to the Register are David Hyman Dyte and Neville Holland: the first restored in June, 1893, and the second in December, 1896. This will enable the Registrar approximately to find the dates when they were restored to the Register.

As permitted by you, I place my views in writing on the subject of erasure by the Society:—

1. The Society cannot cancel or get back a diploma because it has no statutory power to do so.

By its Amendment Act, 1874, it can only erase a name in the case of "infamous conduct in a professional respect" *after* the Medical Council has erased the name from the Medical Register. If a Licentiate has been convicted of a crime the Society can act on its own motion.

2. When a name has been erased because the Medical Council has first struck it off the Medical Register it may be assumed that (a) the Society would not restore it unless under the special direction or advice of the Medical Council, and (b) that it would expect the Council to tell the Society what conditions must be imposed in the matter of examination before the name was restored.

3. Referring to what Mr. Muir Mackenzie says in his opinion as to the statutory right of the Council to restore a name, this would equally apply to the Society. He, however, adds that "the erasure from the list of Licentiates of the Apothecaries' Society involves 'the loss of the qualification entitling' the person to be registered."

If this be so, does not a serious question arise whether the Society, without requiring the person to pass a qualifying examination, can restore a name once erased from its list?

I venture to repeat that in my opinion fresh legislation is required.

Your most obedient servant,
JAMES R. UPTON.

Sir William Turner,
President of the General Medical Council.

Proposed Amendment of the Companies' Act.

Mr. TOMES asked if the Council would allow the resolution arrived at *in camerâ* in respect to a deputation to the Board of Trade to be entered on the minutes. As it stood now the resolution was confidential and therefore there was difficulty in acting upon it.

The Council agreed to the request.

The PRESIDENT intimated that the resolution was to this effect:—

Resolved that the President, Mr. Tomes, and Mr. Horsley be a committee to take such steps as they deem most effective to induce the Government to insert a clause in the Companies' Acts Amendment Bill now before Parliament with the object of procuring the registration of companies to carry on medical, surgical, and dental practice.

That resolution was arrived at on Saturday and it would now appear on the minutes. He might mention that he had written a letter to the Secretary of the Board of Trade intimating to him that a deputation had been appointed and asking that the President of the Board might receive the deputation.

Penal Cases.

Mr. CARTER, seconded by Sir JOHN BATTY TUKE, moved:—

That no case of complaint should be considered by the Penal Cases Committee until a statutory declaration as to the facts of the case has been supplied by the complainant.

Mr. CARTER said that it had been repeatedly the experience of the Penal Cases Committee that charges of a character which probably could not be sustained had been brought by medical practitioners against their neighbours and when inquiries were made the persons making the charges said they did not want their names to appear and were not prepared to give a statutory declaration to the committee. In this way the time of the committee had been taken up with the consideration of letters of a very unsatisfactory character behind which there was nothing to substantiate the charges made.

The motion was agreed to, with the addition of words providing that the Executive Committee give effect to the resolution in the standing orders with reference to penal cases.

Dental Curriculum and Examinations.

The Council then went into Committee to consider further the recommendations of the Dental Education and Examination Committee as to the course of study and examinations to be required of candidates for licences in dentistry or dental surgery.

Mr. BRYANT, the chairman of the committee, expressed the hope that the Council would proceed a little more rapidly than they did on Friday. In none of these recommendations was there any suggestion to interfere with the schemes of education which the four licensing bodies were enforcing. All they did was to lay down general principles for their guidance. He moved the adoption of sub-section *b* of Section 4 of the recommendations—namely, "human anatomy for six months."

Dr. BRUCE moved:—

That the words in Sections 4 and 5 of the report of the Dental Education and Examination Committee fixing particular periods for the courses of instruction specified after line 8, p. 7, Appendix I., be deleted, and that the subjects of professional study and examination be drawn up upon parallel lines to those for professional examination for medical students and become the requirements of the General Medical Council for candidates for licences in dentistry or dental surgery.

In his opinion, he said, it was quite unnecessary to name any particular time for the courses and it seemed to him that the Council would be following a much wiser course if they went upon the same lines as they did with the medical student.

Dr. LEECH seconded this amendment.

Dr. MCVAIL said he had intended to move to remit the report back to the committee that they might consider and report as to how far the medical and surgical examination of dental students should correspond to the education and examination required in the case of medical students. He thought the time had come to consider what was to be the real position of the dentist in the future. Was the dentist still to be a man of inferior medical and surgical training with a few specialisms? or was he to have knowledge such as the members of the medical profession had, with dental knowledge in addition? His own impression was that the time had now come when the dentist ought to be a surgeon, when he ought to have a knowledge of surgery as complete as the person going into the practice of the profession in the ordinary way. He thought the dental profession ought to be elevated and ought no longer to consist of men who had an imperfect education in medicine and surgery. Although they had a separate Register, dentists were, after all, members of their profession and he was glad to think that other members of this Council were beginning to take this position.

Dr. MACALISTER insisted that Dr. McVail's position was one of simple obstruction; he wished to smash the whole scheme.

Dr. MCVAIL objected to this description of his position. He had thought this matter out very carefully and he had seen the difficulties of the committee. They were endeavouring to reconcile two things which were irreconcilable. His hope was to see the dental profession put upon a proper footing and its members become worthy colleagues of their surgical brethren.

The PRESIDENT announced that the latter portion of Dr. Bruce's amendment had been altered to read, "and that the subjects of professional study and examination be specified as in the recommendations for the professional education of medical students and become the recommendations of the General Medical Council for candidates for licences in dentistry or dental surgery."

Sir RICHARD THORNE said he could not agree to this. What he contended was that they ought to draw an absolute line between the surgeon who practised dentistry and the licentiate in dentistry. As for these recommendations of the Dental Committee they were a direct inducement to the dentist to pretend that he had had a medical education. He would give an example of what he meant. A gentleman came over from a distant part of this empire—a gentleman with a good deal of information about diplomas—and he consulted a dentist in one of the west-end squares. One day when he went to him he was not feeling well and he incidentally explained his symptoms. The dentist whom he was addressing referred to the symptoms and added, "You know I am a doctor." The gentlemen said, "I was not aware of that." He replied, "What I mean is that I have had to go through a complete medical education." About these recommendations he would like to point out that they required of these candidates that they should go through a six months' course in the principles of medicine and that they should be occupied in a course of clinical medicine in a recognised general hospital for twelve months, and yet—one would hardly believe it—the committee did not deem it necessary that the candidates should be asked one single question in medicine. A greater anomaly he had never heard of in the course of his life. His idea would have been to eliminate these subjects and devote the time thus saved to purely dental work.

Mr. TOMES said that this was no new subject to the dental profession and it had been decided that a purely dental education would not meet the case. It had been equally recognised that a purely medical training did not make a good dentist. He sympathised with Dr. McVail in his desire to see the dentists of this country fully-qualified medical practitioners who had added to that a dental education. Some day he hoped that might be practicable, but he did not think it was practicable at the present moment. As to what Sir Richard Thorne had said, he could give him many instances of the great desirability of the dentist possessing medical knowledge. The dentist frequently was the person who had the earliest opportunity of recognising malignant and other diseases. As to the existing curriculum, practically speaking, under it some 1600 people had been educated and the net result had been exceedingly good. The dentists of to-day, as a whole, were on a different plane in respect of education and attainments from the dentists of former days, and he did not think the Council would be wise if they put aside the practical results of experience. He did not think that the evil Sir Richard Thorne had in his mind had happened. He did not think that the dental licentiate had poached, or had shown the smallest disposition to poach, upon medical practice. He did not think that he had shown the smallest disposition to pose as a fully-qualified medical man. He had never heard of an instance of the kind. It was not the person who had received an education which taught him the limits of his own knowledge who sought to pose as a fully-qualified medical man; it was the person who had not received that education. It was the educated man who would at once seek the advice of the medical practitioner and it was the uneducated man who would seek to keep the case in his own hands.

In reply to a question addressed to him by Mr. CARTER

Mr. TOMES said that every day in the practice of a dentist the knowledge of general pathology came in. Hardly a day would pass if the dentist was in a large practice without his seeing and having to form an opinion upon a case which was on the borderland where he hardly knew whether the trouble was local or constitutional.

Dr. MACALISTER, speaking to the subject immediately before the Council—namely, the amendment of Dr. Bruce—said that in recommendations as contrasted with requirements it was possible to go into considerable detail, and the detail was much more necessary in the case of the dental than of the medical student. As to the general question, he thought it was all to the advantage of dentists as a profession that they should have the range of their education extended.

After some further debate Dr. Bruce's amendment was negatived.

On the suggestion of Mr. BRYANT sub-sections *b* and *c* were made one sub-section and as such they were approved by the Council.

Sub-section *d* was approved without debate and with the initial words "principles of" deleted. Sub-section *e* was also approved.

On Sub-section *f*

Sir CHRISTOPHER NIXON said that there was nothing in Ireland to fit in with this recommendation.

The PRESIDENT said the chairman of the committee ought to tell the Council whether these courses were to be attended in a dental or a medical school.

Mr. BRYANT: In a medical school.

The PRESIDENT said if that were so then they must be adapted to the courses given in the medical school and it appeared that they were not so adapted.

Mr. BRYANT submitted that they were quite consistent with the present practice. The dental student was asked to attend the ordinary course given to the medical student, but the committee did not wish to emphasise that he was to get up the practice and the treatment of disease; they desired him to learn the principles as embodied in these lectures. If he could get up a little knowledge of practice so much the better for him, but they did not for a moment suggest a special course for his benefit.

Sir RICHARD THORNE moved as an amendment:—

That since the Dental Committee deem it unnecessary to require candidates for the licence in dentistry to undergo any examination whatever in medicine, the requirement that they shall attend a course of at least six months upon medicine and a course of clinical medicine in a general hospital extending over a period of at least twelve months be eliminated from the regulations.

Sir JOHN BATTY TUKE seconded the amendment.

On a vote being taken the amendment was negatived by 15 to 11 votes.

The sub-section with the words "principles of" deleted was then approved.

Mr. BRYANT moved sub-section *g* in this form: "Clinical surgery and medicine at a recognised general hospital for twelve months."

Dr. MCVAIL spoke of this as a sham and a burlesque of medical education and moved to leave out medicine altogether.

Sir CHRISTOPHER NIXON seconded the amendment.

This amendment was negatived, as was also another amendment, moved by Dr. MCVAIL, and thereafter the motion proposed by Mr. Bryant was agreed to.

The Council now reached Section V. and after passing the general statement in this form: "That he has attended courses of instruction in the following special subjects at a recognised dental hospital for at least the period specified," it passed sub-section *a* as proposed in the report.

Sub-section *b* was amended so as to read "dental pathology and surgery with materia medica and therapeutics applicable to dental surgery for three months." Sub-section *c* was passed as proposed in the report.

Sections VI. and VII. were also passed as proposed in the report.

Coming to the Professional Examinations the Council passed sub-sections *a* and *b*, but altered sub-section *c* so as to read "dental anatomy, physiology, pathology, surgery, with materia medica and therapeutics as applicable to dental surgery." Sub-section *d* was passed in its original form; sub-section *e* was made to read "human anatomy and physiology"; and sub-section *f* was made to read "principles of surgery and medicine in their application to dental surgery."

In the last recommendation an alteration was made to make it read "may be taken at two or more successive stages during the course of professional study."

The Council then resumed and Mr. BRYANT moved that the Council confirm the resolutions passed in committee.

This motion was after a short debate agreed to.

The recommendations as finally approved were in the following form, viz.:—

RECOMMENDATIONS AS TO THE COURSE OF STUDY AND EXAMINATIONS TO BE REQUIRED OF CANDIDATES FOR LICENCES IN DENTISTRY OR DENTAL SURGERY.

A. Preliminary Examination and Registration.

1. That every dental student shall at the commencement of his studentship be registered in the manner and under the conditions prescribed for medical students.

2. That no person shall be registered as a dental student who has not previously passed one of the preliminary examinations in general education recognised by the Council unless before July 22nd, 1878,

be commenced professional study by apprenticeship to a Dentist entitled to be registered or by attendance on professional lectures.

*** See Regulations of the General Medical Council in regard to the registration of medical and dental students.

B. Professional Study.

3. That every candidate for a Licence in Dentistry or Dental Surgery shall be required to produce certificates showing—(1) that he is at least twenty-one years of age; (2) that he has been registered as a dental student; (3) that he has subsequently to the date of the registration been engaged in professional study for at least four years[5]; (4) that he has attended courses of instruction in the following general subjects at a recognised medical school for at least the period specified: (*a*)[6] Chemistry and Physics (with practical laboratory work for six months); (*b*) human anatomy for six months and dissections (with demonstrations) for twelve months; (*c*) physiology for six months (with practical laboratory work or a separate course of practical physiology); (*d*) surgery (including the elements of general pathology) for six months; (*e*) medicine (including the elements of genera pathology) for six months; (*f*) clinical surgery and medicine (at a recognised general hospital) for twelve months. (5) That he has attended courses of instruction in the following *special subjects* at a recognised dental school for at least the period specified: (*a*) dental anatomy and physiology, human and comparative (with practical work and demonstrations in dental histology), for three months; (*b*) dental pathology and surgery with materia medica and therapeutics in their application to dental surgery for three months; (*c*) dental metullurgy (with practical work and demonstrations) for three months; (*d*) dental mechanics (with practical work and demonstrations) for three months; (6) that he has for two years attended the practice of a recognised dental hospital or of the recognised dental department of a general hospital; (7) that he has, before or after registration as a dental student, received for three years practical instruction in mechanical dentistry from a registered dentist or in the mechanical department of a recognised dental school and hospital.

*** No portion of this instruction which is anterior to the date of registration shall be reckoned as a portion of the four years of professional study required.

C. Professional Examinations.

4. That the Examinations for a Licence in Dentistry or Dental Surgery shall be partly written, partly oral, and partly practical, and shall include the following subjects: (*a*) chemistry and physics; (*b*) practical examination in dental mechanics and metallurgy; (*c*) dental anatomy, physiology, pathology, surgery, with materia medica and therapeutics in their application to dental surgery; (*d*) practical examination in dental surgery; (*e*) human anatomy and physiology[6]; (*f*) principles of surgery and medicine in their application to dental surgery.[7]

5. That the prescribed subjects of examination may be combined or distributed at the discretion of the licensing bodies and may be taken at two or more successive stages during the course of professional study, provided that no candidate shall be admitted to any final examination in dental surgery and mechanical dentistry until he shall have completed the required four years' course.

The PRESIDENT congratulated the Council on having got through this important and difficult work.

The Council then adjourned.

TUESDAY, MAY 31ST.

The Council resumed work to-day with Sir WILLIAM TURNER again in the chair.

The Dental Committee and the Two Scottish Licensing Bodies.

Mr. BRYANT made an explanation with regard to certain proceedings at the last session in connexion with the suggestion in the report of the Dental Committee that the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow should unite and form one Conjoint Board for Scotland.

Dr. HEBON WATSON and Dr. MCVAIL made statements on the same subject.

The PRESIDENT, in closing the incident, said it appeared to him plain that the two bodies in Scotland through their representative men had inquired into the question and had come to the conclusion that there was no power in the Dentists Act to enable them to make the combination.

Disciplinary or Penal Powers of Qualifying Medical Authorities.

Mr. BRYANT, on behalf of the Executive Committee, submitted a fourth report on the disciplinary or penal powers of the qualifying medical authorities. He said that the report contained pretty well all which had taken place on the subject and was thoroughly up to date. The committee's report on the communications they had received contained the following:—

Further communications on this subject have been now received from the Scottish universities and the President having referred them in May, 1898, to the sub-committee for consideration the sub-committee have pleasure in reporting that a considerable advance has been made. The four Scottish universities have been working together by means of a joint committee, and the universities of Edinburgh, Glasgow, Aberdeen, and St. Andrews have informed the Council in almost identical terms that they are of opinion that it is impossible for the Scottish universities to obtain penal and disciplinary powers over graduates from the Privy Council, nor could they ask such powers from Parliament without making them applicable to graduates in all faculties; that they are desirous of assisting the General Medical Council in preventing medical practitioners convicted of crime, or of professional misconduct, from continuing the practice of their profession; but in such cases an inquiry into each case would have to be instituted, for which neither the University Court nor the Senate is, by its constitution, well fitted. Consequently they suggest that Section 40 of the Medical Act of 1858 might be so amended as to prohibit the use of a university degree by a medical graduate whose name had been removed from the Register. The inquiry into the professional misconduct of any accused person would thus be left in the hands of the General Medical Council, and in cases in which names were removed from the Medical Register under Section 29 medical graduates could no longer use the titles of which they were formerly possessed.

The following was the report of the Joint Committee:—

REPORT BY JOINT COMMITTEE OF THE SCOTTISH UNIVERSITIES APPOINTED TO CONSIDER THE QUESTION OF PENAL AND DISCIPLINARY POWERS OVER GRADUATES, OF DATE 5TH MARCH, 1898.

The Joint Committee were of opinion that it is impossible for the Scottish Universities to obtain penal and disciplinary powers over graduates from the Privy Council and that the universities could not ask such powers from Parliament without making them applicable to graduates in all the faculties. The only profession which has suggested that such powers should be obtained is that of medicine, and in cases of professional misconduct on the part of graduates of medicine a kind of inquiry would be rendered necessary, for which neither the University Court nor the Senatus is by its constitution well fitted.

On the other hand, the committee were of opinion that medical degrees in some respects stand in an exceptional position and that it is desirable to aid the General Medical Council in more effectually preventing medical practitioners whose names have been removed by them from the Register, either on account of crime or of professional misconduct, from continuing to practise their profession under cover of the degrees obtained from the Scottish universities.

The committee, therefore, resolved unanimously that their several courts be recommended to intimate to the General Medical Council that they would be prepared to support any proposal made by the Council to obtain from Parliament an amendment of Section 40 of the Medical Act, 1858, so as to prohibit any medical graduate of a university from continuing to take or use the name or title appropriate to his degree after his name had been erased from the Register by the General Medical Council under Section 29 of the Medical Act, 1858, and so long as such erasure continues in force. At present the penalty enacted by Section 40 applies to the false assumption of a medical title, but there seems no good reason why it should not be extended to the case of a man who, although he retains his degree, has, by the erasure of his name from the Medical Register, ceased to be a "duly qualified medical practitioner" in the sense of Section 34 of the Act. The adjudication of professional misconduct and its consequences would thus be left entirely in the hands of the proper authority—that is, the General Medical Council—without the necessity of any further inquiry by bodies largely non-medical and the possibility of a different conclusion being come to by them.

The conclusion of the Executive Committee on the subject was:—

As the disciplinary powers of the twenty qualifying bodies vary vastly and the views of those bodies differ widely as to the expediency of their seeking for more powers than they now possess the conclusion seems to be clear that this Council must take the matter into its own hands either by adopting a suggestion which was embodied in a report of this committee received by the Council in May, 1896, and supported by a carefully considered opinion of Mr. M. Muir Mackenzie, which is appended, or by acting on the suggestion of the Scotch Universities, as set out on page 10 of this report, and so amend Section 40 of the Medical Act as to prohibit the use of a University degree by a medical graduate whose name has been removed from the Register. If the latter measure is thought by the legal advisers of this Council to be expedient it seems to this committee to be the best and soundest one to adopt: for the prohibition of the use of any medical title, whether of a University or otherwise, by anyone who has had his name erased from the Medical Register for infamous conduct, would be a simple and effective action.

He had thought it desirable to take the legal advice referred to and on the Scottish Universities' suggestion Mr. Muir Mackenzie, as legal adviser to the Council, had given the following opinion:—

The facts which have been elicited in prosecutions which have taken place during the last two or three years disclose a very serious mischief arising out of the defective condition of the law. The report recommends that it would be desirable that each qualifying medical authority should in future have power, if it sees fit, to erase from its list or roll of Licentiates or Members the name, and cancel, recall, or suspend the diploma of any Licentiate or Member whose name has been erased from the Medical Register after an inquiry held under Section 29 of the Medical Act, 1858, and should also have power to replace on its lists or roll of Licentiates or Members the names and restore the diploma of any Licentiate or Member whose name after erasure from the Medical Register has been by order of the General Medical Council replaced on that Register. In my opinion the proposal to confer these powers on each of the medical authorities, if carried out by the necessary legislation, would effect a very beneficial change in the law and be very useful in its operation. I would add that the necessary legislation could be effected by a very short and simple Bill to be submitted to Parliament.

In conclusion Mr. BRYANT moved:—

That the President be requested to communicate with the Lord President of the Privy Council as to the practicability of obtaining such an amendment of the law as would more effectually prevent the

---

[5] Not more than one year of *bonâ fide* apprenticeship to a registered dentist, if served subsequently to the registration, may be reckoned as a portion of the four years of professional study required.

[6] This instruction may be obtained at a science school recognised by the licensing body.

[7] It is recommended that a synopsis of the scope of the examination in these subjects be issued by the licensing bodies.

holder of a medical diploma or degree from using the title thereof after his name has been erased from the Medical Register under Section 29 of the Medical Act, 1858, and so long as the erasure continues in force.

Dr. MACALISTER seconded the motion, inserting the words "more effectually" in order to meet an objection by Mr. HORSLEY that the proposal was in contradiction to a resolution of Council to take on a test case in the High Court of Justice.

The PRESIDENT (to Mr. Horsley): Do I understand that you hold that the law does not need amendment?

Mr. HORSLEY: Yes. The test case has not been heard. It certainly has not been withdrawn.

Dr. MACALISTER pointed out that the attitude the Council were now asked to assume was that held at the time he joined the Council some twelve years ago.

Dr. GLOVER wished to emphasise the fact that it had been held it was the respective bodies who ought to get the powers in question, but now it was proposed to relieve these bodies and throw the responsibility on the General Medical Council. He hoped the Council would not commit itself to any such proposal as that now before it.

Sir CHRISTOPHER NIXON regarded the suggestion of the legal adviser as a very happy solution of the difficulty which existed on the subject. But he thought the first step which ought to be taken upon it was to ascertain whether the qualifying bodies would consent to have degrees conferred by them removed by the General Medical Council.

The motion was agreed to.

Direct Representation.

Mr. GEORGE BROWN had given notice of the following motion:—

That in the opinion of the Council, in view of the large increase in the number of registered practitioners residing in the United Kingdom, the time has come when it would be expedient to confer upon them the power of returning an increased number of Direct Representatives to the General Medical Council, as provided for in section 10, sub-section 1, paragraph C of the Medical Act of 1886, and that representations be made to the Privy Council accordingly.

He said that the last time a similar motion was before the Council was in 1891, when 5 members voted for it and 21 against it. But of these 21 only 12 now sat at the Council and owing to the infusion of new blood he thought the time had arrived to revive the proposal. Since he placed it on the notice paper the resolution had been received with a great deal of favour, but it had been represented to him that at such a late period of the session it would be undesirable to bring the proposal forward. In deference to this view he now asked leave to postpone the motion till the November session.

The leave asked for was granted.

A Sweeping Proposal.

Mr. BROWN had also given notice of his intention to move:—

(*a*) That Standing Order 7, relating to the Executive Committee, be and is hereby repealed, and that the duties of the Executive Committee be in future discharged by the branch councils. (*b*) That the Standing Order 9, relating to the appointment of committees on education, examination, public health, dental education and examination, students' registration, and penal cases, be and is hereby repealed. (*c*) That the duties of the committees referred to in Standing Order 9 be in the future discharged by the branch councils.

The PRESIDENT wished to say that if carried these three proposals would practically revolutionise the whole of the proceedings of the Council. He wished to know if Mr. Brown had a seconder.

Mr. BRUDENELL CARTER: The Executive Committee is a statutory committee.

Mr. BROWN was not at all satisfied to delegate the Council's powers to the Executive Committee and the experience of this session and last convinced him that some change in their procedure was necessary. They had sat two days this session at a cost of 300 guineas to correct mistakes made by the Executive Committee, and he thought that the time had come when there ought to be introduced a new mode of conducting their business.

The PRESIDENT: Do you withdraw the proposals?

Mr. BROWN: Yes, meantime.

Dr. MACALISTER: Because there is no seconder.

The Dentists Act and the Duties of the Executive Committee.

Mr. HORSLEY moved that Standing Order No. 15, Chapter VII., which was, "The Executive Committee shall carry out generally the provisions of the Dentists Act in accordance with the Council's resolutions," should be rescinded. He maintained that the Medical Act did not empower the Council to impose upon the Executive Committee the duties they had been undertaking.

Mr. BROWN seconded the proposal.

On a division 9 members voted for the motion and 8 against, 13 declining to vote.

The PRESIDENT: It is a pity that so many members have not voted.

Dr. GLOVER: I declined to vote because Mr. Muir Mackenzie is not here.

Dr. MACALISTER: I voted against it because I did not think a case had been made out.

Dr. MCVAIL: I did not vote because I did not understand the question.

The PRESIDENT: The abstention from voting is most unfortunate.

Eight Notices.

On the motion of Dr. LOMBE ATTHILL, seconded by Mr. TEALE, it was agreed to refer to the Executive Committee for consideration and report the following eight notices of motion standing in the name of Mr. Horsley:—

That the following be added to the Standing Orders, Chapter IX., to follow Standing Order No. 7: "Each committee shall be convened by the chairman of his own motion or by the requisition of any two members of the committee."

That the Penal Cases Committee shall be included among the other committees to be annually appointed in May under Standing Order No. 8, Chapter IX.

That in Standing Order No. 5, Chapter IX., the following shall be a new sub-section: (iv.) The Penal Cases Committee shall meet at least once a month.

That the sentence "as and when approved by the President" in sub-section *a* of Standing Order No. 3, Chapter XIV. (p. 24), be and is hereby rescinded.

That in Standing Order No. 5, Chapter XIV., after the word "offence" the Order shall read, "the matter shall be referred to the Committee of Penal Cases."

That in Standing Order No. 6, Chapter XIV., for the word "solicitor" shall be substituted the words "General Registrar," and that with regard to Appendix A, p. 31, the letter scheduled therein shall be signed by the Registrar to the General Medical Council.

That Standing Order No. 8, Chapter XIV., shall read as follows: "When any answer, evidence, or statement is forwarded or application made by the accused person between the date of the issue of the notice and the day named for the hearing of the charge copies thereof shall be immediately sent by the Registrar to each member of the Penal Cases Committee."

That in Standing Order No. 9, Chapter XIV., for the word "President" shall be substituted the words "Penal Cases Committee."

A Legal Opinion.

On the motion of Mr. HORSLEY, seconded by Dr. BRUCE, it was formally agreed to enter on the minutes the opinion obtained from Mr. Muir Mackenzie about the President's right to prohibit Mr. Horsley's access to Council documents such as Mr. Horsley said he had enjoyed up till April 7th.—Dr. MACALISTER explained that it was not customary to place counsel's opinion on the minutes unless there was a demand to do so.

The Public Health Diploma.

Sir WILLIAM GAIRDNER called attention to diversities of interpretation given at different places to the regulations of the General Medical Council with reference to the course of study for a diploma of public health. He said that since he came to London to attend the meetings of this session of the Council he had received communications from a very excellent man, a high authority on the matter, showing that there was a sad want of uniformity in regard to outdoor sanitary study. The Council's requirement was that every candidate for a diploma must produce evidence of his having during six months studied practically the duties connected with outdoor sanitary work. His correspondent showed that in cases what was demanded was attendance at the sanitary office daily for five days a week, while elsewhere the attendance required was only one hour on Saturday, and only occasional Saturdays came in. What he wanted to know was what was the meaning of "practically." He moved that the consideration of the matter should be remitted to the Public Health Committee.

Mr. TICHBORNE seconded.

Mr. TOMES said it would be a new order of procedure to lay down exactly what a qualifying body was to do. It was for the qualifying bodies themselves to determine. The Council said that such and such an amount of study was requisite, but they left it to the bodies to determine what the amount of attendance should be. The Council were surely not going to say how many hours a man must study. If they once began to attempt it—and he saw a tendency in that direction during the discussion of the dental recommendations—they would be placing themselves in an awkward position, which would be bad for education generally because the qualifying bodies understood the matter better than the General Medical Council did.

The PRESIDENT pointed out that there was a difference

between the relation of the Council to public health and its relation to other subjects. The statement that in one place daily attendance for five days a week was required for outdoor sanitary study, while in other places an occasional Saturday was deemed enough, was a matter to which he really thought the Public Health Committee ought to have their attention drawn.

Sir RICHARD THORNE, chairman of the Public Health Committee, said this matter came before the Council because of a magnanimous Scotch medical officer who was willing to give instruction on five days a week without charging for it. English officers could not do that. He hoped the Council would not order an inquiry because it would not only be difficult to make but would raise other very important questions which the Council would have to deal with as the result.

On a division the motion was carried by 13 votes to 7.

Unqualified Dentist Assistants.

The next business was consideration of the following communication from the British Dental Association, referred by the Executive Committee to the General Council, as to the issue of a notice to dentists in regard to the employment of unqualified assistants:—

British Dental Association, 40, Leicester-square, London, W.C., Feb. 12th, 1898.

DEAR SIR,—Certain members of the dental profession who possess medical qualifications have received an important notice from the Medical Council as to the employment of unqualified persons and assistants. On behalf of the British Dental Association I beg to submit that the time has arrived when a somewhat similar notice as regards "covering" might be sent to all dentists or that the notice issued to the dental profession by the Medical Council in 1893 might be repeated. The notice of 1893 was found to be of much service in helping to check the spread of the practice of "covering," as members of the executive of this association have reason to know; and it is felt that the issue of another notice at the present moment would, as a preventive measure, be most opportune and saving of both time and money to the Council in the investigation and consideration of future cases.

As a minor matter I might remind you that Mr. Miller utilised the opportunity of coupling with the 1893 warning notice a means for further correcting the address entries of dentists in the Register. I shall feel obliged if you will bring this request to the notice of the Executive Committee at the earliest moment.

I am, dear Sir, yours truly,
W. B. PATERSON,
Hon. Secretary of the British Dental Association.

To the Registrar of the General Medical Council.

On the motion of Dr. MACALISTER, seconded by Mr. TOMES, this communication was referred to a committee consisting of the members of the Dental Committee for consideration and report.

Administration of Anæsthetics.

Consideration was next given to the following communication, referred by the Executive Committee to the General Council, from the Dundee and District Branch of the British Medical Association as to the administration of anæsthetics by registered medical practitioners for unregistered dental practitioners—a practice which in the opinion of the Executive Committee is most reprehensible:—

Annfield House, Dundee, March 10th, 1898.

Covering Unregistered Dental Practice:

DEAR SIR,—I have been asked by the Council of this branch to ask you whether the recent notice issued by the General Medical Council will extend to the case of a registered medical practitioner who by administering anæsthetics for dental operations by persons not registered under the Dental Acts gives countenance to this most objectionable form of practice. If the question has not yet been considered you might bring it under the notice of the General Medical Council at its next meeting. I have been corresponding with Mr. Robertson and he has referred me to you.

I am, yours sincerely,
H. E. Allen, Esq. R. C. BUIST, M.D., Hon. Sec.

On the motion of Mr. BROWN, seconded by Dr. BRUCE, this communication was referred to the same committee as that to which the British Dental Association's letter had just been committed.

Mr. TOMES pointed out that the question raised in this case was a much wider one and any decision come to in connexion with it must rule in the case not only of dentists but also medical practitioners.

The PRESIDENT, before calling for the next business on the printed programme, pointed out that in dental matters they were placed now in a difficulty by their adoption of Mr. Horsley's proposal to prevent the Executive Committee from generally administering the Dentists Act. Unless they set up machinery equivalent to that which had existed hitherto all communications on dental matters must come direct to the Council in future.

Dr. MACALISTER thought that communications on dental business relating to matters other than such as pertained directly to the statutory Dental Committee might go to the Executive Committee so as to allow the latter to prepare the business for the Council.

A motion to this effect was thereupon agreed to.

Tropical Diseases.

Sir JOHN BATTY TUKE, as chairman of the Education Committee, submitted the following report on a communication from the Colonial Office regarding special instruction in Tropical Diseases in medical schools:—

The following communication from the Colonial Office has been forwarded by order of the President to the Education Committee for consideration and report:—

Downing-street, March 11th, 1898.

SIR,—In an address (a copy of which is enclosed) delivered at St. George's Hospital at the opening of the Winter Session on Oct. 1st last Dr. Manson, who is now the medical adviser of this Office, urged the necessity for special education in tropical medicine in the medical schools of this country.

2. This is a matter in which Mr. Chamberlain is much interested, as he is anxious to do everything in his power to extend the benefits of medical science to the natives of the tropical colonies and protectorates and to diminish the risk to the lives and health of those Europeans who as Government officers or private employés are called upon to serve in unhealthy climates.

3. He feels confident that if some scheme can be devised by which it can be ensured that all the medical officers selected by the Secretary of State for appointments in the tropics shall enter on their careers with the special knowledge requisite for dealing with those diseases which are especially prevalent in tropical climates, great benefit will result to Europeans and to natives alike.

4. At present there is no arrangement by which officers selected for medical appointments in the Crown colonies and protectorates receive instruction in tropical medicine before taking up their duties, and in consequence the greater number of these officers possess at the commencement of their service only the crudest knowledge of the diagnosis and treatment of tropical disease, though they may by the exigencies of the service be placed at once in responsible positions where such a knowledge would be of the highest importance.

5. Mr. Chamberlain is at the present time endeavouring to make arrangements for giving to colonial medical officers some such clinical instruction in tropical medicine as is given in Netley and Haslar in the case of medical officers of the army, navy, and Indian Medical Services.

6. Even if such an arrangement is eventually arrived at the conditions of the colonial service will scarcely admit of the officers being kept under instruction for more than three or four months; it is therefore desirable that they should have some preliminary knowledge of the subject so that they may derive the greatest possible benefit from their clinical opportunities during this short course.

7. So far, then, as this department is concerned Mr. Chamberlain would be glad if any scheme could be arranged by which an opportunity for special instruction in tropical disease could be offered to the student by the medical schools of this country and would be prepared to support it by selecting preferably for colonial medical appointments those candidates who could show that they had studied this branch of medicine, especially if some certificate or diploma to that effect were forthcoming.

8. Mr. Chamberlain would point to the fact that the War Office, Admiralty, India Office, and Foreign Office are interested in this matter and that, as Dr. Manson states, rather over a fifth part of the medical graduates of Great Britain and Ireland practise in warm climates, or being in the army and navy may be called upon at any time to do so.

9. Mr. Chamberlain has consulted these departments and finds that they share his views as to the desirability of extending the teaching of tropical medicine in the British medical schools and he would ask the General Medical Council to give the matter their earnest and favourable consideration.

10. A similar letter has been addressed to the leading medical schools of this country. I am, Sir, your obedient servant,
C. P. LUCAS.

The President of the General Council of Medical Education and Registration of the United Kingdom.

The Committee have given the foregoing communication their earnest attention at two meetings and beg leave to report to the Council thereon as follows:—

They share the conviction expressed by Mr. Chamberlain that it is highly desirable that medical men who propose to practise in hot climates should have opportunities for the special study, theoretical and practical, of tropical diseases. But they are not of opinion that this desirable end would be attained by means of a recommendation, emanating from the Council, to the effect that such special study should be made obligatory on all candidates for a licence to practise. To be effective it is necessary that every course of instruction in these diseases should include clinical demonstrations and observation of actual cases. In few of the medical schools in the United Kingdom can such clinical instruction be provided; and merely to add a short course of theoretical lectures to those that are already given on the subject in connexion with the usual systematic courses on general medicine would serve no good purpose.

The committee believe, however, that if the resources of such institutions as Haslar or Netley were made available for the instruction, not only in tropical medicine, but also in tropical hygiene and climatology, of qualified practitioners selected for colonial medical appointments, the efficiency of this branch of the public service would be materially increased. At such central institutions the teachers would naturally be selected for their skill and experience in this special branch of practice; the cases for clinical demonstration would be at hand as they cannot be in ordinary general hospitals; and the candidates under instruction, having already obtained their medical qualifications, would be free to give their undivided attention to the special study in question. It would, moreover, be an advantage if the facilities for

genuine and efficient study thus provided were thrown open under proper conditions to other medical practitioners who propose to practise in tropical countries. Certificates or diplomas which might be granted by the authorities of such institutions to medical practitioners who had completed a satisfactory course of study would have a real value as evidence of special qualification. But the committee do not think that this could be said of diplomas granted to medical students possessing only the preliminary and theoretical knowledge contemplated in paragraphs 6 and 7 of the above communication.

The committee accordingly recommend that the Council inform the Secretary of State for the Colonies that, while the Council is not prepared to recommend that tropical medicine should be made an obligatory subject of the ordinary medical curriculum, it deems it highly desirable in the public interest that arrangements should forthwith be made by the Government for the special instruction in tropical medicine, hygiene, and climatology of duly qualified medical practitioners who are selected for the Colonial Medical Service or who otherwise propose to practise in tropical countries.

Sir JOHN BATTY TUKE moved the adoption of this recommendation.

Dr. MACALISTER, deputy chairman of the committee, and who presided at the meeting at which the report was agreed to, seconded the motion.

Mr. CARTER thought the Seamen's Hospital at Greenwich should be mentioned.

Sir WILLIAM THOMSON objected to mention being made of any particular institution and it was only because Netley and Haslar were named in the Secretary of State's letter that they were named in the report. The Council were not asked to name any school and it was not for the Council to suggest what were the schools at which information of the kind in question was to be obtained. In making the recommendation they had made the committee were keeping within their proper limits.

The motion was agreed to.

Recognised Preliminary Examinations.

Sir JOHN BATTY TUKE submitted the following interim report from the Education Committee on the revision of the list of recognised preliminary examinations :—

The Education Committee have been engaged in collecting evidence as to the standard of the various preliminary examinations with a view to the revision of the Council's list, which they propose to report upon at the November session. Much, however, remains to be done and the list cannot be brought into its final form until a date near to the end of the year. Inasmuch, however, as by Resolution 2 of the Council, adopted on November 28th, 1897, the revised list is to come into force on Jan. 1st, 1899, the notice that can be given to the various educational bodies and to intending candidates will of necessity be very short. Representations as to the inconvenience of this have reached the committee from several quarters, and these representations appear entitled to the consideration of the Council. The committee would remind the Council that their original proposal was that the revised list should come into force on Jan. 1st, 1900, and they now accordingly recommend as follows :—

That notwithstanding the Council's resolution of Nov. 29th, 1897, the revised list of preliminary examinations to be submitted by the Education Committee at the November session do not come into force until Jan. 1st, 1900.

He moved the adoption of this recommendation, mentioning that it simply asked for extension of time by a year.

Dr. MACALISTER, in seconding, said that the list would be ready by November; but it was thought that a month was too little to allow after its appearance and therefore the committee reverted to the originally proposed date, 1900.

The motion was agreed to.

Finance.

Mr. BRYANT, chairman of the Finance Committee, submitted the following report :—

The Finance Committee reports that the income of the General and Branch Councils for the year ending December 31st, 1897, was £7942 18s. 4d., but that the expenditure for the same period, having been £10,761 1s., exceeded the receipts by £2818 2s. 8d., as against an excess of £1526 18s. 10d. last year. From Table A it will be seen that the fees received by the Branch Councils were considerably less than last year, as £557 7s. 6d. less was received from that source in England, £254 10s. less in Scotland, while Ireland alone shows a small increase of £32 5s., making a total decrease of £779 12s. 6d.

The items of increased expenditure are shown on Table B, and among these may be specified the following:—(*a*) An increase of £404 8s. 1d. for the British Pharmacopœia, occasioned by the further necessary expenditure in the production of the new book. (*b*) An apparent increase of £451 17s. 11d. in salaries, caused by the vote of £1000 as an honorarium to the late Registrar. (*c*) An increase of £172 18s. 1d. in law expenses, due chiefly to counsel's fees in the appeal by the Apothecaries' Hall of Dublin to the Privy Council. (*d*) An increase of £60 2s. 1d. on account of the interest due on the mortgage entered into by the General Council, the amount having been increased from £20,000 in 1898 to £22,507.

On the other hand decreased expenditure has to be noted: (*a*) in fees paid to the General Council, £343 15s. 2d., the Council having sat for one day less than the previous year; (*b*) in miscellaneous printing, £352 5s. 5d.; (*c*) in inspection and visitation of examinations, £65 2s., owing to the termination of the series of inspections.

Though there are still some payments to be made on account of the Pharmacopœia it may be expected that as the whole of the issue will probably be sold within a short time, seeing that of the Pharmacopœia of 1885 13,500 were sold in the first four months and 22,300 in the first sixteen months, not only will the whole of the expenditure be refunded but a considerable profit will be shown.

The additional expenditure of an exceptional nature (£2507) incurred during the year in the alteration of the Council office is excluded from the total normal expenditure of the year, as otherwise comparison with previous years would be rendered difficult. One of the appended tables shows assets of the three branch councils and the dental fund at the close of the last three years respectively, from which it will be seen that they have decreased owing to the large contributions which have been required by the General Council, the English branch assets having decreased by £1605 7s. 7d., the Scottish by £629 7s. 9d., and the Irish by £687 5s. 8d. The dental fund shows an increase of £823 4s. 9d. It should be remembered, however, that the British Pharmacopœia being now completed and published there will not only be an end to the demand upon the branch funds on account of its expenses, but that the £3683 that has been locked up during the production of that work will be received back by the General Council, removing the necessity for any large demands on the branches for the next few years.

The question of establishing a sinking fund for the repayment of the loan of £20,000 from the English Branch Council should be considered by the Council.

This may be done either by the annual deposit of a sum of money at the Bank of England and the investment of capital with its interest, so that a capital sum would be secured at a fixed period, or by making an annual payment to a sound and established insurance company.

An inquiry at the Bank of England as to the best method to adopt elicited a letter from the manager, in which he informs the committee that it would probably be more advantageous for the Council to arrange the matter with some first-class insurance office than to do so with the Bank of England, both on the grounds of cheapness and simplicity. Under these circumstances it seems best to your committee that this advice should be followed, and your committee have to advise that by making an annual payment of £172 10s. to the Alliance Insurance for fifty years the sum of £20,000 would be realised.

By means of this fund the whole of the debt of the General Medical Council would be wiped out and the Council would have its freehold buildings rent free, and this would be done by the payment of a sum of money every year which would hardly be felt by the Council.

The question of raising the Oxford-street building another storey should also be entertained, for more committee rooms and a room for the President are much wanted.

It was agreed, on the motion of Mr. BRYANT, seconded by Dr. BRUCE, that the suggestion contained in the report as to the sinking fund should be referred to the several branch councils for consideration and report to the General Council and that the President and treasurer should be empowered to obtain plans and estimates for the addition of another storey to the present offices at 299, Oxford-street, they to report to the Council.

The PRESIDENT mentioned that he had brought the matter of want of accommodation before the executive. During the few weeks he had held office he had felt the inconvenience which arose from there being no room for the President, who if he had to meet members had to use the Council chamber itself, the luncheon-room, a committee-room, or it might be the stairs. He did not think it right that the President should be in that position.

Dr. MACALISTER, who pointed out that the resolution committed them to inquiry only, said that owing to their committees having become not only more numerous but more active, more committee rooms, as well as a President's room, had become absolutely urgent.

Mr. HORSLEY urged that the finance report should contain tabular statements of the Council's liabilities and assets and should show the actual legal expenditure more clearly than the account first submitted did.

The Dublin Apothecaries' Hall.

Mr. BRYANT, as chairman of the committee appointed to secure a successor to Mr. Arthur Chance, read the following report :—

The Committee recommend the Council to appoint Mr. H. G. Howse, of 59, Brook-street, Grosvenor-square, London, M.S. London, F.R.C.S. of England, surgeon to Guy's Hospital, and late examiner in surgery at the College of Surgeons and at the University of London, assistant examiner in surgery at the Apothecaries' Hall of Ireland, and inspector on behalf of the Medical Council, "to secure at the examinations of the Apothecaries' Hall the maintenance of such standards of proficiency in medicine, surgery and midwifery (under the provisions of the Medical Act, 1886, Sec. 5, Clause 2) from candidates at such qualifying examinations, and to have such powers and perform such duties in the conduct and inspection of those examinations as this Council may from time to time by order prescribe, and to secure that such examination shall be deemed a qualifying examination within the meaning of the Medical Act, 1886.

He moved :—

That Mr. H. G. Howse, M.S., F.R.C.S., be appointed an assistant examiner in surgery at the examinations of the Apothecaries' Hall, Dublin, in the room of Mr. Arthur Chance, resigned, and that the duties and conditions of his appointment be the same as those relating to the appointment of Mr. Chance.

Dr. HERON WATSON having seconded, the motion was agreed to.

Fines under the Medical Acts.

On the motion of Sir DYCE DUCKWORTH, seconded by

Mr. HORSLEY, the following interim report was received and entered on the minutes:—

The Committee on Fines under the Medical Acts has to report that at a meeting held by them on March 4th, 1898, they directed that a statement, based on the report of the committee that met in 1891, should be forwarded to Sir Edward Bradford and that he should be requested to receive a deputation on the subject. In answer to this communication the Council was informed by the Commissioner of Police on March 24th, 1898, that the matter was receiving his careful consideration and that he was in communication with the Secretary of State for the Home Department on the subject and in answer to a further inquiry made by the Registrar on May 17th he stated that a decision had not yet been arrived at.

The Executive Committee.

A ballot for the election of the Executive Committee, which consists of the President *ex-officio*, four members representing the English Branch Council, two the Scottish, and two the Irish, resulted in the return of Sir Dyce Duckworth, Mr. Bryant, Mr. Brudenell Carter, Dr. Glover, Dr. Heron Watson, Sir William Gairdner, Dr. Lombe Atthill and Sir Philip Smyly. Sir William Gairdner, who takes Sir William Turner's place, is the only new member on the committee.

Mr. HORSLEY thought the Council ought to revert to the old custom of annually delegating powers to this committee. He proposed "That the powers and duties delegated in accordance with the Standing Orders as amended in the present session to the Executive Committee be vested in the committee until the next May meeting of the General Medical Council."

Sir CHRISTOPHER NIXON seconded and Mr. BROWN supported the motion.

The PRESIDENT thought the Council should abide by the resolution of 1887.

Dr. MACALISTER pointed out that no harm had resulted from working under the resolution just referred to.

On a division the motion was rejected by 18 votes to 5.

The Pharmacopœia.

Mr. BRUDENELL CARTER, seconded by Dr. LITTLE, moved that the report of the Pharmacopœia Committee be received and entered on the minutes. This, which was a lengthy one, will be printed in our columns next week, when we shall finish our report of this session.

Medical News.

THE annual dinner of the Members of the Royal College of Veterinary Surgeons took place on June 1st at the Hôtel Cecil under the presidency of Professor Penberthy.

MEDICAL MAGISTRATE.—The Lord Chancellor has appointed Dr. John J. Lynch of Walsall a Justice of the Peace for that borough.

BY the will of Mr. Edward Mackeson, who died in March last, the Royal Asylum of St. Anne's Society, the Surgical Aid Society, and the Association for Promoting the General Welfare of the Blind, will each receive a third share of £100,000.

PRESENTATIONS TO MEDICAL MEN.—Mr. F. M. Blackwood, M.B. Durh., M.R.C.S. Eng., of Summerhill, Sydney, New South Wales, has been the recipient from the Sterling Lodge, No. 18, Independent Order of Oddfellows, of an illuminated address.—Mr. Joseph Park, M.B., Ch.M. Syd., of Helensburgh, New South Wales, has been entertained at a public banquet by the inhabitants of Helensburgh and presented with an illuminated address.—Mr. W. H. O'Neill, M.B., Ch.M. Edin., late of Narrandera, New South Wales, was entertained at a public banquet on leaving the district and was presented with a gold watch and chain. The watch bore a suitable inscription.—On March 25th last Mr. F. J. Drake, M.B., Ch.B. Melb., on his retiring as surgeon superintendent of the General Hospital, Launceston, Tasmania, was presented with several medical works by the medical staff and a spirit lamp by the present and past nurses.—On the occasion of Mr. William A. Rutherford, M.B, C.M. Edin., resigning the post of house surgeon at the Durham County Hospital, which he had held for about three years, he received presentations from the nurses of the institution and other friends as marks of esteem.—On May 27th Mr. C. Thiselton D. Urquhart, M.B., C.M. Aberd., of Aberdeen, was entertained at dinner in the Imperial Hotel by many of his medical brethren on his leaving the city.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual meeting of this society was held at 20, Hanover-square, on May 26th, when the retiring President, Dr. J. F. Payne, delivered a valedictory address. He then introduced the new President for the session 1898–99, Dr. Radcliffe Crocker, who read a paper dealing mainly with the influence on treatment of a proper knowledge of the bacteriology of the skin.—Dr. J. H. Stowers opened a discussion upon Drug Eruptions. He was followed by the President and by Dr. Payne, Dr. Bowles, Dr. Stopford Taylor, Dr. A. J. Harrison, Dr. Galloway, Mr. Pernet and others.—Dr. Payne showed three cases—(1) Prurigo in a Child; (2) Morphœa in a Little Girl; and (3) a case for Diagnosis in an Old Man.—Mr. Hutchinson exhibited a large collection of drawings illustrating lupus, rodent ulcer, &c.—The annual dinner was held in the evening at the Café Royal, the President being in the chair. About forty members and guests were present.

THE CANDIDATURE OF MR. BENNETT MAY FOR THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—A meeting of Fellows of the College residing in the Midlands was held in the Birmingham Medical Institute on June 1st, in support of the candidature of Mr. Bennett May for membership of the College Council. The chair was taken by Dr. Thomas Savage, and there were also present, in addition to the candidate, Mr. Gilbert Barling, Mr. W. E. Bennett, Mr. H. J. Blakesley, Mr. L. Gamgee, Mr. W. F. Haslam, Mr. G. Heaton, Mr. J. Furneaux Jordan, Mr. C. Leedham-Green, Mr. Christopher Martin, Mr. J. W. Taylor, Mr. William Thomas, Mr. T. Wilson, and Mr. J. T. J. Morrison. Apologies for non-attendance had been received by the secretary (Mr. Morrison) from Mr. F. Edge, Mr. G. C. Franklin, Surgeon-Major W. G. Lowe, Mr. C. H. Marriott, Mr. F. H. Marson, Mr. E. J. P. Olive, Mr. Edwin Rickards, Mr. E. S. Savage, Mr. J. Vose Solomon, and Mr. W. D. Spanton. At the request of the chairman Mr. Bennett May stated his views on College affairs and expressed his willingness to accede to the request that he would offer himself for the ensuing election in July. The following resolution, proposed from the chair and seconded by Mr. Barling, was carried unanimously—viz.: "That this meeting of Fellows of the Royal College of Surgeons of England residing in and around Birmingham is of opinion that it is desirable that the Midlands should be represented on the Council of the College, and pledges itself to support the candidature of Mr. Bennett May." It was also resolved that copies of the foregoing resolution should be sent to the medical press, and a sub-committee was appointed to take further steps to promote Mr. Bennett May's election.

BECKENHAM AND PENGE MEDICAL SOCIETY.—The annual dinner of the Beckenham and Penge Medical Society was held at Howard's Assembly Rooms on May 26th, when thirty-five members and guests were present. The company included the Rector of Beckenham and Dr. Walker, honorary members of the society, and the majority of the medical practitioners of the neighbourhood. Among the visitors were Dr. Frederick Roberts, of University College; Mr. Bland Sutton, of Middlesex Hospital (honorary consulting surgeon of the local hospital); Mr. Marmaduke Sheild, of St. George's Hospital; and Mr. Keetley, of the West London Hospital. The dinner was a great success and the pleasure of the evening was in no way decreased by the absence in the speeches of any allusion to the bitter conflict of last year. The medical practitioners remain as they were, but prefer to leave to the healing influence of time and the good sense of the public the settlement of the club question. The toast of "The Queen" was proposed by the President, Mr. Frank Sturges, and he made a feeling reference to the loss which Her Majesty and the nation had sustained in the death of Mr. Gladstone. Mr. Prangley, vice-president, proposed "The Royal College of Physicians of London and the Royal College of Surgeons of England," urging on them a more serious attention to the duties devolving on them as the governing bodies of the profession. This was replied to by Dr. Roberts for the Royal College of Physicians in a very humourous and witty speech and by Mr. Sheild for the Royal College of Surgeons. The Rector of Beckenham, the Rev. H.

Arnott, F.R.C.S., proposed "The Local Medical Society." He spoke of his love and admiration for his old profession in the warmest terms, dwelt on the many advantages of the society in rubbing away rough corners and promoting goodwill and good fellowship among the members, but avoided altogether the "Battle of the Clubs" in either its general or local aspect. This enabled Mr. Sturges, who replied on behalf of the society to avoid it also, and he contented himself with some general remarks on the use of these societies in strengthening and binding together the medical profession throughout the country for its own good and for that of the public. Mr. Wells proposed "The Visitors," regretting the absence of those who were unable to be present. Mr. Keetley replied. The health of the Chairman, proposed by Mr. Bland Sutton, and the Chairman's reply concluded the toast list. During the evening Mr. C. A. Lidgey presided at the piano and Dr. Roberts and Mr. Henley sang. Altogether it was a most excellent dinner, a most enjoyable and harmonious gathering, and a conspicuous success.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Prisons Bill.

THE consideration of the Prisons Bill by the Grand Committee on Law of the House of Commons is now practically finished and as the measure has been a good deal altered by the Committee it may be useful to explain its present state. Probably the clause in which the most important amendment has been made is the first. The clause provides for the amalgamation of the Directors of Convict Prisons with the Prison Commissioners and against the expressed opinion of the Home Secretary the Committee inserted a stipulation that one of the latter shall be a medical man skilled in mental diseases. In the matter of visitation the Bill in its present state provides that the Secretary of State shall appoint for every convict prison a board of visitors of whom not less than two shall be justices of the peace and whose powers and duties shall be prescribed by the prison rules drawn up by the Secretary of State. With regard to the rules for hard labour it is provided that in making these rules regard shall be had to the sex, age, health, industry, and conduct of the prisoners. Roughly speaking, the arrangements in the original Bill for the division and classification of prisoners stand—that is to say, there are to be three classes. In the interests of persons imprisoned for default in payment of a debt or for default in satisfying an order of the Court there is a proviso that they shall not be placed in association with convicted prisoners or be compelled to wear prison dress unless their own clothing is unfit for use. Clause 6 is now made to read: "1. It shall not be necessary to provide or appropriate punishment cells in any prison for the confinement of prisoners for prison offences, but in every prison special cells shall be provided for the temporary confinement of refractory or violent prisoners. 2. The Secretary of State shall satisfy himself from time to time that in every local and convict prison separate cell accommodation is provided for all prisoners, and a yearly return showing the accommodation of each prison and the daily average and highest number of prisoners confined therein during the year shall be given in the annual report of the Prison Commissioners." The Home Secretary has drafted the rules which he proposes to issue and these he has put before the members of the committee for their consideration. Further than that, by way of concession to prison reformers, he has appointed a committee of experts (the constitution of which was given in our columns last week) to inquire into the important question of the dietary.

Vaccination Bill.

Very soon after the conclusion of the Whitsun Recess the Vaccination Bill will fall to be dealt with by the Grand Committee on Law of the House of Commons, and in view of the proceedings a large number of amendments have been prepared by members of the committee. Many of these amendments aim at the same object though their wording may be somewhat different. For instance, there is a large group which seek to insert in the Bill an arrangement whereby there shall be no prosecution for contravention of the Vaccination Acts unless with the sanction of the board of guardians. Their phraseology and in some cases their methods differ, but they all have this object in view. Mr. Carlile is responsible for a long list of amendments. Among other things he proposes that six instead of twelve months shall be the period from the time of birth within which vaccination shall be required to be performed. He also proposes several new clauses. One of these is in effect that from and after a particular date vaccination by public vaccinators shall with certain exceptions be performed with glycerinated calf or other approved animal lymph, and such lymph shall be obtained either from the national vaccine establishment or from a person or body duly licensed to supply it; that the Local Government Board shall make regulations to secure the provision and supply of glycerinated calf or other approved animal lymph, and may license on such terms as the Board may think fit any person or body to supply such lymph, and that if any parent or person having charge of a child shall signify the desire to have the vaccination performed with humanised lymph the vaccination officer may so perform it on receiving a written statement to that effect signed and witnessed. Mr. Carlile has drafted two other clauses—one providing for vaccination free of charge by public vaccinators and the other providing that parents having conscientious objections to vaccination may make a statutory declaration to that effect and thus free themselves from the possibility of prosecution. Mr. Sydney Gedge proposes that the parent shall get a reward of one shilling for having his child vaccinated, and that in addition to this shilling to the parent the sanitary authority shall pay to the medical practitioner a fee of half a crown for each child whom he vaccinates. Against the name of Mr. Brigg there stand on the notice paper several amendments. One of these limits the penalty on conviction to 5s. "including the costs." In another it is proposed that evidence tendered before a court of summary jurisdiction in cases of prosecution for neglected vaccination shall not be considered complete unless it includes a certificate from a duly qualified medical man that the child whose parent or guardian is being prosecuted is in a fit state of health to undergo the operation. Fitting in with this amendment Mr. Brigg has framed a new clause setting forth that the certificate of the duly qualified medical man shall not cost more than 1s. Colonel Long proposes that in any case where the parent or guardian makes a declaration or affidavit that he objects to the child being vaccinated on the ground that he believes vaccination to be dangerous or wrong and forwards the declaration or affidavit to the local registrar, then the parent shall not be liable to prosecution under the Vaccination Acts. Mr. Logan is responsible for the novel proposal that no local authority or educational authority or institution receiving grants in aid from the Government shall make vaccination a condition of employment or admission. There are many more amendments, but those mentioned will serve to show the drift of the discussion to be anticipated when the committee begins its work.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALFORD, H. T. M., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

ALLFREY, F. H., B.A. Camb., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

BELFRAGE, S. H., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BELL, R. H., B.A. Camb., L.R.C.P., M.R.C.S., has been re-appointed a House Physician to St. Thomas's Hospital.

BERRY, F. M. D., M.D., B.S. Lond., has been appointed a Medical Officer by the London School Board.

BERTRAM, T. D., M.B., Ch.M. Glasg., has been appointed Visiting Surgeon and Dispenser for the Coonamble Gaol, New South Wales, vice E. O. Newland, resigned.

BLUETT, P. F. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed *pro tem* acting Medical Officer and Vaccinator for the district of Molong, New South Wales.

BOOTH, JAMES, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Officer of Health and Public Vaccinator for the Shire of Dunmunkle, East Riding, Victoria, Australia, vice A. G. H. Colquhoun, resigned.

COBB, E. H., L.R.C.P., M.R.C.S. has been re-appointed an Assistant House Surgeon to St. Thomas's Hospital.

CLOSS, J. O., M.D., Ch.M. Edin., has been appointed a member of the Board of Examiners for the City of Dunedin, New Zealand.

COLEMAN, P., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eighth Sanitary District of the Tendring Union.

COOK, P. R., M.B., Ch.B. Univ. N. Z., has been appointed a Public Vaccinator for the district of Oxford, New Zealand.

COX, F. H., M.B., Ch.M. Syd., has been appointed a Medical Officer for the Hospital, Walgett, New South Wales.

CROSS, W. J., M.D. Toronto, L.R.C.P., L.R.C.S. Edin., has been appointed a Public Vaccinator for Horsham, Victoria, Australia, vice G. J. Young, resigned.

CUSCADEN, GEORGE, L.R.C.P., L.R.C.S. Edin., has been appointed a Certifying Medical Officer for the Factories and Shops Acts for Port Melbourne, Victoria, Australia, vice W. S. Smythe, resigned.

DAVIES, W. J. E., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

DON, W. W., M.D., has been appointed a Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

FINLAY, S., L.K.Q.C.P., F.R.C.S. Irel., has been appointed a Government Medical Officer and Vaccinator for the district of Dugong, New South Wales, vice A. W. McMath, resigned.

GEMMELL, JOHN E., M.B., C.M. Edin., has been appointed Honorary Acting Medical Officer for the Hospital for Women, Shaw-street, Liverpool, vice T. B. Grimsdale.

GILBERT, L., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

GODWIN, H. J., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon for the Durham County Hospital, vice W. A. Rutherford, resigned.

GOOD, J. E., M.B., M.S. Edin., has been appointed a Public Vaccinator for South Australia.

GRANT, A. J., M.D. Brux., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

GREAVES, F. L. A., L.R.C.P., M.R.C.S., has been re-appointed an Assistant House Surgeon to St. Thomas's Hospital.

GREG, A. H., B.A. Camb., L.R.C.P., M.R.C.S., has been re-appointed an Assistant House Surgeon to St. Thomas's Hospital.

HALL, J. S., L.R.C.P., M.R.C.S., has been re-appointed a House Surgeon to St. Thomas's Hospital.

HARVEY, R. R., M.B., Ch.B. Melb., has been appointed a Health Officer for Norseman, Western Australia, vice A. Goode, resigned.

HAWKES, C. S., L.R.C.P. Lond., M.R.C.S., has been appointed *pro tem.* Acting Medical Superintendent of Quarantine, Acting Health and Medical Officer, Acting Visiting Surgeon to the prison, and Acting Visiting Surgeon to the Lock Hospital at Rockhampton, Queensland.

HAY, J. B., M.B., Ch.M. Edin., has been appointed Officer of Health and Public Vaccinator for the Shire of Heytesbury, Victoria, Australia, vice G. M. Reid, resigned.

HINDER, A. V. C., M.B., Ch.M. Syd., has been appointed Surgical Tutor in the University of Sydney, New South Wales, vice J. F. McAllister, resigned.

HUXTABLE, R. B., M.B., Ch.M. Edin., has been appointed Resident Medical Superintendent for the Hospital, Charters Towers, Queensland, vice F. W. C. Hare, resigned.

KENNARD, H. P., M.B., B.S. Durh., has been appointed a Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

LAWSON, G. L. L., M.R.C.P. Edin., D.P.H., M.R.C.S., has been appointed Health Officer for Mullewa, Western Australia.

MCCLEAN, J. F., L.R.C.P., M.R.C.S., has been re-appointed a House Surgeon to St. Thomas's Hospital.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been re-appointed a House Surgeon to St. Thomas's Hospital.

MARTIN, F. R., B.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

MULLICK, SASAT, M.B., C.M., has been re-appointed Resident Medical Officer for the National Hospital for Heart and Paralysis, Soho-square, London.

PIERCE, R. W. C., M.B., B.Sc. Lond., L.R.C.P., M.R.C.S., L.S.A., D.P.H. Camb., has been appointed a House Physician to St. Thomas's Hospital.

ROBINSON, A. C., L.R.C.P., M.R.C.S., has been re-appointed an Assistant House Surgeon to St. Thomas's Hospital.

SANGUINETTI, H. H., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been re-appointed a House Surgeon to St. Thomas's Hospital.

SARGENT, P. W. G., B.A. Camb., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

SCOTT, H. H., L.R.C.P., M.R.C.S., has been re-appointed a House Physician to St. Thomas's Hospital.

SHEA, H. F., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been re-appointed a House Physician to St. Thomas's Hospital.

SHUTTLEWORTH, G. E., M.D. Heidelb., M.R.C.S., has been appointed a Medical Officer by the London School Board.

STEVENSON, JOHN FINDLAY, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Casualty Surgeon, Glasgow Police, vice Professor Glaister, resigned.

THORNELY, W., M.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been appointed a Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON MANOR URBAN DISTRICT COUNCIL.—Medical Officer of Health for the district. Salary £200 per annum; and Medical Attendant at the Infectious Hospital. Salary £125 per annum, for one year. Applications to the Clerk of the Council, Council Offices, Albert-road, Aston Manor, Birmingham.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street, Birmingham.—Honorary Assistant Surgeon for one year.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, Birmingham.—Clinical Assistant.

BRADFORD ROYAL INFIRMARY.—Honorary Physician or Medical Officer.

BRISTOL GENERAL HOSPITAL.—Locum Tenens. Two weeks from June 13th. £3 3s. per week.

CARDIFF INFIRMARY.—Assistant House Surgeon and an Assistant House Physician for six months. Board, washing, and apartments provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Resident Medical Officer for twelve months. Salary £60 per annum, with board, lodging, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—In-door Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

LINCOLN COUNTY HOSPITAL, Bank-street, Lincoln.—Assistant House Surgeon for six months. Honorarium £10, with board, residence, and washing.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY, Loughborough.—Resident House Surgeon. Salary £100 per annum, with furnished rooms, attendance, and board.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £100, with apartments, board, and washing.

PARISH OF ST. LEONARD, Shoreditch.—Second Assistant Medical Officer for the Infirmary, Hoxton-street, N., for six months. Salary at the rate of £60 per annum, with rations, washing, and furnished apartments in the Infirmary. Applications to the Clerk to the Guardians, Clerk's Office, 213, Kingsland-road, N.E.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

ROYAL INFIRMARY, Sheffield.—Vacancy on the Honorary Surgical Staff.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE, London.—Assistant Demonstrator of Chemistry.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, London.—Resident Medical Officer. Salary 100 guineas per annum, with an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coal, and lights.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE), Leeds.—Demonstrator of Physiology. Salary £150.

WALSALL AND DISTRICT HOSPITAL, Walsall.—Resident House Surgeon. Salary £100 per annum, board, lodging, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months.

WEST RIDING ASYLUM, Wakefield.—Pathologist. Salary £150, increasing to £200.

WILLITON RURAL DISTRICT COUNCIL.—Medical Officer of Health for the Eastern Division of the District. Salary £50 per annum. Applications to the Clerk to the Council, Williton, Somerset.

WILLITON UNION, Somerset.—Medical Officer and Public Vaccinator for the Stogumber District of the Union. Salary £80 per annum, together with certain extra fees. Applications to the Clerk, Williton, Somerset.

WONFORD HOUSE, Exeter.—Locum Tenens Assistant Medical Officer for July and August.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser for two years, unmarried. Salary £70 per annum, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to W. Draper, Esq., De Grey House, York.

Births, Marriages, and Deaths.

BIRTHS.

BARTLETT.—On May 23rd, at Saffron Walden, the wife of Hedley Bartlett, M.R.C.S., L.R.C.P., of a daughter.

BENSON.—On May 26th, at Broomhill, Sheffield, the wife of Henry Mitchell Benson, M.B., C.M. Edin., of a daughter.

FLEMING.—On May 26th, at Bruntsfield-place, Edinburgh, the wife of Andrew Milroy Fleming, M.B., C.M., of Salisbury, Mashonaland, of a son.

LITTLE.—On May 26th, at Seymour-street, Portman-square, London, W., the wife of E. Muirhead Little, F.R.C.S. Eng. of a daughter.

MACLEOD.—On May 25th, at Airlie bank, Dundee, the wife of J. M. H. MacLeod, M.B., of a son (stillborn).

OXLEY.—On May 23rd, at 33, Richmond-terrace, Clapham-road, the wife of W. H. F. Oxley, M.R.C.S., L.R.C.P., of a daughter.

STRAND.—On May 25th, at Baker-street, Portman-square, W., the wife of Alick C. Strand, M.R.C.S., of a daughter.

WHITELOCKE.—On May 24th, at Oxford, the wife of H. Anglin Whitelocke, M.B., F.R.C.S., of a daughter.

MARRIAGE.

CONNOLLY—HOPER-DIXON.—On May 24th, at St. Dominic's Priory Church, Haverstock-hill, N.W., Richard Michael Connolly, B.A., L.R.C.S. Edin., District Surgeon, Perak, Federated Malay States, to Flora Hoper-Dixon, second daughter of the late Thomas Nunn Debenham, Regent's-park-road, and widow of the late Surgeon-Captain A. L. Hoper-Dixon.

DEATHS.

BARNARD.—On May 27th, at Broad-walk, Buxton, Arthur Joynson Barnard, M.R.C.S., L.R.C.P., aged 37 years.

HECKSCHER.—On May 29th, at The Elms, Barlow Moor-road, West Didsbury, near Manchester, Martin Bernard Heckscher, M.D., M.R.C.P., aged 74 years.

LOWDELL.—On May 29th, at Charles-road, St. Leonards-on-Sea, Surgeon-Major Charles Lowdell, late 4th Bengal Cavalry (Retired).

SHAW.—On May 26th, at Blackheath, Francis Bentley Shaw, M.R.C.S., L.R.C.P., aged 28 years.

WRIGHT.—On May 27th, at his residence in Wakefield, Thomas Giordan Wright, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (6th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40 Leicester-square).—8 P.M. Papers:—Mr. K. D. Goadby: Some further Notes on the Bacteria of the Mouth.—Mr. W. R. Humby: A Communication on Amalgam.

TUESDAY (7th).—ROENTGEN SOCIETY (11, Chandos-st., W.).—7.30 P.M. Council Meeting. 8 P.M. Papers:—Mr. T. C. Porter (Eton): Work on the X-rays.—Mr. A. A. C. Swinton: A Pin-hole Roentgen Ray Camera and its Applications. (Followed by a Discussion.)

WEDNESDAY (8th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—4 P.M. Council Meeting. 5 P.M. Cases and Specimens will be shown by Dr. Permewan, Dr. Tilley, Dr. Pegler, Dr. Spicer, Mr. R. Lake, and others.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—6.15 P.M. Demonstration of Clinical Cases.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (Limmer's Hotel, Conduit-street, W.).—9 P.M. Conversazione. Dr. G. V. Poore: Circumstances which Influence the Effectiveness of Climatic Treatment. Messrs. Negretti and Zambra: Exhibition of Meteorological Instruments. Dr. W. S. Hedley: Radiant Heat Apparatus.

THURSDAY (9th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Cases and Card Specimens. 8.30 P.M. Papers: Mr. P. Flemming: A Case of Retinitis Proliferans in which the Eyeball was examined after Death.—Mr. H. Spicer: Œdema of the Conjunctiva.—Mr. T. Collins: The Pathogenesis of Anterior Polar Cataract.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square).—8.30 P.M. Specimens will be shown by Mr. S. Keith, Mr. C. Ryall, and others. Dr. F. Edge (Wolverhampton): Note on a Case of Uterus Septus Bilocularis and Vagina Subsepta. Paper:—Dr. G. Bantock: Dysmenorrhœa (followed by a Discussion).

FRIDAY (10th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, W.).—Mr. P. Smith: The Etiology and Educative Treatment of Convergent Strabismus. (Bowman Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (6th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Anatomy of Ear (illustrated with lantern).

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. Lennox Browne: The Treatment of Lupus and Tubercle of the Upper Air Passages.

TUESDAY (7th).—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Neoplasms.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Dr. T. D. Savill: Cases of Neurasthenia and Acroparæsthesia.

WEDNESDAY (8th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Air.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: Incipient Pulmonary Tuberculosis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. D Hood: The Symptoms of Gastric Ulceration.

THURSDAY (9th).—LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Heron: Clinical Lecture.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Wallis: Demonstration of Surgical Cases (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr. D. Grant: Clinical Anatomy and Methods of Examination of the Sinuses of the Nose.

FRIDAY (10th).—LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Typhoid Fever and Diphtheria.

SATURDAY (11th).—ROYAL INSTITUTION.—3 P.M. Dr. R. Caton: The Temples and Ritual of Asklepios at Epidaurus and Athens (with lantern illustrations).

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

TYPISTS AND HEARING.

IN the May number of the *Phonographic Magazine* of Cincinnati Mr. William Whitford, the official reporter of the American Medical Association, points out that it is essential that the typist should have very acute hearing, otherwise ludicrous mistakes may occur. This is particularly the case in medical work, in which so many words with similar sounds are used. Chemosis and ecchymosis, anæmia and enema, macerate and lacerate, nephritis and metritis may be easily mistaken for each other by one whose hearing is imperfect, while change-stroke bears a close resemblance in sound to Cheyne-Stokes. This is sufficiently obvious, but it may not be so well known that the continual noisy tap, tap of the typewriting machine will impair still more hearing which may be already deficient. We know of a case of chronic middle-ear catarrh in which

the use of the typewriter had a very deleterious and destructive effect on the already deficient hearing. When this was realised the machine was exchanged for one of another make more silent in operation. But the effect of the new machine upon the hearing was nearly as great and now the patient cannot work for a few hours at the typewriter without having to pay the penalty of a diminished degree of hearing. The deafness of boilermakers and artificers who work where there is much loud hammering is well known, and though we do not suppose, as in their case, that the noise of a typewriter would damage the normal healthy ear, the case to which we refer shows that it may accentuate and increase mischief already begun. The man who can devise a silent typewriter will earn the gratitude of a progressive people.

AN IMPROVED TEAPOT.

MANY people prefer, and with good reason, a teapot made of earthenware, but tea-infusers of this kind are not always satisfactory—either the infusion will not pour out freely or else the smaller leaves find their way into the cup. Bailey's patent strainer teapot is designed to overcome this objection, the strainer being formed of a cup-shaped piece of clay perforated with a number of small holes which effectually prevent the tea leaves from getting into the teacup. In the event of the holes becoming filled up with small particles of leaves the teapot can be placed in an oven, when the leaves will shrivel up and they can be removed by blowing down the spout. As the strainer is part of the teapot there is nothing to get out of order and the invention is likely to be appreciated by all lovers of a cup of good tea. The teapot can be obtained at 32, Hatton-garden, E.C., or at the Alloa Pottery, Alloa.

A DANGEROUS PRACTICE.

A CORRESPONDENT of the *Manchester City News* calls attention to the dangerous practice, a very old one in Manchester, of throwing heavy bundles of cloth from the upper stories of warehouses on to lorries standing in the street. It is a wonder that accidents do not happen more frequently. The man on the lorry is generally on the look-out and the one above who throws the dangerous missile acquires, no doubt, some skill in the practice; but accidents do occur, and the writer of the letter gives two instances. In one, occurring the other week, "a little girl just missed death by a few inches, the bundle of cloth falling at her feet," and in the other while a man was loading goods which were being thrown from a warehouse in Hart-street "a bundle fell on him, and he is now in the infirmary, if not dead." The writer is surprised that the trades unions do not take the matter up, but they seem to think more of wages and short hours than of danger to life. No doubt, as he says, "the (calico) printers, dyers, and bleachers save large amounts at the risk of life to the public." It is a matter well worthy the attention of the city council whether or not they should continue tacitly to sanction this dangerous and unnecessary practice.

THE LADY DISPENSER.

To the Editors of THE LANCET.

SIRS,—I should be greatly obliged for any information as to the prospect for a young lady wishing to take up "dispensing." Any particulars as to facilities for instruction and nature and salaries of posts subsequently obtainable will be gratefully received.

I am, Sirs, yours faithfully,

May 31st, 1898. M.D. LOND.

REFUSAL OF MEDICAL MEN TO ATTEND.

IT is a curious delusion that a medical man is public property, bound to be at everybody's beck and call. The most stingy man, who has not paid his medical man's bill for two or three years, is apt to consider as soon as he gets into trouble that he has only to ring the "doctor's" bell to be immediately attended. The medical profession has itself to blame for this popular delusion. It has made itself so cheap that many people assume that its services need not be paid for. It is time that such a notion should be corrected. It was broached a few days ago at an inquest at Elton, where the husband of the deceased complained that the medical man applied to refused to go without an order. The witness admitted that he had not paid for some previous attendance. The coroner refused to believe that a medical man would neglect his duty. So do we. We are not arguing from any inhumanity; but we think that coroners and others do well to vindicate the profession on such occasions and to read the law to the public which expects so much of and gives so little to medical men.

"A QUESTION OF TREATMENT."

To the Editors of THE LANCET.

SIRS,—I have only just observed in your issue of April 16th under the above heading the inquiry of your correspondent "Venule." The dilatation of small veins to which he alludes is, I believe, due to the partial or complete occlusion of their affluent capillaries, such occlusion having been brought about by long-maintained poisoning of the blood stream by the products of depraved digestion and metabolism, including generally uric acid. The heightening of the colour as the result of an attack of indigestion is due to a temporary increase in the contamination of the blood. The treatment for such cases divides itself under two heads: the improvement of the circulation and the opening up of closing arterioles and capillaries, which can be best and most rapidly effected by recourse to the Schott methods of baths and exercises, and, secondly, by careful diet, the limitation of gastric fermentation, intestinal antisepsis, and the free ingestion of warm water from two and a half to three hours after the principal meals, with a view to washing out the stomach and carrying off the products of retrograde metamorphosis through the kidneys.

I am, Sirs, yours faithfully,

June 1st, 1898. W. B. T.

THE DISTRICT MESSENGERS COMPANY.

THE general manager of this company draws our attention to the difficulty often experienced by the public in obtaining the services of a district messenger boy at public places. "In most cases," he says, "this is owing to some prejudice or vested interest on the part of attendants and others." "A messenger call-box," he continues, "is in nearly every first-class hotel, club, theatre, shop, and public building of any kind, and if any difficulty is ever experienced or obstacle thrown in the way of getting a messenger we should be grateful for information given at any of our offices."

"THE LATE ARTHUR JEFFARES BARLOW."

To the Editors of THE LANCET.

SIRS,—Please acknowledge on behalf of the Barlow Fund, per DR. J. W. Moore, £1 from "Postmark" (Waterford).

I am, Sirs, yours truly,

179, Hither-green, Lewisham, S.E., May 31st. R. H. CAPPER.

L.R.C.P., M.R.C.S.—There is no precedent known to the Royal College of Physicians of London for the issue of a second diploma by the College. The request to do so has always been refused. In the great majority of cases the licence has been registered by the General Medical Council, and a certificate of registration answers all the purposes of a diploma. The Royal College of Surgeons of England also declines to issue duplicate diplomas, but a certificate can be obtained from the College that a diploma has been obtained, which certificate would always satisfy the Registrar of the General Medical Council or any other authority. The charge for the certificate is five guineas, unless it can be proved that the original document "has been destroyed or irrevocably lost by fire, shipwreck, or other accident" (Section XIX. of the College Bye-laws and Section VII. of the Standing Rules).

Determination of Sex.—Other journals have already seen the coincidence or we should have been happy to print the note.

J. R.—We do not recommend individual practitioners.

Lambda.—No.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 2nd, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
May 27	29·95	S.E.	0·05	102	65	50	49	54	Cloudy
,, 28	30·02	N.		93	61	50	50	54	Cloudy
,, 29	30·14	N.W.	0·15	102	64	50	51	57	Cloudy
,, 30	29·89	N.	0·06	108	63	51	50	56	Cloudy
,, 31	29·62	N.W.	0·20	95	61	54	54	57	Cloudy
June 1	29·55	N.W.	0·17	102	58	43	45	50	Cloudy
,, 2	29·67	W.	...	87	50	47	47	50	Cloudy

During the week marked copies of the following newspapers have been received: *Kenilworth Advertiser, Eastern Daily News, New Ross Reporter, Walsall Advertiser, High Peak News, Berkshire Chronicle, Grantham Journal, Lancashire Express, Bridgend Chronicle, Pioneer Mail, Times of India, Cambridge Chronicle, Leigh Chronicle, Bristol Mercury, Cheshire Observer, Builder, Scotsman, Acton Gazette, Newport Advertiser, Citizen, Architect, Carnarvon Herald, Lowestoft Standard, Liverpool Daily Post, Dursley Gazette, Montrose Standard, Nottingham Guardian, Leeds Mercury, Maryport News, Whitstable Times, Dewsbury Reporter, East Anglian Times, Yorkshire Post, Sussex Daily News, Leicester Post, Manchester Courier, Sheffield Independent, Glasgow Herald, Tamworth Mercury, Brighton Gazette, Rutherglen Reformer, Sanitary Record, Hertfordshire Mercury, Light, The New Age, Reading Mercury, City Press, Local Government Chronicle, Mining Journal, Surrey Advertiser, Local Government Journal, Hong-Kong Daily Press, Hong-Kong Weekly Press, Australasian Medical Gazette, Brecon County Times, Clifton Chronicle, Alloa Weekly News, Falkirk Herald, Durham Chronicle, Dundee Advertiser, Weekly Free Press and Aberdeen Herald, Birmingham Gazette, West Middlesex Herald, Falkirk Mail, Essex Times, Ramsbottom Observer, Stroud Journal, Yarmouth Mercury, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. H. Ashworth, Halstead; Messrs. Arnold and Sons, Lond.; A. H. M.; Messrs. Allen and Hanburys, Lond.; A. E. B.

B.—Dr. J. Bately, Great Yarmouth; Messrs J. Beal and Son, Brighton; Messrs. Burgoyne, Burbidges, and Co., Lond.; Birmingham and Midland Ear Hospital, Hon. Secretary of; Berrow's Worcester Journal Co.: *Buxton Advertiser*, Proprietor of; Dr. R. C. Brown, Lond.; Mr. J. Barlow, Glasgow; Messrs. Burroughs, Wellcome and Co., Lond.; Messrs. W. H. Bailey and Son, Lond.; Mr. W. H. Brown, Leeds; Messrs. Brand and Co., Lond.; Dr. T. Barr, Glasgow; Dr. W. J. Brown, Chester-le-Street; Mr. W. J. Burcombe, Lincoln; Mr. S. H. Benson, Lond.; Messrs. Bates, Hendy, and Co., Reading; Bristol General Hospital, Secretary of; Birmingham and Midland Hospital for Skin, &c., Diseases.

C.—Sir F. Cruise, Dublin; Dr. W. Cromar, Wisbech; Dr. C.; Dr. T. C. Craig, Newcastle-on-Tyne; Coventry Public Medical Service, Hon. Secretary of; Mr. W. F. Clay, Edinburgh; Dr. R. Caton, Liverpool; Dr. J. B. Coleman, Dublin; Messrs. J. and A. Churchill, Lond.; Messrs. Cassell and Co., Lond.; Mr. H. F. Cheese, Lond.; Mr. Chavasse, Birmingham; Cardiff Infirmary, Secretary of; Chelsea Hospital for Women, Secretary of; Mr. H. Cox, Williton; Messrs. A. H. Cox and Co., Brighton; Dr. F. J. H. Coutts, Manchester.

D.—Dorchester County Asylum, Medical Superintendent of; District Messenger and Theatre Ticket Co., Lond., Secretary of; Messrs. Dale, Reynolds, and Co., Lond.

E.—Dr. G. H. Edington, Hillhead; Messrs. Eason and Son, Dublin.

F.—Mr. T. Fowler, Lond.: Ferru-Cocoa Manufacturing Co., Carmarthen, Secretary of.

G.—Mr. A. Garrett, Lond.: Mr. A. E. Gilbert, Newcastle-on-Tyne; Messrs. Garland-Smith and Drake, Lond.; G. M. S.

H.—Mr. H. Hillyard, Lond.: Mr. C. B. Hall, Lond.; Dr. E. F. Hoyst, New York; Mr. Victor Horsley, Lond.: Sir F. Seymour Haden, Alresford; Humerus, Lond.; Rev. A. P. Hockin, St. Margarets; Mr. E. Huxley, Lond.; Mr. J. Halliwell, Dewsbury; Mr. J. Heywood, Manchester.

I.—Institute of Chemistry of Great Britain and Ireland, Secretary of.

J.—Dr. A. H. Jeremy, H.M.S. *Australia*, Netley; Joint Counties Asylum, Carmarthen, Medical Superintendent of; Messrs. Joshua Bros., Lond.; Jenner Society, Gloucester, Hon. Secretary of; Jeyes' Sanitary Compounds Co., Lond.

K.—Messrs. T. Kirby and Sons, Walsall.

L.—Dr. C. W. Leaf, Lond.; Mr. T. B. Luscombe, Lond.; Loughborough and District General Hospital, Secretary of; Dr. B. Lawrence, Lond.; Mr. W. Lund.

M.—Mr. J. G. Muddiman, Lond.; Medical, Surgical and Hygienic Exhibitors' Association, Lond., Secretary of; Rev. G. Munley, Turvey; Mr. B. F. Meadows, Hastings; Mr. J. M. Menzies, Lond.

N.—Messrs. Neyroud and Son, Lond.; National Sanatorium for Consumption, Bournemouth, Secretary of; Nottingham City Asylum, Clerk of.

O.—Dr. G. Ogilvie, Lond.

P.—Mr. G. S. Pollard, Midsomer Norton; Paisley Parish Council, Inspector of Poor of; Dr. W. S. Playfair, Lond.; Mr. G. Pernet, Lond.; Dr. T. W. Parry, Youlgreave; Passugg, Lond.

R.—Mr. K. Ricker, St. Petersburg; Mr. F. G. A. Rogers, Cardiff; R. R. D.; Mr. M. A. Robinson, Honiton; Royal Society, Lond., Assistant Secretary of.

S.—Mr. H. W. Scriven, Lond.; Scientific Press, Lond., Manager of; Sanitas Co., Lond.; Dr. J. A. Shaw-Mackenzie, Lond.; Dr. C. Slater, Lond.; Dr. G. E. Shuttleworth, Richmond; Mr. J. C. Spence, Westham; Mrs. E. Shiers-Mason, Gibraltar; Dr. R. P. Smith, Lond.; Messrs. Street Bros., Lond.; Messrs. M. Samuel and Co., Lond.; Messrs. Street and Co.; J. T. Segrue, Ltd., Lond.; Dr. Syers, Lond.; Messrs. W. H. Smith and Son, Manchester.

T.—Dr. A. M. Turnbull, Neemuch, India; The Tropon Agency, Lond.; Dr. H. Tilley, Lond.; Messrs. Trollope and Sons, Lond.

U.—Mr. J. R. Upton, Lond.

V.—Rev. J. E. Vize, Welshpool; Messrs. C. Vaux and Sons, Sunderland; Mr. J. W. Vickers, Lond.; Vinolia Co., Lond.

W.—Dr. W. Whitla, Belfast; Mr. S. Wand, Leicester; W. T. B.: Mr. T. Welsh, Walsall; Dr. T. J. Wood, Bradford; Dr. A. T. Wilkinson, Withington; Messrs. Wills, Lond.: *Wiltshire County Mirror*, Salisbury, Managing Director of; Mr. F. Wilson, Lond.: West Riding Asylum, Wakefield, Clerk of; Messrs. Widenmann, Broicher, and Co., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. W. J. Allkin, Denton; A. K.; Mr. G. N. Adams, Lond.; Dr. F. A. Arnold, Bulawayo, Rhodesia; Ancoats Hospital, Manchester, Secretary of; Mr. S. E. Atkins, Pinhoe.

B.—Mr. C. E. G. Bateman, Walsingham; Mrs. S. A. Bennett, Lond.; Bristol Royal Hospital for Sick Children, Secretary of; British North Borneo Co., Lond.; Miss Boultbee, Lond.; Mr. W. E. Burton, Lond.; Mr. A. Baker, Aysgarth; Birkenhead Union, Clerk of; Beech Hurst, Hanley; Mr. B. S. Browne, Saxlingham; Mr. H. A. Bull, Great Haywood; Mr. R. J. Bedford, Kegworth; Mr. T. W. Brimacombe, Kingswood; B., Lond.

C.—Dr. Cotton, Darsham; Combined Wine Growers' and Distillers' Syndicate, Lond.; Mr. J. Carter, Lond.; C. P. G.; Messrs. Clarke, Sons, and Platt, Lond.; Mr. J. Campbell, Elgg.

D.—Dr. H. L. Davies, Bewdley; Mr. G. H. De'Ath, Buckingham; Dispenser, Lond.; D. C.; Dr. T. Dewar, St. Helen's Auckland.

E.—Messrs. Evans, Gadd, and Co., Exeter; E. A. P.; Mr. Edwards, Tonypandy.

F.—Mr. H. McG. Forbes, Ayr; Mr. J. FitzGerald, Queenstown; Mr. C. E. S. Flemming, Freshford; Folkestone Medical Society, Hon. Secretary of; Messrs. Fletcher, Fletcher, and Co., Lond.; Dr. W. Fleck, High Wycombe; Dr. F., Disley; Mr. F. C. FitzGerald, Hanley.

G.—Miss Good, Worcester; G. H. T.; G. S. D.; G. F. T.

H.—Mr. J. R. Hatfield, Worthen; Hereford County Asylum, Clerk of; Messrs. Hooper and Co., Lond.; Mr. A. G. R. Harris, Thorne; Mr. M. J. Houghton, Ilford; Mr. H. L. Hudson, Sheffield.

I.—Mr. A. T. Ilott, Lond.

J.—Mr. F. F. Jones, Llanfyllin; Mr. C. Jephcott, Chester; J. A. G.; Mr. R. A. Jackson, Kirby Moorside; J. D.; J. B. R.

K.—Mr. B. Kühn, Lond.; Kingston-upon-Hull Corporation, Borough Treasurer of; K., Hackney; Messrs. Krohne and Sesemann, Lond.

L.—Mr. R. Lake, Lond.; Mr. W. Latham, Ashton-in-Makerfield; L. B.; Mr. F. G. Layton, Newton Ferrers.

M.—Mr. F. H. Maberley, Lond.; Messrs. Maythorn and Son, Biggleswade; M. R.

N.—G. Newnes, Ltd., Lond.; N. M.

O.—Mr. W. H. F. Oxley, Lond.; Dr. G. Oliver, Westcott; Mr. E. M. Owens, Caersws.

P.—Mr. J. W. Pratt, Wiveliscombe; Mr. C. H. G. Prance, Launceston; Parish of Paddington, Clerk of; Mr. E. M. Perrott, Luppitt.

R.—Mr. C. Randolph, Milverton; Royal Southern Hospital, Liverpool, Secretary of; Dr. J. W. Russell, Birmingham; Mr. J. Reiss, Lond.; Mr. J. Robinson, Kidderminster; R. W. J.; Rectus, Coventry; Dr. Rose, Keswick; Messrs. Richardson Bros and Co., Liverpool; Mr. W. R. Rice, Coventry; Dr. A. Reid, Portgordon; R. H. H.

S.—Mr. B. S. Sanders, Ilfracombe; Mr. J. H. Stuart, Castle Douglas; Sunderland and North Durham Eye Infirmary, Secretary of; S. T. B.: *Sheffield Independent Press*; Mr. J. Sampson, York; Mr. D. Sen. Buxar, India; Rev. Preb. Snowden, Lond.; Scapula, Hove; Mr. H. Smith, Ballyshannon; Surgeon, Halifax; Dr. S., Lond.; S. W.

T.—Mr. J. Thin, Edinburgh; Professor F. Trombetta, Messina; T. B., Neath; Tower Hamlets Dispensary, Secretary of; T. S. W.

V.—Dr. H. J. Van Broekhuizen, Ficksburg, Orange Free State.

W.—Wildersdale, Ilfracombe; Mrs. Weekes, Brighton; W. P. R.

Y.—Yöst Typewriter Co., Lond.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 12th, 1898.

THE PUBLIC AND THE LONDON HOSPITALS.

THE Metropolitan Hospital Sunday Fund has now been established so long that only those among us who are verging upon middle-age can clearly recall the days when it did not exist, while this is the twelfth representation made by THE LANCET on its behalf to a public wider than the professional circle of our usual readers. Again it falls to our lot to emphasise, if we can, the appeal which will be made on June 12th from almost every pulpit in the metropolis and from very many beyond its boundaries to the generous, whether rich or poor, and to add for the information of those who care to consider the matter in detail statistics which we believe to be eloquent and which we know to be unimpeachable.

THE CONTRIBUTIONS OF THE VERY POOR AND THE VERY RICH.

Very likely to many of those who for the first time glance at figures relating to the Fund, and who see that last year the sum collected amounted to £41,003 13*s.* 1*d.*, the first thought which will occur will be to the effect that something over £40,000 is a very handsome sum and that it shows wonderfully warm-hearted and universal sympathy with a thoroughly deserving object. From that opinion let us offer a respectful but firm dissent and let us proceed to justify our view in detail. It will be conceded upon the briefest reflection that the hospitals which are aided by the Hospital Sunday Fund constitute the one object of subscription, which not only appeals equally to all sects and varieties of religious belief to be found in a city famous for the number and diversity of its creeds (a general appeal on behalf of the poor does that much), but of which also it can be said that its benefits are reaped in various degrees and ways by all sections or ranks of the population, whether rich or poor, whether directly aided or not. In case we may appear to assume too readily that our position on this point is unassailable we will return later to defend it, but for the present we will proceed to point out that leaving aside minuter fractions as of inappreciable importance the yearly contribution per head of the metropolitan population amounts to the inconsiderable sum of 2¼*d.* We published this calculation last year, but it is a picturesque fact which will bear repetition. We took as a sample year 1890, because in that year the individual donations, the large gifts ear-marked with the names of the givers, amounted to only £3991 out of a total of £42,814. This showed the collections by offertory, the anonymous gifts of the general givers, at a little under £39,000, a larger sum than that contributed by them in many years when the total has been a good deal higher. Taking this, then, as the sum given by the general population of London, and the number of that population in 1890 to have been about 4,200,000, it will be found that the sum contributed individually amounted to less than 2¼*d.* Now we are quite aware that it may be said in reply that the 4,200,000 include the poorest of the poor, the women and the children, and that for hundreds of families 2¼*d.* per head would be an impossible annual contribution; but at the same time it is obvious, though not too obvious to be pointed out, that there are thousands of families to whom a much larger sum would mean a small percentage only of money usually spent upon self-indulgence, even though the contributors would justly claim to be among the necessitous of our fellow citizens. Let us leave out of the question the odd 200,000 given in the figures we have quoted as being the number of the population of London, or rather of the conglomerate district to which the objects of the fund appeal, and having thus got rid of one-half of what has recently been known as the "submerged tenth," take the million that comes next above them in the scale of poverty. It would, we may be told, be utterly unpractical to suggest that of this million, which, indeed, includes women and children, one-fourth part should contribute on the average—say—1*s.* per annum to the Metropolitan Hospital Sunday Fund. Unpractical it may be, but we cannot leave the suggestion without pointing out four facts. Firstly, that we are writing of those who contribute voluntarily to no other charitable or philanthropic work or do so to an infinitesimal extent. Secondly, that of the fourth part of the million we have imagined practically all probably earn *something* in the course of the year, while very many of them are in receipt of substantial wages. Thirdly, that the 1*s.* which we have taken as a remotely possible sum may seem preposterously large and may have been chosen by us simply because it was a convenient one to name for the sake of argument, but that at the same time it fairly represents no more than the price of 2 oz. of tobacco added to the cost of a couple of quarts of beer. What proportion 2 quarts of beer and 2 oz. of tobacco bear to the annual *average* consumption of those luxuries by the least poor quarter of the humblest million of the metropolis (omitting the 200,000 as above) we leave to those who care to ascertain the necessary figures and make the necessary calculations. But although we are ready to admit that such a contribution is not likely to be made we must point out that the persons making it would be those who, in themselves, their wives, and their children, benefit most largely and most directly from the hospitals which wealthier citizens have planted in their midst. And this brings us to the fourth fact—namely, that a contribution upon such a scale as we have imagined would exceed in aggregate result that made by the same million persons at an average rate of 2¼*d.* per head by more than £3000.

Turning at this point from the poorest to the wealthiest section of the community—a section which includes only a few thousands or perhaps a few hundreds, whose names are in some instances household words and in some are completely unknown to most of us—we are driven to the conclusion that a large portion of the Metropolitan Hospital Sunday Fund is received from the surplusage of large incomes. We have referred to the special donations to which the names of the givers are attached, and details of which lie before our readers. In 1890, as we have said, these special donations did not bulk largely. How great the value of these noble gifts may be and their importance with relation to the whole Fund can be seen from the figures of 1895, when the total sum subscribed amounted to the unusually high figure of £60,361. Of this total a few pounds less than £22,000 were special donations, and of these £10,000 were given by one financier and the circle immediately associated with him. When therefore we point out that 1895 was the year of what is known as the "South African Boom" it will be seen that the Hospital Sunday Fund may find itself depending to a great extent upon surplus wealth, liable to fluctuation in its amount, and that even in the case of the extremely rich the subscriptions do not constitute a voluntary rate levied upon themselves by those who could do so with least effort and with most conspicuous results; for in the year 1895 the nameless givers contributed a few hundred pounds less than in 1890. The Fund has no reason to complain of the generosity of the wealthy; when the figures are considered the conclusion most naturally arrived at is that the wealthy contribute a liberal share to the support of our hospitals, for it must be borne in mind that over and above their contributions to the Metropolitan Hospital Sunday Fund this is the class from which large sums in gifts and legacies annually accrue to individual hospitals, gifts without the aid of which these hospitals would not be able to carry out their work.

THE CONTRIBUTIONS OF THE GREAT INTERMEDIATE CLASS

When, however, we come to consider the bulk of the population of London, the vast number of persons whose pecuniary position lies between the extremes we have been considering, and whom we can subdivide further indefinitely, we find that while this class contains in its upper and lower divisions a large crowd of subscribers to charity who pay with more or less regularity and remain anonymous it must at the same time be said of these that their contribution to the Metropolitan Hospital Sunday Fund cannot from the figures before us be held worthy of the great body of citizens which is responsible for it. We are writing, be it remembered, for all creeds, on behalf of a Fund mainly collected upon the day held sacred by the Christian religion, but appealing at the same time to all varieties of religious thought and denomination, and on behalf of a Fund the object of which is to aid institutions which not only are of benefit but are actually necessary to the bodily welfare of all members of the community, whether rich or poor, although the boons which they confer immediately upon the poor renders them primarily and more conspicuously charitable. What wonder then that we say that a sum of £40,000, even if it represented the gifts of the "intermediate" citizen only, is inadequate, whether regarded as his contribution to the needs of his poorer brethren or to the aid of the science to which he himself appeals when in sickness. As we have said, £40,000 is not the contribution of the "intermediate" citizen, but even if it were what would it represent? Half-a-crown per head from 320,000 persons, the sum which a clerk on a comparatively small salary spends cheerfully in any week of the year on a seat at a music-hall or the pit of a theatre. We neither urge nor deprecate self-denial in this behalf: we simple wish to indicate that what some would say was a large sum for persons in a comparatively humble rank of life to give is spent by them unquestioned and frequently upon pleasure, while there is another point to which the question of self-denial, even if we do not fully go into it, must of necessity lead. If the hospitals are to be supported only from the surplus which remains to a fortunate few after they have provided liberally for their necessities and equally liberally for their luxuries, what is to happen in years when some unexpected general shrinkage of incomes occurs? Most of the hospitals of London while doing their noble work are living from hand to mouth; more, they are in a pecuniary position which in individuals or trading corporations would be tersely described as bankruptcy. What is to happen to them in years of bad trade? We are living in a time of political uncertainty which is reflected in the dealings of the markets in which we buy and sell and there are very many of all classes who even now are suffering from recently diminished incomes. Does it not behove all who have the means and who, as a rule, do not contribute largely, or perhaps at all, to charitable or religious enterprises, who possibly spend little or nothing in the year upon others, to endeavour to contribute a gift which is substantial and which represents maybe a small pleasure foregone, an inconsiderable fraction of one per cent. upon the yearly income? And does it not behove them to do this for two reasons, firstly, in order that the hospitals may be put in a position of comparative financial soundness as soon as may be, and, secondly, in order that their income may not only be increased but may be more stable than one proceeding largely from funds which are only available in seasons of plenty can ever be?

THE QUESTION OF STATE AID.

But, say many, when the matter is approached from this point of view, if you wish to place the hospitals upon a sound financial basis why not aid them with State or municipal funds? Look at the sum which a fraction of a penny on the income-tax will produce, or, as it is rather a municipal and local matter, consider that under the Public Libraries Act of 1892 a rate of a penny in the pound may be levied in any district which chooses to declare itself in favour of a free library, so that all citizens residing in that district shall contribute their fair proportion to the cost of it. Consider the number of districts in London and its neighbourhood that cheerfully pay this rate and maintain libraries in order that, as the opponents of free libraries cynically put it, a minority of the inhabitants may enjoy all possible facilities for studying the betting and racing news. Can it be for a moment said that these districts, and many more than now avail themselves of the law to obtain free libraries, would not cheerfully see their rates added to by a far greater amount than the penny referred to, if such institutions as the London hospitals, of which Londoners are so justly proud, were to be the recipients of the income thus provided? Again, an alternative or subsidiary plan to State support is to aid the hospitals by taxation levied upon places of amusement, such as theatres and concert halls. We have just instanced the amount spent by a youth of small income upon his seats in the pit as a standard whereby might be judged his subscribing powers to charity; and it was in our mind to suggest that the price of a couple of stalls would not be a large sum to expect from many who fill seats in the best part of the theatres and music-halls perhaps many times during the run of a popular piece as their tribute to the funds of the London hospitals. When, however, it comes to *taxing* anybody or everybody by force of law, for the sake of supporting that which has been originated by voluntary generosity and kept alive by the same agency for so long, a wise man may well pause and consider. We suggest as food for his reflection the following points. They have, of course, been urged before both in our pages and in those of our contemporaries.

In their origin and in their continued existence our hospitals individually have ever represented the liberality of those who have the good things of the world towards those who have not. We have suggested that the poor might reasonably be expected to help, but we are well aware that it is the richer class, the class which is so well endowed that its members would not be admitted either as in-patients or out-patients to the benefits of any hospital, that must always contribute the lion's share. If once the compulsory system were introduced, even to subsidise, it would begin by diminishing and end by destroying the voluntary system altogether. Those who found themselves taxed for the hospitals would gradually cease to subscribe voluntarily, some because they would not care to pay twice over, others because they would think that their subscriptions were not needed for a State-aided institution, others because they would hold that what the State or the township did at all it ought to do thoroughly and bear the whole cost, where it bore a part, and also interfered with the control. This last consideration is the most important one of all. Where the State or the municipality found the funds, there it would necessarily claim to raise its voice in directing the spending of them. And so instead of institutions ruling themselves independently under the

guidance of their own wisest and most experienced members, ever ready to detect and censure any real misfeasance, we should have branches of a Government department aided in their administration by local municipal wisdom. The change from the present system to one of red-tape and schedules no well-wisher of science or of the suffering poor would wish to see. Red-tape is not a ligature employed in our wards and we hope it never will be. What may be the result of permitting the interference of local municipal authorities in scientific institutions has been shown over and over again. Men who are possibly sensible business men and capable as such of sound and economical management where the purchase of necessaries and the keeping of accounts are concerned are not to be expected to prove sound judges of scientific questions and of medical procedure. They are exposed to influences unfelt by professional men which guide them wrongly to the detriment of others besides themselves. But there is another equally grave objection to the proposal of State-aid. What is to be the limit within which State-aided or rate-aided medical and surgical relief is to be afforded? The question has arisen at times locally, and on a small scale, but if the experiment were to be tried in London the consequences would be neither local nor small. We have now a national and State-aided system of education. There is no limit imposed within which its benefits are conferred. It has naturally been thought that it is illogical to compel everyone to help in the maintenance of schools and to reserve to one class only the benefits of the schools themselves. On the contrary, a limited class are so aided that education can be obtained free up to a certain point, while no child who comes and pays all the fees demanded is refused admittance on account of the pecuniary position of the parents. Some of the classes for whom the national education system was not originally designed avail themselves of this. Clergymen and others of small means but good social position are known to pocket their pride and send their children to the village school. They get thereby an excellent education for their offspring, they feel that they are entitled to it, and that by accepting it they are also setting to others a good example; they are, in fact, showing their appreciation of its benefits. On the whole, however, the social standard of the children educated in the public elementary schools of our towns and villages remains pretty much where it was before. The farmer and the small tradesman do not care to send their families to mix with those of their labourers and workpeople. They despise those that do so and feel that they would lose caste by putting themselves on their level as long as they can afford to pay to have their children educated in schools where the fees are higher and the company more select. But no one has ever observed this unwillingness to take advantage of that which was designed for the good of those unable to pay the full price for themselves when it was a case of saving a medical man's bill by having recourse to treatment at a public hospital. Both in the in-patient and out-patient departments constant care has to be exercised to prevent persons from obtaining relief who could well afford to pay for it in the ordinary way in their own homes. The difficulty of dealing with the applications of such persons would be enormously increased if they thought they could claim as a right that to which they were compelled to contribute, while if once it were admitted that the right was theirs the whole character of our hospitals would at once be changed. They would be charitable institutions no longer, but would become huge state or municipal dispensaries for the community at large, while the only check on the increase of their dimensions and of the taxation necessary to maintain them would lie in reducing the comforts supplied and the general scale of their administration to the level now maintained in our workhouses or prisons. What the effect of either of these alternatives would be we need not discuss. It is enough to say that the sufferers would inevitably include the general public, the patients, and the medical profession, an opinion in which medical men are not alone. In 1890 a Special Committee appointed by the House of Lords sat to investigate the whole subject of the administration and accommodation of the metropolitan hospitals and issued an elaborate report as the result of deliberations extending over two years and assisted by a large mass of expert evidence. This report, it is true, recommended improvements of organisation tending to knit the various institutions into one coöperating whole, but the Special Committee which made the recommendation, while dealing with possible improvements in the manner of dealing with the resources of the hospitals spoke no word of criticism upon the manner in which they are obtained —no word of praise of any scheme for throwing the hospitals upon the rates.

THE HOSPITAL AND THE COMMUNITY.

The system we have and which we are proud of is one which has built up for us a system of national hospitals given to and maintained for the nation by the voluntary act of the nation's individual members. If only the funds provided can be in any way made sufficient for the work it is evident that the voluntary method expressing the gratitude and benevolence of the community at large is the right one, the one which does honour both to the giver and the recipient. These two motives, gratitude and benevolence, personal thankfulness towards a system beneficent to the giver himself and goodwill towards that which aids suffering fellow-men, have made the hospitals what they are, and these two motives once thoroughly aroused in the heart of the people of our metropolis should maintain the hospitals without difficulty in the noble position they have won. Each motive should appeal in varying degrees and for various reasons to every class. The cause of gratitude for those who are givers only, though less obvious than in the case of those who have been, or are liable to become, inmates or out-patients themselves, is none the less very real. Take the case of the millionaire who, crushed in a sudden accident to his carriage, lies unexpectedly at the doors of death. Should the catastrophe occur near a hospital and should his condition be such that after his admission for immediate treatment his removal is undesirable he remains an inmate till he is convalescent, with skill as great as any he could summon to his private bedside at his command, and whatever aid is rendered to him is given with no claim for remuneration beyond that which the injured man's sense of gratitude may dictate. If, on the other hand, he is taken to his private residence the medical man summoned to consult beside his pillow may be the same man who would have dealt with his case in the hospital, whose skill has been acquired within hospital walls, and whose name would have been unknown to millionaires had not it been first known favourably to the poor and to his colleagues at his hospital. It is more evident perhaps in surgery than in medicine, but it is none the less true of both, that no body or combination of rich men, however powerful or however wealthy, anxious to retain the highest skill for the use of its members, could do so or would ever think of doing so, to the exclusion of the humble. The medical attendant of the rich man who has been injured in a carriage accident could have gained no experience in dealing with such injuries if he had not for years been in daily contact in his hospital with the mass of sufferers to whom crushing and maiming are among the common risks of their everyday occupations. In like manner in the medical wards of our hospitals opportunities are given for systematic observation, record, and comparison impossible in private practice, on which account it is not too much to say that the higher the degree of knowledge and dexterity exacted by the rich man of his medical attendant the greater reason has he to be grateful to our hospitals which offer such skill to be retained should his needs require it. We urge this point of view upon those rich men who see no other possible motive than benevolence to prompt the gifts of their fellows to the Metropolitan Hospital Sunday Fund and who for themselves claim that they find fields for their own benevolent impulses elsewhere. To the mass of citizens of greater and smaller degrees of wealth, whose medical attendants do not, as a rule, include members of the permanent staff of any hospital, we desire to point out that in their need they turn to those members of the medical profession who may exercise their skill in a circle of private patients, but who must have first acquired it through the medium of hospital appointments or hospital tuition. The mass of citizens do not, save on exceptional occasions, require assistance other than that of the general practitioner who acts as their family adviser. They pay him fees commensurate, as a rule, to their own condition of life rather than to the services which he renders to them, and from the poorest he receives a fee which cannot in any sense represent the time, trouble, and skill which he has bestowed on the case in question. Let us point out that it is only the facilities afforded by our hospital system which enable the general

practitioner to obtain the training that he does during the time and at the price that the average young man can devote to preparation for his profession. The Metropolitan Hospital Sunday Fund is collected mainly in the metropolis and is for the hospitals situated therein, but dwellers in the country would be badly off for medical advice if the schools of the metropolitan hospitals only admitted students pledged to practise within the area immediately surrounding them, while the London hospitals welcome daily patients from all parts of the United Kingdom. Dwellers in country districts have their local hospitals to assist, but in justice to what they owe to London they should not forget London's needs. We have spoken of the gratitude of the richer classes in prompting them to subscribe to hospitals; let us turn to the poorer class—to that class which avails itself of hospital relief and for which hospital relief is primarily intended. To exact a fee from such would be impossible, to demand it would be to rob the hospitals of their charitable character; but at the same time no one who watches from an outside point of view the crowd which waits each morning before the entrance to the out-patient department of a great hospital can fail to see many in it to whom, or to the family of whom, a few pence could hardly be a matter of serious consideration. He is surprised perhaps to see some of them there at all waiting for charitable relief, and he cannot help hoping that when they get it, if the hospital admits them to it, they are duly grateful.

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1897.

TABLE I.—GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients.*

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Charing-cross	1,006	2,017	1,075	781	155	134	163	94,604	11,790
French	324	711	135	404	93	50	32	16,854	650
German	394	1,644	411	535	499	86	113	46,104	2,679
Great Northern Central	481	1,527	1,279		70	97	151	62,534	5,034
Guy's	1,313	6,609	5,435		724	412	570	161,781	48,387
Hampstead	131	305	43	231	5	18	13	1,787	69
Italian	61	122	—	120	—	2	2	15,851	—
King's College	1,400	2,604	834	1,079	220	177	229	39,458	13,143
London	3,937	11,146	3,887	5,182	1,097	613	1,058	301,636	19,842
London Homœopathic	245	1,064	256	580	200	82	69	29,077	696
Phillip's Memorial Homœopathic	31	74	18	50	5	6	—	2,910	9
London Temperance	648	1,175	328	682	64	77	108	18,396	11,846
Metropolitan	481	1,054	285	580	29	67	123	100,793	10,449
Mildmay Mission	262	452	111	284	—	32	30	24,051	1,701
Miller Hospital and Royal Kent Dispensary	236	276	37	189	15	19	16	44,164	6,429
North-West London	350	560	115	349	99	45	29	35,023	6,018
Poplar	403	1,037	818	169	71	56	57	22,815	—
Royal Free	831	2,162	1,798		110	150	214	90,983	16,540
St. George's	1,356	4,689	2,919		881	334	412	105,574	12,096
SS. John and Elizabeth	58	51	51	—	20	16	27	—	—
St. Mary's	1,706	3,317	836	1,992	256	248	265	85,317	17,430
Seamen's Hospital Society	919	2,620	705	1,574	20	188	155	90,324	22,581
The Middlesex	1,925	3,641	2,619		675	267	390	126,676	31,825
University College	1,181	2,875	879	1,435	433	124	233	175,270	35,419
West Ham	289	694	68	625	7	37	49	69,895	9,523
West London	725	1,683	1,246		—	88	158	86,709	7,674
Westminster	1,094	2,618	2,216		383	179	223	70,000	11,073
	£21,608	56,758	10,907	16,791	6,061	3,604	4,889	1,917,486	302,903
Estimated to supply omissions	—	—	5,547	11,995	40	—	—	—	3,541
Total	£21,608	56,758	16,454	28,786	6,101	3,604	4,889	1,917,486	306,444

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

SOME CURIOUS CALCULATIONS.

What do the figures say? Let us take a recent year at random; 1896 will do as well as any and the sums look easy to calculate in the table which refers to the work of the special hospitals, and the moneys assigned to them in that year by those who managed the Hospital Sunday Fund. The precise sum distributed to them—and 57 hospitals divided it in the proportions assigned to them—was £13,662, while the number of visits made by out-patients was (as shown by estimates in some cases combined with precise returns in others) 1,310,885. Let us leave out the odd hundreds in the one case and the odd thousands in the other, and we have £13,000 for 1,300,000 visits. One sovereign (or a little over, in point of fact) for every 100 visits represented the gratitude not of the patients treated, but of the whole of London for the boon supplied. £1 per 100 amounts to a little more than 2½*d.* apiece, so that if each patient *had* chosen to contribute that sum for every visit made he who attended once would have given little more than the estimated average gift of a Londoner who has personally received no relief; while the whole amount so raised would have nearly equalled that contributed by the whole of wealthy London to its special hospitals through the Hospital Sunday Fund, 1,300,000 times 2½*d.* amounting to £12,500. Figures such as these help one to realise that great as is the value of the Metropolitan Hospital Sunday Fund to the institutions in whose behalf it is raised and warm as is necessarily their appreciation of it, it really only plays a very small part in providing for their daily expenditure. This we say, of course, not from any wish to depreciate the Fund, but solely on account of our desire that it may play a larger part, a part more worthy of the care with which it is organised and the objects which it benefits. We spoke of the man who glances for the first time at the annual totals and is at once struck with the idea that they are large from the point of view of the givers. Let us point out to him how inadequate they are from the point of view of the receivers. We will not compare them with the amount of the indebtedness of the hospitals or with the income of each institution from other sources, as it is not pretended that the contribution of the Fund is all each hospital has to live upon. Taking two years at random, 1888 and 1896, we find that in the former the amount which the Fund could assign to the hospitals, as distinct from institutions, dispensaries, &c., was £34,135, while the number of general and special hospitals which qualified to receive donations was precisely 100. In the later year, a year when the Fund rose to a higher figure than usual, though not as high as in 1895, the total distributed to hospitals was £39,199, but against this increase the number of the institutions assisted was 116 instead of 100. When we point out that, according to the best obtainable statistics, in 1888 the general and special

TABLE II.—SPECIAL HOSPITALS.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest	927	760	676		—	116	84	65,126	—
Hospital for Consumption	1,391	1,651	1,147		230	290	244	71,595	—
North London "	263	3,279	3,259	—	—	58	20	19,674	—
Royal Hospital for Diseases of Chest	350	740	577		43	69	94	24,932	—
Royal National Hosp. for Consumption	262	848	662	—	—	131	30	—	—
Alexandra Hospital for Hip Disease	149	168	27	51	22	59	2	1,703	—
Barnet Home Hospital	35	61	45	22	—	14	1	—	—
Belgrave Hospital for Children	123	327	75	211	12	5	34	15,847	200
Cheyne for Incurable "	121	73	4	3	6	46	12	—	—
East Lond. Hosp. for "	394	1,616	319	802	125	86	324	74,913	8,348
Evelina Hosp. for Sick "	394	862	672		118	34	154	21,153	688
Home for Incurable "	61	35	—	—	—	37	5	—	—
Home for Sick "	123	725	—	—	152	—	15	4,056	—
Hospital for Sick "	700	2,145	770	673	199	136	265	84,841	—
North-East. Hosp. for "	262	772	156	455	97	53	111	54,352	2,073
Paddington-green for "	149	573	473		106	38	62	43,819	2,552
Victoria Hospital for "	481	894	753		445	31	3	38,303	576
Victoria Home, Margate	26	25	16	6	—	16	1	—	—
"The Vine"	26	41	9	6	—	24	—	—	—
British Lying-in Hospital	26	187	—	186	—	9	1	—	—
City of London Lying-in Hospital	66	521	—	513	7	28	3	11,676	—
Clapham Maternity	31	337	—	—	—	—	2	8,330	—
East-end Mothers' Home	61	237	—	234	—	11	3	2,410	—
General Lying-in	53	—	—	—	—	—	—	—	—
Queen Charlotte's Lying-in	201	1,101	—	1,101	—	—	—	7,868	19
Chelsea Hospital for Women	306	693	33	602	148	43	15	10,259	—
Hospital for Women	306	720	303	311	86	58	23	24,605	—
Grosvenor Hosp. for Women and Children	44	91	47	31	6	11	2	10,938	—
New Hospital for Women	192	555	205	310	—	—	23	32,482	—
Royal Hosp. for Children and Women	219	376	—	—	12	—	39	19,937	12
Samaritan Free	490	542	111	408	—	40	12	22,178	—
Cancer	569	832	730		20	85	92	14,140	—
London Fever	876	707	—	616	—	77	14	—	—
Gordon for Fistula	37	253	22	231	—	5	—	4,296	—
St. Mark's "	53	319	40	286	—	25	4	4,131	—
National for Diseases of Heart &c.	53	117	96	15	—	—	6	10,079	—
Female Lock	123	694	616	—	2	76	2	16,976	—
Hospital for Epilepsy &c.	57	81	78		2	19	1	11,928	—
National for the Paralysed &c.	752	1,001	317	155	185	186	20	36,974	—
West-End for Nervous System	96	296	219	31	—	44	2	28,412	—
Central London Ophthalmic	96	209	12	197	—	12	—	26,587	239
Royal Eye	166	405	335	339	—	23	2	—	—
Royal London Ophthalmic	490	1,968	—	—	—	59	2	129,960	—
Royal Westminster "	88	644	627		—	17	—	26,404	—
Western "	39	—	—	—	—	—	—	—	—
City Orthopædic	66	—	—	—	—	—	—	—	—
National "	70	206	149		—	56	1	8,124	—
Royal "	61	170	54	83	—	47	—	3,443	—
Royal Sea Bathing Infirmary	298	592	351	107	—	99	7	—	—
Hospital for Diseases of Skin	—	41	3	36	—	2	—	14,479	—
Western Skin	—	—	—	—	—	—	—	6,793	—
St. Peter's for Stone	56	430	419		—	8	11	32,771	—
Central London Throat and Ear	85	277	86	220	3	6	12	48,880	—
Hospital for Diseases of Throat	—	470	76	373	14	—	7	41,132	60
Metropolitan Ear and Nose	—	8	—	8	—	—	—	6,141	—
Royal Ear	8	307	—	—	—	—	—	8,757	—
The Dental	109	—	—	—	—	—	—	62,512	—
National Dental	105	—	—	—	—	—	—	—	—
Estimated to supply omissions	£12,435	31,001 1,719	8,278 4,955	8,568 6,559	2,040 217	2,291 224	1,767 —	1,208,878 99,117	14,767 4,288
Total	£12,435	32,720	13,233	15,127	2,257	2,515	1,767	1,307,995	19,055

hospitals, leaving cottage hospitals out of the calculation, took in 71,000 patients, and in 1896 took in 84,130, it will be seen that the Fund contributes just about 10*s.* per annum towards the board, lodging, and medical attendance of each in-patient relieved, it will be seen from the figures below, which demonstrate the progress of the Fund, that although a glance at the column of totals shows an increase in money subscribed as between 1889 and 1896, it cannot be reckoned as an instance of steady and confirmed progress; whereas there is an increase in the number of those seeking hospital relief, which must be constant both now and in the future, because it principally depends upon the increase of the population of London and its rapid growth at all points towards its suburbs. The increase of 16 in the number of hospitals partaking in the fund may partly be accounted for by the fact that each year more hospitals by care and good management bring themselves within the conditions enforced by those who distribute the grants.

Progress of the Metropolitan Hospital Sunday Fund.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1886	£40,399	£4817 [3]
1874	29,936	1605	1887	40,607	4130 [4]
1875	26,386	1424	1888	40,379	3080
1876	27,042	1339	1889	41,744	3482
1877	26,082	947	1890	42,814	3991 [5]
1878	24,904	1199	1891	45,330	9019 [6]
1879	26,501	1120	1892	41,512	4429 [7]
1880	30,423	1567	1893	39,290	3652 [8]
1881	31,856	1638	1894	43,679	7717 [9]
1882	34,146	2106	1895	60,361	21,990 [10]
1883	33,935	1980	1896	46,035	3582 [11]
1884	39,329	6410 [1]	1897	41,003	2361 [12]
1885	34,320	2555 [2]			

[1] In 1884 £4500 was received from the managers of the International Health Exhibition.

[2] In 1885 a special donation of £1000 was received from Dr. James Wakley, Editor of THE LANCET.

[3] In 1886 a further special donation of £1000 was received from Dr. James Wakley.

[4] In 1887 a legacy of £1000 was paid by the executors of the late Dr. James Wakley.

[5] Including legacy of £1003 14s. from the executors of the late Mr. Thomas Crouch.

[6] In 1891 donations of £5000 from the late Duke of Cleveland, &c., and £1000 from Sir Savile Crossley, Bart., were received.

[7] In 1892 Sir Savile Crossley gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Price of Brighton.

[8] In 1893 Sir Savile Crossley gave a further donation of £1000.

[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late Mr. W. J. Whitaker, and Sir Savile Crossley gave a further donation of £1000.

[10] In 1895 Messrs. Barnato and Friends gave a donation of £10,000; £3400 was received from the Stock Exchange through Messrs. Pym, Vaughan, and Co., and Messrs. Burdett and Harris; Lord Iveagh gave a donation of £1000; Sir Savile Crossley gave a further donation of £1000; and Mr. J. B. Robinson gave £1000.

[11] In 1896 Sir Savile Crossley gave his sixth donation of £1000, and legacies were received from Mr. John Smith of £500 and Mrs. May Evans of £172 9s. 4d.

[12] In 1897 Sir Savile Crossley gave his seventh donation, amounting this year to £500.

THE FIGURES FOR 1897.

Let us now examine the figures compiled with reference to the Metropolitan Hospital Sunday Fund and its distribution in the past year (1897) and with reference to the work of the London hospitals during the same period, and we shall be able to see if they continue to bear out the deductions which we have hitherto made from the statistics of previous years taken at random. In the first place with regard to the amount collected. This we find from the balance-sheet of the fund was £41.003, as against £46.035 in 1896, £60,361 in 1895, and £40,379 in 1888. If we take two more dates, also recent ones—1891, £45,330; 1893, £39,290—we shall not add very much to our argument, but we shall possibly make it a little clearer that the Hospital Sunday Fund does not steadily increase with the growth of the population of the metropolis nor does it increase more rapidly in proportion than the population as it becomes better known. On the contrary, it fluctuates with so-called good years and bad, in a manner possibly natural, but none the less calculated to cause anxiety to those who have the welfare of the hospitals at heart. In urging, therefore, its claims upon those who have not contributed before, either because to do so would have been an act of self-denial or because they have not realised its claims, we have endeavoured to suggest the Hospital Sunday Fund as the subject of a small—very small—self-inflicted taxation, in the hope that the act of self-denial may be made annual and may occur even where the superfluity of income ceases. Again, taking the number of hospitals assisted in 1897 and looking to see whether they have increased in number, as from previous experience we had reason to expect they would, we find their number returned as 120, as against 116 and 100 in 1896 and 1889 respectively. This means that after deducting for other institutions there were last year £37,262 to be divided among 120, as against £39,199 in the previous year among 116. We should like to see the incidence of increase and decrease reversed—the Fund larger annually and the number of applicants smaller owing to the increased prosperity of individual foundations. So much with regard to the diminished receipts of last year and to the increased number of hospitals aided; let us turn to the amount of relief dispensed. The general hospitals have had one more added to their list, which naturally does not increase rapidly; let us strike out this one, the Mildmay Mission Hospital, and the figures relating to it. We then find that the general hospitals last year received £21,345 as

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Metropolitan Convalescent	563	3,805	1,210	3,593	—	96	6	—	—
Bexhill ,,	262	1,601	479	1,078	—	42	2	—	—
All Saints ,,	481	3,637	1,176	1,595	—	89	4	—	—
Mrs. Gladstone's ,,	88	647	—	—	—	17	—	—	—
Hahnemann ,,	35	144	148		—	26	1	3,303	1
Hanwell ,,	13	—	—	—	—	—	—	—	—
Herbert ,,	17	436	235	144	—	38	—	—	—
Herne Bay (Baldwin-Brown) Convalescent	22	323	—	—	—	—	—	—	—
Herne Bay Mothers' Home	39	490	—	—	—	—	—	—	—
Homœopathic Convalescent	13	204	—	—	—	—	—	—	—
King's College ,,	57	385	61	298	—	11	2	—	—
Mrs. Kitto's ,,	79	329	—	—	—	—	—	—	—
London and Brighton Female Convalescent	26	2,108	2,065		—	38	—	—	—
Mary Wardell Convalescent	87	250	—	—	—	—	—	—	—
Morley House ,,	96	842	—	—	—	—	—	—	—
St. Andrew's (Clewer) Convalescent	158	685	491	—	—	—	6	—	—
Do. (Folkestone) ,,	245	2,066	—	—	—	—	—	—	—
St. John's Home for Convalescent Children	70	300	300	—	—	—	1	—	—
St. Joseph's Convalescent	48	561	322	39	—	45	3	—	—
Convalescent Home for Poor Children, St. Leonards-on-Sea	87	807	209	538	—	49	1	—	—
St. Michael's Convalescent	26	181	—	—	—	—	—	—	—
Seaside ,,	123	—	—	—	—	—	—	—	—
Warley ,,	6	70	69	—	—	—	1	—	—
Ascot Priory ,,	61	—	—	—	—	—	—	—	—
Friendly Societies ,,	31	—	—	—	—	—	—	—	—
Police Seaside Home	17	663	663		—	—	—	—	—
St. Mary's Convalescent	13	108	—	—	—	7	—	—	—
Beckenham Cottage Hospital	46	159	26	127	—	2	6	—	—
Blackheath and Charlton Cottage Hospital	61	160	45	98	—	6	7	3,871	—
Bromley, Kent, ,,	73	319	54	227	15	19	13	—	—
Chislehurst, Sidcup, &c. ,,	39	147	17	105	—	8	10	—	—
Eltham ,,	29	62	11	41	3	2	5	—	9
Enfield ,,	39	108	21	77	—	9	5	—	12
Epsom and Ewell ,,	61	103	8	74	10	5	6	—	6
Hounslow ,,	18	79	29	45	2	10	5	2,392	6
Mildmay ,,	61	161	46	67	9	23	15	—	5
Reigate and Redhill ,,	53	249	39	205	—	12	6	—	12
Sidcup ,,	31	111	19	84	3	4	1	215	12
Wimbledon ,,	35	103	11	83	1	5	3	200	12
Woolwich and Plumstead ,,	31	73	13	35	4	8	9	38	12
Establishment for Gentlewomen	105	137	24	106	—	6	1	—	—
St. Saviour's Hospital and Nursing Home	105	83	32	41	—	10	7	—	—
National Sanatorium for Consumption	53	312	185	—	2	62	6	—	—
Invalid Asylum	53	196	155	107	11	21	2	—	—
Firs Home	35	49	16	—	—	19	14	—	—
St. Catherine's Home	26	35	29	—	1	9	4	—	—
Friedenheim Home for the Dying	219	118	28	—	—	27	63	—	—
	£3,942	23,441	5,420	8,002	61	725	215	10,020	85
Estimated to supply omissions	—	1,403	4,013	5,527	—	248	14	365	—
Total	£3,942	24,844	9,433	14,129	61	973	229	10,385	85

against £22,152 in 1896, took in 56,276 in-patients as against 55,514 in 1896, and dealt with 1,893,435 visits of out-patients as against 1,584,735 visits in the preceding year. From this it will be understood that the same group of institutions found their sphere of utility widening last year, as it has widened before and will again, but found a diminished recognition of their needs on the part of the public to which the Metropolitan Hospital Sunday Fund appeals.

GIVE, GIVE, GIVE.

What is that public? The Fund is primarily connected with a collection made in Christian places of worship on the first day of the week. But it excludes no sect or religious denomination of the Christian or any other religion from its appeal any more than the hospitals which it benefits exclude any sect or denomination from their wards. There are many, too, who, not from any motive of sect or denomination, will not hear the claims of the Hospital Fund urged from the pulpit of any place of worship on Hospital Sunday and to this class belong some of whom it least behoves to ignore the appeal, and who are best able to respond to it. To the golfer and the cyclist no one grudges his game or his ride, and parenthetically we may remind each of the support which the medical profession have always given to the national habit of healthy athleticism prevalent in this country. We do not wish to discuss the price of bicycles or to unduly remind the devotees of the one game which appeals to young, middle-aged, and elderly alike of the amount of their club subscriptions, their railway fares, or the expenses incidental to a round of the links, but we do desire to recall to the memory of each that it is for the sick and the maimed that we appeal upon Hospital Sunday and we do ask him as he hurries in pursuit of health not to forget those who are deprived of it and whose only hope of regaining it lies in the generosity of their better-endowed fellow men. A late well-known head-master appealing, not for the first time, for funds for the completion of his school chapel once humorously retranslated "Bis dat qui cito dat" "He who subscribes early gives a second subscription." That is not our point of view here; we do not complain of the generosity of the bulk of those who give annually already, we only urge them to continue their gift and express a very earnest wish that the liberality of Londoners may some day become as universal every time the appeal is made as it is now open-handed where the appeal goes home.

TABLE IV.—DISPENSARIES.

Name of dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£66	—
Bloomsbury ,,	11	—
Brixton, &c.	53	26,340
Brompton Provident	22	6,621
Camberwell ,,	88	96,727
Camden ,,	11	6,150
Chelsea, Brompton, and Belgrave Provident	42	16,040
Chelsea Provident	13	3,119
Child's Hill ,,	9	—
City	61	23,271
City of London and East London	21	63,764
Clapham General and Provident	23	—
Deptford Medical Mission	14	12,660
Eastern	29	17,204
East Dulwich Provident	13	—
Farringdon General	35	17,712
Finsbury	26	45,867
Forest Hill	26	7,705
Gipsy Hill Provident	4	—
Hackney ,,	6	7,844
Hampstead	39	—
Holloway and North Islington	57	22,593
Islington	39	45,570
Kensal-town Provident	4	4,833
Kensington	61	16,341
Kilburn, Maida-vale, and St. John's-wood	28	2,957
Kilburn Provident Medical Institution	26	—
London	13	7,202
London Medical Mission	53	17,096
Metropolitan	44	2,313
Notting-hill	13	1,652
Paddington Provident	28	10,953
Pimlico ,,	14	—
Portland-town	14	5,402
Portobello-road Provident	5	—
Public	39	14,701
Queen Adelaide's	19	16,956
Royal General	35	—
Royal Pimlico Provident	44	55,006
Royal South London	44	18,231
St. George's and St. James's	39	2,300
St. George's (Hanover-square) Provident	35	6,070
St. John's-wood and Portland-town	33	25,000
St. Marylebone General	44	10,904
St. Pancras and Northern	39	—
South Lambeth, Stockwell, & North Brixton	39	—
Stamford-hill, Stoke Newington, &c.	44	39,141
Tower Hamlets	32	9,899
Walworth Provident	10	4,386
Wandsworth-common Provident	8	4,066
Westbourne Provident	12	—
Western	26	23,844
Western General	118	38,601
Westminster General	26	4,015
Whitechapel Provident	17	19,843
Woolwich ,,	9	2,086
Estimated to supply omissions	£1,723	817,985
	—	364,853
Total	£1,723	1,182,838

THE PRINCE OF WALES'S HOSPITAL FUND.

We ought not to close this article without reference to H.R.H. the Prince of Wales's Hospital Fund in support of the metropolitan hospitals, to which we made reference at some length last year by way of speculation as to its probable effect upon the Hospital Sunday Fund. The individual donations to the Prince of Wales's Fund during 1897 ranged from 6*d.* to £12,500 and the subscriptions from 1*s.* to £1000 a year. The total sum paid into the credit of the Fund during the eleven months ended Dec. 31st, 1897, was £227,551 12*s.* 5*d.* Of this amount there were contributed in annual subscriptions £21,443 1*s.* 5*d.* After distributing £56,826 among the hospitals there remained a sum of £167,020 for investment. The total expenditure under all heads, including salaries, office and other expenses, and advertisements, amounted to £3704. It is quite possible that the falling off in the receipts of the Hospital Sunday Fund as between 1897 and 1896 may have been, as we expressed a hope that it might not be, due to the rivalry of so important a competitor; it is also possible that the needs of the hospitals and the importance and merits of the organisation which distributes the Hospital Sunday Fund have been brought before the notice of some who have hitherto been indifferent, and that ultimately the Hospital Sunday Fund will be the gainer. Of one thing we are certain. His Royal Highness would deplore the fact that his Fund should interrupt the channels of other charities. He has designed to honour his mother's Diamond Jubilee by establishing his Fund in aid of the metropolitan hospitals. If the Jubilee Fund detaches subscribers from the Hospital Sunday Fund the deserters pay their Prince and their Queen no compliment whatever. The objects of each Fund are the same; there is no rivalry, while the needs of the London hospitals would absorb the contributions of two more Funds as large and still be found thirsty.

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£21,608	56,758	16,454	28,786	6,101	3,604	4,889	1,917,486	306,444
Special Hospitals	12,435	32,720	13,233	15,127	2,257	2,515	1,767	1,307,995	19,055
Cottage Hospitals and Convalescent Homes	3,942	24,844	9,433	14,129	61	973	229	10,385	236
Dispensaries	1,723	—	—	—	—	—	—	1,182,838	—
Total	£39,708	114,322	39,120	58,042	8,419	7,092	6,885	4,418,704	325,735

In the following sketch we have tried to picture one situation, and not the most sensational, which would commonly arise were London without these noble institutions, the growth of which and of their usefulness in the memory of living man has been so enormous, and the total absence of which from our midst is not, of course, even with the aid of the most vivid imagination, realisable.

THE MISSING WORD.

AN INCIDENT IN LONDON WITHOUT ——.

Joe Smithson, navvy, came up to London in search of employment. He had had a bout of work on a new light railway in Kent, where, being better educated than his fellows as well as a strong man, he had been made foreman of a gang. Then an old enemy had wrestled with him and overcome him—without any very gallant resistance on his part—and his fall had carried him back to the position of a simple digging workman under a foreman he despised and another bout of liquor had been followed by his discharge. Wherefore he was sitting in a public-house with a man whom he had picked up in the street. The change from a sovereign after paying for drinks for two represented his worldly possessions beyond what were contained within the knotted corners of a blue pocket-handkerchief, and he had not yet found a lodging. The man he had picked up was a decent sort of fellow with a quiet thirst and a somewhat forcible way of expressing himself but speaking seldom withal, and Joe Smithson sat with his legs crossed and his arm hanging over the back of the bench they were on and did the talking himself. He was fond of talking, for he was a man who had read a little, who had attended lectures, and who had once gained a prize in a missing word competition which had kept him and his family in plenty rather than peace for six idle weeks.

"Blow 'orspitals," said Joe Smithson, "it wouldn't make no difference if there weren't no 'orspitals."

A friend of his working as foreman of a gang on the Central London Railway had been removed to St. ——'s Hospital the day before suffering from the kick of a pony which had resented his riding down the tunnel on its back, and Joe Smithson had thereby lost a chance of work; but as the friend was being well cared for without expense to himself it was not very easy to see why his fate should lead to the denunciation of hospitals—except that Joe had been denied admission during the dinner-hour. The stranger from the street made a suggestion to that effect, but Joe Smithson only said "Blow 'orspitals" again with more emphasis than before and declined to stand another drink unless the other agreed with him.

"Where'd we poor chaps be without 'em?" asked the man from the street as a parting shot, declining to be persuaded and rising to go.

"Where we are now!" retorted Joe Smithson to himself, and he continued muttering as he hung half over the back of the seat; "where we are now, if we didn't play the fool; and if we did, what matter?" From which it will be seen that Joe Smithson was not in a condition to reason clearly.

So he ordered something more to drink, and then it seemed to him that he, too, rose, forgot his worldly belongings in the blue pocket-handkerchief, and went out.

* * * * *

Five minutes after leaving the public-house Joe Smithson, lurching across the Edgware-road, collided with a horse which was being driven rapidly northward, and the horse being firmer upon its four legs than he was upon his two went on its way without any important deviation, the wheels of the cart passing after it along the right side of Joe Smithson lying prostrate and over his right hand and right foot. The driver, presumably seeing no advantage to be gained by waiting and many excellent reasons for not doing so, drove off at an increased speed; at all events, Joe Smithson saw him no more. He found himself later sitting on the pavement and leaning against an area railing with a dim recollection of having been helped thither by the policeman who formed part of the crowd in front of him. He fancied that he had somehow hopped there, supporting himself partly on the policeman's shoulder and partly on his left leg. His right foot and hand were useless and in addition hurt him considerably.

"That's right," said the policeman in a tone of pride and possession as Joe Smithson opened his eyes and stared at him; "better now, eh Shall I fetch a doctor"

"Fetch a doctor!" exclaimed Joe, finding his voice—he had only groaned hitherto; "why don't yer bring the College o' Surgeons in a wheelbarrer?"

"Anything you like," said the policeman, who evidently did not understand sarcasm, "only make up your mind."

"Mind!" ejaculated Joe Smithson, "there ain't two minds about it; I'll run to a cab if there's one handy and go to the ——" A twinge of pain in his foot interrupted him as he moved and he ended with a groan.

The policeman blew two toots on his whistle and a hansom pulled up by the kerb. A hansom cab is about as difficult a vehicle as could be devised to get a disabled man into, particularly when he weighs 16 st. and is built correspondingly, but there were willing hands in the crowd.

"Where to?" asked the policeman as the cabman looked down through the trap for orders.

"Why, the nearest ——," said Joe Smithson, "I've forgot the word—you know."

"Doctor," suggested the policeman, sitting down beside him.

"No," said Joe Smithson. "Where Bill Harding's gone, and they won't let you see him 'cos 'e's eatin' 'is beef-tea for dinner; St. ——'s ——"

"Church," suggested the policeman.

"No churches for Bill," answered Joe Smithson, almost laughing at the thought. "I means where they boards and lodges and doctors you for nothin', an' the young women wear white caps, an' ——"

But the policeman did not seem to understand and was taking matters into his own hands. "There's Dr. Zealous round in the next street," he muttered, giving an address to the driver.

When the cab stopped a grey-haired, well-dressed gentleman was coming down the flight of steps from a front door which had a brass plate on it and walking towards a brougham which stood in front of it. He recognised the policeman and stepped up to the cab.

"What have we got here?" he asked briskly.

The policeman explained and the doctor stood on the step of the cab and passed his hand quickly over Joe Smithson's bruised and blood-stained hand.

"There's nothing much in it," he said. "Just some bruising. You must take him somewhere else."

"What, you won't do anything for me, then, governor?" asked Joe, setting his teeth against the pain.

"My good man," said the doctor, "I have a large practice to attend to. You had better go home and send out for somebody."

"Ain't got no home," said Joe Smithson gloomily.

The whole thing puzzled him. He was quite conscious now but could not make matters out.

"Try the workhouse," said the doctor to the policeman.

The policeman shook his head. "They say they'd want room for thousands if they took them in like that," he explained. "The workhouses only look after the people that are taken ill when they are in them."

"But isn't there a place," asked Joe Smithson, "where they take in poor chaps like me that get hurt in the streets or lets them come to be doctored and then go home? a place people subscribes for? What do they call it? A ——"

But the old gentleman was walking rapidly towards his brougham.

"No," he said, turning his head as he did so and speaking in smooth, polite tones, "there is no such institution that I know of; but now you come to mention it I quite admit that there ought to be. Constable, why not take him to Mr. Chiron's Academy for students?"

"Oh," groaned Joe Smithson five minutes later, "where is it that they do it all for nothing and the nurses wear them white caps? Where can it be? I've clean forgot the word."

"They'll do a good deal for you here," said the policeman drily, as the cab drew up before a doorstep on which two young men were standing, "but you'd better stop that about missing words and white nightcaps. I'm going back to my beat." He spoke a few words to the young men by way of introduction to Joe Smithson and the history of his case and then left them.

"If you will come in, my man, we will do what we can for you," said one of them. They helped him out of the cab kindly enough and as they were strong young men it was easier work than getting into it had been. They also paid his fare, saying something about Joe wanting all

his money for board and lodging if he were to be laid up for long.

"There's the foot, too; we must not forget that," said one of them after they had got him inside the house and while they were bending over the hand—but they never arrived at examining his foot; what they did to his hand hurt him so much that he drew it back from them and exclaimed fiercely that he did not believe that they knew their trade.

"My good man," said one of them, "no one could touch a hand in that state without hurting you and we are doing our best to relieve you."

"You both of yer look very young," said Joe Smithson, sullenly. "Ain't you bin to no ——— ?" Again the word failed him and he paused, weakly groping for it in his memory.

"We may be young and we may be jolly green," said the younger of the two cheerfully; "but if you are going to make a favour of letting us look at you you'd better go; you may think yourself and your case interesting but you are not absolutely unique, you know." Joe Smithson stood up. His foot hurt him a good deal, but his huge boot with its inch-thick sole had taken the brunt of the blow, and the cart had not been a heavy one. He could hobble and he did so towards the door.

"I'm off," he said as he did so. "I ain't let out for experimants, I want a place where I can lie down and be comfortable and have a real doctor and a nurse with a white cap on 'er 'ead."

The two young men exchanged glances. "I think," said the elder one quietly, "that you had better have let us do a little for you before you went to look for all that; anyhow, I'll put your arm in a sling and give your hand a support."

As he evidently meant what he said kindly and was apparently doing what he could for Joe Smithson's comfort Joe submitted with a bad grace and left the house with his arm suspended by means of a white bandage and supported on a splint, so that at all events it felt as if it were being kept together a little. He scowled, however, a few moments later and almost climbed the steps again to claim admittance, having overheard, as he leaned against the area railings, something of what the two young men were saying about him. However, not feeling in good trim for fighting, he thought better of it and moved a few houses farther up the street and leaned against other railings.

"Barmy, is it, they call me? lunatic, eh?" he muttered, "I'll loony them when I've 'ad a month in ———" But still the word refused to come back to him, while hitherto no one had seemed to come anywhere near to understanding his explanations. And yet he was a foreman labourer and intelligent and able to express himself—a man who had won a missing word competition.

As he leaned against the railings and wondered dimly what he was to do next someone tapped him on the shoulder. He turned and saw that it was a clergyman, a tall, thin-faced man, with rather sunken eyes and a friendly smile.

"In trouble, eh?" he asked, pointing to the sling.

Joe explained that he had no home, almost no money, and could get no work until he had recovered from his injuries. Therefore he wanted medical attendance and shelter for a little time. Could the reverend gentleman tell him where the—well, the place where that sort of thing was done for poor men. Joe thought that he had found someone at last, perhaps, who would understand what he wanted and where he wished to go. He did not have much "truck," as he expressed it, with the clergy as a rule, but he watched this one intently as he listened with a puzzled look coming into his deep-set eyes.

"You had better come with me, I think; a doctor who is a friend of mine will see you if I ask him and we will arrange the other matter," he said after a pause; "but we must take a cab, it is two miles away."

"Then I'll pay this journey," said Joe Smithson, as his new friend helped him into a four-wheeler, and in the end he did so, after they had driven a long distance and stopped in a quiet square at a quiet house with a church beside it. He found himself a few minutes later on a sofa in a large room chiefly furnished with books, while a doctor who seemed to live somewhere close by was examining his hand and his foot. Joe had looked anxiously at the servant who brought in hot water and other things as they were wanted; her cap had reminded him vaguely of the place he had wished to be taken to. At last the doctor, who appeared to him to have done what he had to do very thoroughly, for he had taken a long time and hurt him a good deal, seemed to have finished his work so that hand and foot lay swathed in bandages, comfortable, but perfectly immoveable and helpless.

"There," said the doctor cheerfully, "you are a lucky chap to be no worse, and now comes the question what is to be done with you."

"A very serious question," said the clergyman gravely, "all the beds I have here for such people are filled, and though my friend the doctor attends to you because he has a kind heart and I ask him to, lodging-house keepers don't quite take the same view of such matters."

"Lodgings for a month at least," ejaculated the doctor, "and he says he has 15*s.* left and no home. What about your parishioners?"

"They do a good deal for the people in the parish," answered the clergyman; "of course I can ask them; the ladies are very kind, and the men, too, for that matter, when a case is brought directly to their notice."

"But," said Joe Smithson interrupting, "ain't there no other place where I'd be taken in an' done for, doctored and fed an' turned out well—a place where there's hundereds and hundereds of poor beggars like me, and women an' kids too, and them that ain't bad enough to have to stay there can come and be seen by the doctors and get their bottles of medicine given them and take them home with them?"

"No," said the clergyman in his deep, thoughtful voice, "there is no such place in all London."

"Then," said Joe Smithson emphatically, "I always thought there was, and if there ain't there ought to be."

"Our injured friend is right," said the doctor, looking a little graver than he had before. "There ought to be. There is the germ of a great idea in what he says. He means an institution for dispensing medical and surgical treatment to the necessitous poor. It would have to be on a big scale—a very big scale—to do good; but then it would do a great deal of good and allay a lot of suffering."

"I suppose doctors could be found to look after it?" asked the clergyman.

"Rather. Put it on no higher ground than self-education. What a grand place it would be for working in or for learning the elements of your work as a pupil; think of the cost of the education and the value of it compared with what we have now. Now our young men have to find out the way for themselves."

"Blow me, but they *'ave*," said Joe.

"Then they would do nothing until they knew how, and would be learning how all day."

"And would the people avail themselves of such a place?" asked the clergyman, "and be grateful for it?"

"Rather; they'd use it right enough," put in Joe Smithson, "and they'd be grateful for it, too," he added, feeling quite sure that he had heard others speak in warm terms of such institutions, others who had used them and been benefited by them. Of himself he did not feel quite sure. He had never thought much upon the subject and had dim recollections of having on one occasion, out of the spirit of perversity, possibly spoken of them disparagingly. It must have been merely out of the spirit of perversity and thoughtlessness, such a spirit attacks every man at times; but the doctor was shrugging his shoulders and shaking his head.

"Where would the money come from?" he asked. "If you are to do such a thing adequately you must have a large sum of money annually which you can count upon as regularly as quarter-day, so that you may make your work fit your income and be covered by it, and it would not be the sort of work you could limit easily. Taxes and rates are high enough already; people would simply rebel against a wholesale measure for raising them, and yet a charge for each institution on the local rates would be the fair, just way."

"But not the best," said the clergyman earnestly. "No; they must be, if ever they are to be at all, the gift of the rich man to the poor man—aye, the gift of all who have not felt the grinding pressure of absolute want to those who do not know where to turn for help in the hour of need. The rich must give of their bounty not only because they are rich; but because to give is good; because, too, that which they are aiding is a national institution for the nation's good and a training ground for those who in the rich man's need will aid the rich man as they have aided the poor. The man who is not rich will give in proportion to his means, because he is

proud to tax himself for a noble object, perhaps because he, too, will some day derive benefit from that which he is establishing or helping to maintain for others. The good to self is there, we cannot afford to despise it as an argument, but the gift that is free from such a motive commends itself to me best. Such a gift in such a nation as ours from the great to the small, from the 'haves' to the 'have-nots,' would be a gift indeed."

The doctor nodded, and smiled at his friend's enthusiasm. "I daresay the 'have-nots' as you call them would help a bit when they had a little; it would be a case of every little helps, I fancy."

"I take it that the poor have no wish to be pauperised," said the clergyman, rather stiffly. "Those benefited, those taken in, that is, and treated, would feel grateful, but they would usually be, from the mere fact of having been ill or injured, the least able to contribute; it would have to be brought home to those in health among them that no gift, however small, would be despised, and then, you see, numbers would tell. Think what the masses of poor number in this city."

"Yes," said the doctor cheerfully, "it is a fine idea, but a bit Utopian; however, give a thing a good name nowadays and it will often go surprisingly. What would you call these institutions that you seem so ready to develop and organise for us?"

"Ah," said the clergyman; "I had not thought of a name for them; we should have to invent one."

Now Joe Smithson felt perfectly certain that he not only could give the name if he only thought hard enough, but could add a good deal of information which would be of service and of interest to his new friends. He had a vague idea that if he was still in London it was London deprived and absolutely ignorant of what should have been to it a household word, and that the word which to him at least was the key to the whole mystery had entirely escaped his memory. Meanwhile they had in their conversation evidently forgotten his existence, and as he lay on the sofa he was getting very drowsy. If only he, the hero of a missing word competition, could recall the word he could help them, and rest quietly, but what was it?

* * * * * *

"If he's drunk he goes to quad, if he's ill and a wandering in his mind he goes to the hospital; anyhow he goes out of here."

They were standing round him in a group, the landlady of the public-house, the man he had picked up in the street, the potman, and one or two others. The landlady had spoken and the potman was shaking him.

"Well?" said some one as he opened his eyes; but his ears had caught the word his mind had been seeking for in vain.

"Horspital!" he shouted; "that's it."

"Bedlam Horspital, I should think, from the way you've been going on," said the potman, shaking him again.

"Here, mind my hand and foot, young man," said Joe Smithson, "they're injured. At least," he added, stretching out his right arm and bending down to pinch the corresponding leg, "I fancy the way I've been sitting 'as made them go to sleep; and I suppose I've been asleep, too, eh? and it was all a dream of mine about London 'aving no 'orspitals and no doctor or pleeceman 'avin ever 'eard of no such thing?"

The friend he had picked up in the street, and who must have returned to see if Joe would change his mind about the drink, interposed.

"Well, what of it?" he asked. "Who said, 'Blow hospitals; it would make no difference if there was no hospitals at all'?"

"Look here," said Joe Smithson solemnly, "I said it, and I've seen I'm wrong. I'm sorry I said it, and what's more I'm going to find out about what they call the Hospital Sunday Fund. If they're all square an' keep their accounts right, an' play the game, they'll have my half-a-crown when the time comes—and yours, too, if I can make yer."

And he went out, looking thoughtful, in search of work and a lodging.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1897.

Dr. RECEIPTS *for the year ending 31st October, 1897.*

1897.	£ s. d.	£ s. d.
To Balance at Bank of England, 1st Nov., 1896	1,664 16 2	
,, Balance in hands of Secretary	7 4 8	
		1,672 0 10
,, Collections made at Sundry Places of Worship	37,373 19 10	
,, Collections at Schools	22 2 4	
,, Donations, including £16 14*s.* 0*d.* for Surgical Appliances	2,360 10 7	
,, Dividend on £45,346 1*s.* 3*d.* 2¾ Consols, per Executors to the Will of W. A. Guesdon, deceased	1,247 0 4	
		41,003 13 1
,, Balance — Excess of Payments over Receipts	830 16 2	
Less in hands of Secretary	21 6 10	
		809 9 4
		£43,485 3 3

Cr. PAYMENTS *for the year ending 31st October, 1897.*

1897.	£ s. d.	£ s. d.
By Awards to 120 Hospitals	37,262 11 1	
,, Awards to 7 Institutions	595 0 0	
,, Awards to 56 Dispensaries	1,719 9 7	
,, Surgical Appliances	2,247 19 1	
		41,824 19 9
,, Rent	170 0 0	
,, Fuel, Gas, and Office Cleaning	22 18 5	
,, Printing and Stationery	250 13 6	
,, Stamps and Postage	88 5 7	
,, Advertisements	268 13 4	
,, Salaries and Wages	818 1 6	
,, Sundries	5 19 9	
		1,624 12 1
,, Special Expenses— Special Church and Chapel Appeals		35 11 5
		£43,485 3 3

Audited and found correct, this 2nd day of December, 1897.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, 13, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.—ED. L.

Printed and Published by the REGISTERED PROPRIETORS of THE LANCET, at 423, Strand, W.C., and Nos. 1 and 2, Bedford-street, Strand, adjoining.

A Public Lecture
ON
PHARMACOLOGY: ITS AIMS AND METHODS.

Delivered at Oxford

BY WILLIAM J. SMITH JEROME,
M.B. LOND.,
LECTURER TO THE UNIVERSITY IN MEDICAL PHARMACOLOGY AND MATERIA MEDICA.

GENTLEMEN,—If we follow the history of science we find that there has been a process of fissiparous division. Scattered facts are brought together, classification and generalisation follow; the facts increase and multiply, and as they do so lines of cleavage show themselves. These lines deepen and widen as the facts go on accumulating and as the groups into which they become separated show more and more clearly the need for different lines of inquiry, till one of such groups becomes at last detached and forms, as far as this is possible, an independent science. There are few sciences in which this process has taken place to a greater extent than in that of medicine, one of whose latest offshoots is the science which I have the honour of introducing to you to-day—viz, pharmacology. In order to show that this, though of relatively recent origin, has not been barren of results, it suffices, while putting aside the names of distinguished pharmacologists of other countries, to mention two only of our own—viz.. Frazer and Lauder Brunton. But what is Pharmacology? The term has been used in a narrow and in a comprehensive sense. I will for the moment employ it in the latter and provisionally define pharmacology as the science which treats of drugs. What, then, is a drug? A drug is any substance which may be used in the treatment of disease. I am aware that exception may be taken to such a definition, which includes, it may be said, even the knife of the surgeon, but it is difficult to frame one which shall be entirely free from objection. The same difficulty is encountered when we try to describe the difference between foods and medicines or between plants and animals; and, again, it is quite impossible to draw a sharp dividing line between the sciences of chemistry and physics.

In using a substance as a drug what is it which we need to know and which it is the province of pharmacology to teach? I have qualified the statement that pharmacology is an independent science. Few sciences, if any, can stand alone, and certainly not pharmacology. Life is attended by the exercise of function and health is dependent on the normal performance of this; in other words, disease is ordinarily manifested by a derangement of function and drugs are given for the purpose of restoring this perverted action to its normal state. The study of the normal functions of the body is therefore essential to the pharmacologist; but this study forms an important branch of physiology, and physiology is the only basis on which pharmacology can surely stand. The same perversion of function, however, may arise from different causes and conditions, hence the necessity for some knowledge of pathology. Function standing thus in intimate relation to physiology, pathology, and pharmacology it is desirable to consider it more closely, especially in connexion with one fundamental fact which underlies it. It is not dependent on form or size, for the monad and the largest mammalian are both functionally perfect. It seems not to be inseparably connected with complexity of structure, for the seemingly simple amœba performs the functions of digestion, respiration, and reproduction as efficiently as the more specialised animals of higher type. Of want of structure it behoves one, however, to speak with caution, for the apparently structureless substance of to-day may—thanks to improvement in our instruments and in the method of preparing specimens—be found to-morrow to possess a delicate and complicated organisation. There is one condition, however, which is present in all living things, and which, though it has a wider range of action than is represented by the exercise of function, is rarely, if ever, wanting where function occurs, and that is chemical activity. Medicine occupied itself at first with the organs of the body, with diseases of the brain, of the heart, of the lungs, &c. The organs, however, are made up of tissues and these, in their turn, become objects of investigation, but to stop here were obviously to stop midway, for the fibre and the cell are compound objects, and it is in the molecules and atoms constituting these that the real secrets respecting function are contained.

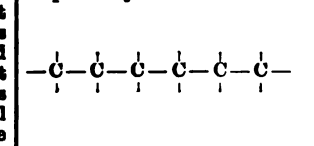
Omitting all consideration of the physical properties and changes of the molecules I propose to refer briefly to a few facts connected with their chemical activity. Most molecules under the usual physical conditions contain two or more atoms and chemical action is generally attended by a splitting of the molecules, the liberated atoms or groups of atoms arranging themselves differently and thus forming new and different molecules. This splitting of the individual molecules takes place because the sum of the forces tending to hold their atoms or groups of atoms together is less than that of the forces acting from without the molecules and in an opposite direction. The discussion of the nature of this force or forces is beyond the scope of the present lecture. It suffices with some substances simply to bring them together under the usual physical conditions for a splitting of their molecules to take place, while with others some help is needed—such as is afforded by heat, light, electricity, &c. Thus the molecules of hydrogen contain (under ordinary conditions of temperature and pressure) two atoms of hydrogen and that of chlorine two atoms of chlorine. If these gases are mixed and kept in the dark and at a moderate temperature they remain for the most part unchanged, but if the mixture is exposed to the sunlight or heated the molecules of each kind of gas are ruptured, the two (H) atoms in each (H) molecule and the two (Cl) atoms in each (Cl) molecule are separated and new molecules are formed, every one of which contains one atom of (Cl) and one of (H) (HCl). What in this case takes place with single atoms may occur also with groups. Thus if, instead of hydrogen and chlorine, we take marsh gas and chlorine we find the methyl group CH_3 acting just like the single atom of hydrogen, and instead of two molecules of hydrochloric acid we get one of hydrochloric acid and one of chloride of methyl $HCH_3 + Cl_2 = CH_3Cl + HCl$. In this case, therefore, as before, old molecules split, atoms or groups of atoms change places, and new molecules are formed. Now this process generally, if not always, attends the exercise of function and, as we shall see, the connexion is no accidental one. If the chemical changes going on in a resting muscle are estimated, so far as this is possible, at the ordinary temperature of the room and afterwards within certain limits at higher temperatures, they are found to have been increased by the elevation of temperature. If the power of the muscle to respond to stimuli is tested under the same conditions a corresponding rise in this is likewise to be observed as the temperature is raised. The muscle cells like that of an amœba have other functions to perform than that associated with movement, and it is with the heightened exercise of these that the increase of chemical activity referred to is connected. If what is regarded as the special function of the muscle—viz, that of doing mechanical work—is now called into play a fresh impetus is seen to have been given not only to the functional but also to the chemical activity of the part. And what is true of muscles individually is true of them collectively, is true of other organs, probably even of nerves and of the organism at large. A frog may be made by being warmed to exhibit more, and by cooling less, of both chemical and functional activity; indeed, these two processes seem to proceed *pari passu* within certain limits. The upper limit—that of increased activity—is soon reached. The question of the minimum of function and of chemical action compatible with the continuance of life is a very interesting one, but time forbids me to enter fully into it on the present occasion. In hibernating animals we have a reduction of both functional and chemical action during hibernation. In resting seeds and during the winter sleep of plants the reduction is carried still further, while living substances have been not only frozen but exposed to lower temperatures still without being killed. In some of these cases the diminution of both functional and chemical activity must have reached a point not far removed from complete arrest, and were it possible by means which did not injure the structure of the cells to arrest instantaneously and absolutely all chemical action in our own bodies and to maintain the cessation I see no reason why we should not rest for centuries and take up again the thread of active, busy life at any moment on the removal of the inhibitory influence. Unfortunately for those who might wish in this way to

sacrifice the present to the future such complete arrest is not easily attainable, for absolute chemico-molecular inactivity is not a necessary condition of chemical equilibrium, the requirement for this being not that there shall be no chemico-molecular movements, but that these shall be in opposite directions and equal. In the meantime we should not have died—death, in fact, is far from being a condition of chemical inactivity. As it draws near, except when it occurs suddenly, the breaking up of old and the formation of new molecules on the old lines of health goes on less actively, some of the new ones formed come to differ from those they replace, and when death has actually happened the process does not stop; the molecules still split but the atoms soon group themselves differently and molecules of a totally different kind ultimately take the places of those of which the tissues had been previously composed. Our bodies then are made up of molecules and the normal performance of their function is inseparably bound up with the chemical behaviour of the molecules. These are capable of splitting and rearranging their atoms in a great variety of ways and health is maintained so long only as they do so in a particular manner, which is probably fixed and definite for every cell (including, however, a certain range of variation in connexion with varying conditions such as intermittence of function and change of food). A quantitative deviation from the normal is attended with an increase or diminution of functional activity. The precise effects of a qualitative change are less easily determined. This brings us within the province of disease and the passage from health to disease and *vice versâ* is subtle and may even involve a paradox, for it sometimes seems as if it might be truly said that an apparently healthy organism is rendered more healthy by becoming sick. When two young and to all appearance healthy animals are fed and treated identically except that to one are given minute doses of arsenic and to the other not, the animal taking the arsenic is found to have a better appetite and to become heavier than the other. Known and well-established facts respecting the Styrian arsenic eaters leave no doubt that this animal feels better than the other. What happens, then, in such a case? When a cell contains molecules which are foreign to it, either through the presence of an element which is not usually there or through a special grouping of its ordinary atoms, that cell is certainly abnormal and may fairly and reasonably be considered sick; and it is a fortunate accident if it is able to perform its functions with its usual precision and success. It is still more a matter for congratulation if the results of the functional action of such a cell not only equal but surpass those obtained from the normal ones. And yet this appears to have happened in the case of animals which have taken arsenic in the manner I have mentioned. Arsenic is taken up and retained; this can be proved by analysis, and as arsenic is chemically closely allied to nitrogen it has been suggested that in certain molecules arsenic may take the place of some of the nitrogen and it is conceivable that a proteid molecule containing a small amount of arsenic in place of an equivalent quantity of nitrogen may perform its functions as well as, or even better than, a corresponding proteid molecule constituted in the normal manner. But there is another way in which the arsenic may act in these cases. If larger doses are given the condition of improved health gives place to one in which the reverse obtains. The breaking up of the old and the formation of new molecules now take an abnormal course. The tissues lose their nitrogen and this, nstead of yielding urea, which is a diamide, passes out of the body largely in such forms of combination as leucine and tyrosin which are amido-acids, while the carbon and hydrogen remain combined with oxygen in the form of fat molecules. The cells and fibres of the body are found, in fact, to have undergone fatty degeneration. Fatty degeneration is, however, under certain circumstances at least a natural process; it is the first step of the process by which nature gets rid of the solid exudation products of disease. It is therefore also conceivable that when in the apparently healthy the condition is improved by arsenic certain feeble cells of the organism—and probably the healthiest organism always contains some such—become fattily degenerated and replaced by others which are healthier and more robust.

Having thus indicated the nature of the connexion between chemical and functional activity in respect of both increase, diminution, and perversion of function I will add a word or two respecting the general character of chemical action. The chemist, when synthetically engaged, may be compared to a worker in precious stones, only instead of gems and jewels he has to handle molecules and atoms. The aim of each is by arrangement and rearrangement of his materials to produce ever an object of greater beauty and of greater value. As the diamond is the gem of gems, so carbon, of which the diamond is composed, is the central atom round which organic nature is built up. The chemist has an advantage over the jeweller in that his atoms, though not alive, are mysteriously active, and when he brings them together under certain conditions they need no cement to fix, no clamp to hold them in position, but by virtue of an innate power they bind and fix and clamp themselves. They do this, however, by means which follow fixed and settled laws.

For example, let H– –O– –N– and –C– represent one atom of hydrogen, oxygen, nitrogen, and carbon severally. These have one, two, three, and four clamps or uniting bonds respectively. When such an atom is detached from its connexions its clamp or clamps becoming free it does not remain in this condition but attaches itself, each clamp joining with some other till all are fixed, and the united group thus formed constitutes a molecule. Thus H–H represents a molecule of hydrogen, but H–O– could not exist alone and would at once unite itself with some atom or group of atoms which had one clamp free. Another atom of hydrogen, e.g., would suffice, and we should then have a molecule of water, the two clamps of the oxygen and the one of each of the hydrogen atoms being all satisfied. To the clamps with their tendency to join with those of other atoms the term "affinity" is given and the wondrous energy displayed by some substances *in statu nascendi* is not strange when we bear in mind the necessity inherent in any atom or group of atoms to satisfy the accompanying affinities. An atom of hydrogen *in statu nascendi* (H–) can for this reason break up molecules which resist the fully-formed molecule of hydrogen (H–H).

Organic compounds are divided into two great classes, the fatty and the aromatic, and these are constructed on the type of the bar or open chain and the ring or closed chain respectively—



—and the chemist, like the jeweller, having made a bar can weld the ends together and form a ring if he desires one. He can take some molecules of carbon (charcoal) and of hydrogen and by heating them together under favourable conditions make them break up and change the position of their atoms so that acetylene is formed, $C_2+2H_2=2(H-C\equiv C-H)$. In this molecule he can introduce four atoms of (H) and so get ethane, $C_2H_2+2H_2=(H_3C-CH_3)$, or instead of this he can join together three molecules of acetylene and form a ring of benzol, $3C_2H_2=C_6H_6$. From ethane, by taking out an atom of H, and replacing it by a methyl group, he can produce propane, and by repeating the process butane and other hydro-carbons of the series. In the molecule of these hydrocarbons he can replace an atom of (H) by a hydroxyl group (OH) and so get the series of alcohols of which ordinary ethyl alcohol is the most familiar member $(CH_3CH_2)-H+OH=(CH_3CH_2OH)$. By removing two atoms (H) from this molecule he obtains the aldehyde, $CH_3CH_2OH-H_2=CH_3COH$. And from these aldehydes he gets acids by introducing into the molecule an atom of (O), $CH_3COH+O=CH_3COOH$. The so-called oxides of the alcohol radicals of the type of sulphuric ether are produced when from two molecules of the alcohol one molecule of water is removed. $2C_2H_5OH-H_2O=\frac{C_2H_5}{C_2H_5}>O$. The true or compound ethers are procured in the same way from a molecule of alcohol and of acid. From the saturated hydro-carbons the unsaturated are obtainable and from them again their various derivatives. And what is true of the fatty applies equally to the aromatic bodies. The alcohols of the benzines are formed in the same way as those of the fatty hydro-carbons, the first alcohol of this series being the so-called carbolic acid, a hydroxyl group replacing an atom of (H). If instead of a (OH) group we introduce into a benzine molecule a (COOH) group we get benzoic acid, and if both an (OH) and a

(COOH) group are substituted for two atoms of (H) salicylic acid is the result. Several such groups may be introduced in succession. Thus, if into a benzine ring we insert first a hydroxyl (OH), then an ethyl group (C_2H_5), next to this an amidogen (NH_2), and finally an acetyl one (CH_3CO), we get the valuable drug phenacetine. Then, again, two aromatic rings may be found together in a single molecule; it is in this way that salol is got from salicylic and carbolic acids, a molecule of water being removed. Not only the substances I have mentioned—with the exception of phenacetine, which contains some nitrogen—but an enormously large number of others may be made from charcoal, hydrogen, and oxygen with the aid of reagents, which may be regarded, under the circumstances, as the tools with which the chemist works. Other elements may be introduced into the molecules in the same way.

There is yet another mode of chemical action: $C\equiv N-H$ represents prussic acid; $C\equiv N\text{-}CH_3$ methyliso-nitrile or prussic acid in which an atom of H has been replaced by a methyl group. Both are poisonous. $CH_3-C\equiv N$, on the other hand, is the formula for methyl-nitrile, which is not poisonous. Both the isonitrile and the nitrile contain the same kind of atoms and the same number of them, but they are differently placed within the molecule, and new molecules, having entirely different properties from those they replace, may be formed by a mere intra-molecular change in the position of the constituent atoms. I mentioned that the number of affinities varies with the elements. I may add that some of the elements have sometimes one number of affinities and sometimes another—e.g., nitrogen may have three or five and sulphur two, four, or six. It will be remarked that in the isonitrile the nitrogen has five affinities and in the nitrile three only. This change, however, is not the cause of the difference in properties, for we find carbaminthionic acid, $CO\begin{matrix}SH\\NH_2\end{matrix}$, harmless, and thiocarbaminic acid, $CS\begin{matrix}OH\\NH_2\end{matrix}$, a powerful poison, though the kind and number of the atoms and the number of the affinities are the same in both cases, the only difference being the manner in which the elements are grouped; the (S) and the (O) in fact have changed places, the sulphur being joined to the carbon only in the poisonous compound, and to both the carbon and the hydrogen in the harmless one.

An important question now presents itself: Are the chemical phenomena occurring in living tissues essentially the same as those which take place in the laboratory? I will not go into the theories of the nature of the difference between dead proteid and living protoplasm. These, ingenious though they may be, lack the one thing needful—viz., the fact of being proven. But there are two facts connected with the subject to which I would wish to draw attention. 1. The synthesis of such bodies as urea and sugar has dispelled, probably once for all, the belief that any products of plants or animals are necessarily incapable of being copied by the chemist. 2. Though it is true that the course of chemical action in living things does not run strictly parallel with that observed in the laboratory, and though life and organisation occur in the former while they are wanting in the latter, it must not be forgotten that there is another factor of supreme importance. It may be safely asserted that in living tissues there are not a few only but many substances which have never yet been isolated; and as the results of any reaction depend, not in some slight degree merely, but mainly and principally on the nature of the reagents present, it must needs be that the chemistry of life will present difficulties which the laboratory for the time being is unable to explain. When, on the other hand, this disturbing factor, the presence of unknown bodies, has been eliminated, as in the future we may hope it will be, it is quite possible that many of the difficulties at present connected with the subject will have explained themselves.

Having taken a cursory glance at the kind of chemical changes constantly going on in our bodies we are now in a position to ask what happens when to the seething, restless mass of molecules of which they are made up we add fresh molecules in the form of drugs. We will take in illustration one of the simplest—viz., common table salt; this, though generally a condiment, may sometimes prove a valuable medicine. It may fall to the lot of some of you to find yourselves in charge of a case of poisoning in which, having done your best not only to remove the poison from the system by the ordinary methods, but also to combat special symptoms and support the strength of your patient, you find yourselves confronted by the fact that in the desperate struggle between the poison and the organism the latter will, if no further help be given, inevitably succumb before it can eliminate the poison. One hope remains, and that is afforded by removing some of the blood, and with it the poison it contains. Having done this, you must replace the missing blood by other blood, or, by what is perhaps better, and certainly safer, by a weak solution of chloride of sodium. Let us suppose that you have injected a proper quantity of this. What is likely to happen to it? A certain—or rather an uncertain—time after the injection there will have been eliminated from the body a quantity of chlorine and of sodium larger than would otherwise have been excreted by an amount corresponding to the chloride of sodium in the injection. Chloride of sodium being a normal constituent of the body it seems natural to conclude that the (Na) and the (Cl) simply circulated as (NaCl) in the interval. This is, however, by no means necessarily what has taken place. The chlorine and the sodium may each have had a very chequered and independent career—independent, i.e., of each other. The chloride of sodium coming into contact with water and carbonic acid may give free hydrochloric acid according to the equation $2NaCl + CO_2 + H_2O = Na_2CO_3 + 2HCl$. The HCl, after taking part in digestion and finding itself in relation with several bases—viz., those of (K), (Na), (Ca) and Mg—may combine with two or more of these in succession and be finally eliminated in union with some of them. The sodium carbonate may also be decomposed and its sodium be united to one, or more than one, of the several acids of the body. Even when the (Cl) and the (Na) do leave the body in the form of (NaCl) it may happen that in any given molecule the (Cl), having been introduced in the injection, detached itself from the (Na) with which it was united and afterwards combined with a (Na) atom which was previously in the body; and the same applies, *mutatis mutandis*, to the sodium atom. The more complicated drugs are naturally not more exempt from change than chloride of sodium, and it may happen that the therapeutic action of a medicine is due neither to the substance which enters nor to that which leaves the body, but to an intermediate product. The subject of the changes undergone by drugs in the body is both interesting and important. Interesting is it to see a substance like sulphonal, which, though resisting the action of some very powerful reagents in the laboratory, is slowly but surely changed by the forces which are at work within us. More interesting still, perhaps, to see how a drug seizes on and fixes some intermediate product of tissue change and thus brings it, perhaps for the first time, under our observation. The cystin-forming group has been thus fixed by the halogen derivatives of benzine, the resulting phenyl-mercapturic acid showing that this group, like uric acid, is formed normally during the ordinary processes of nutrition. Interesting again is it to see one drug reduced and another oxidised during its passage through the system, while a third leaves the body partly in an oxidised and partly in a reduced condition. It is also not without interest that a drug may become for the time being an integral part of the living organism.

We are now able to answer a question asked at an earlier period of the lecture—viz., What is the kind of knowledge which pharmacology is expected to supply? It should tell us not only the coarser and more obvious changes in function induced by the introduction of a drug into the system, but also in as precise terms and as fully as possible the chemico-molecular phenomena which accompany these changes. I need not say that the chemico-molecular phenomena accompanying normal function are not fully understood and I do not wish to imply that even if they were we should know all which it would be well for us to know respecting function. We should still probably be unable to say why contractile tissue contracts or why, coincidently with molecular changes in a particular part of the brain, a thought is struck off.

I pass to a consideration of how knowledge of the kind I have indicated is to be obtained. It is needless to inquire if materia medica either teaches or contributes to increase this form of knowledge. The question carries with it its own negative reply and it may probably be safely predicted that at a period which, though future, is, I hope, not far distant, the greater part of materia medica will be relegated to its natural *habitat*—the domain of the druggist. *A priori* reasoning in the present state of our knowledge also avails

nothing. The one, the only, method of inquiry is the experimental. What, then, is an experiment? An experiment consists in altering the conditions connected with a subject and observing the result. What more easy? some may say. But those who speak thus forget the difference between looking at and seeing. An artist looking at an object or a landscape will see much which the untrained eye is sure to overlook and many physicists must have looked at without observing some of those phenomena, the clear and definite seeing of which has made the name of Faraday for ever famous. It is well if we can at once explain what we see, but the important point is that we do see and that we see truly. A fact is an eternal truth; an inference from a fact may be—sometimes is—altogether false. The literature of science teems with hypotheses, some of which, though masterpieces of ingenious theorising, possess one fatal fault, that of having been falsified by subsequent experience. Not that hypotheses are valueless—they serve various purposes, including that of suggesting new lines of work which, even when, as is sometimes the case, they disprove the theory to which they owed their origin, may lead to results of lasting value. The therapeutic use of chloral hydrate is connected with a perfectly reasonable but quite erroneous hypothesis—the belief that the chloral hydrate was decomposed by the alkaline fluids of the body as it is decomposed by alkalies in the laboratory, yielding chloroform. Chloral yields no chloroform in passing through the body, but it is none the less a potent and valuable medicine.

It will be evident from what I have said respecting the nature of an experiment that every prescription carried out is, thanks to the multiplicity and varying nature of the factors involved, necessarily an experiment. Bearing in mind the enormous number of prescriptions written daily by medical men throughout the world, and not forgetting the great and special difficulties connected with this particular form of work, I would still venture to ask, Is the harvest reaped by pharmacology in this field as abundant as might reasonably be hoped for? Though it is true that no inconsiderable part of existing pharmacological knowledge has been acquired by the mode of experimenting to which I have alluded we are compelled to ask, Does this method, unaided and alone, suffice to protect those who entrust not only health but life to our care? In connexion with this subject I will direct your attention for a moment to what is perhaps one of the saddest pages in the history of medicine. Till the researches of Pasteur had indicated the line along which light was to be sought no outlook was more dark, no prospect more dreary than that presented by diphtheria. The helpless physician used this remedy and that, and amongst others he tried chlorate of potassium. It seemed to be of service; at any rate, there were *a priori* grounds on which it might be expected to be useful. It was used extensively, it was used for years. In the course of time, however, and almost at the same period that an American physician sounded a note of warning, a German prosector noticed in the bodies of those who died while taking it appearances which suggested to his mind the fearful question: Can this fancied remedy be helping the disease to kill? It was a question which could be answered only by further experiments on animals. They answered it, and with an almost brutal clearness showed that the lethal dose of a poison had been given. They showed that the physician had pointed the shaft of the disease, nay, more, that he had himself forged a weapon with an edge more keen than that of even diphtheria itself. This happened in 1879. How many victims chlorate of potassium had claimed till then and how many more homes might have been darkened between then and now but for those experiments on animals it is vain to guess. The episode is past and though painful is instructive, and I think we may not only patiently but even confidently await the time when those who are now against us on the subject of experiments on animals will, with fuller knowledge and not less humanity, reverse their present unfavourable judgment, remembering that yielding to the instinct of pity, though more easy, is not always better, wiser, or holier than resistance to it.

Another method by which pharmacological knowledge is to be obtained is that which is generally understood as research. This, I think, is an ideal form of work, and the leisure and acquirements needed for it are, in my opinion, well worth striving after. A laboratory, it is true, may not be an attractive object. It is not usually gratifying to the æsthetic sense; there are apt to be too many and too obvious manifestations of matter apparently in the wrong place, but it possesses, or at least should possess, one of the fundamental attributes of beauty—viz., a fitness for the purpose it is intended to subserve; and if in itself not beautiful it enshrines what is *par excellence* "a thing of beauty and a joy for ever." It enshrines, it is pervaded by, the spirit of truth—truth which serves both as a lamp to illumine and as a beacon to direct, and yet which shines with a pure and steady ray on those alone who seek to follow it in singleness of purpose. The work performed accords most aptly with Matthew Arnold's description of the work of nature. "Toil unsevered from tranquillity ..... Labour that in lasting fruit outgrows far noisier schemes, accomplished in repose, too great for haste, too high for rivalry." And though it must be granted that the methods of the laboratory, like those of nature, are occasionally harsh, it must also be conceded that its results are useful and its aims beneficent. But even into this paradise of toil there enters or may enter one insidious sin—the lust of what is called "priority." This must be fought against and overcome, or else, like a gathering cloud, it will, if left unchecked, roll onwards and most surely darken all. And why should it not be fought against and overcome? Each fact discovered in the pursuit of knowledge, discovered it matters not by whom or when, and even when unimportant in itself, may prove a stepping stone by which that knowledge mounts to other and far higher things. This is the worker's real recompense; it is this pregnant possibility which makes work, honest work, like virtue, its own great reward.

But to proceed, some of you may be inclined to ask how, if what I have said respecting the relation of drugs to the organism and of the organism to drugs be true, there can possibly be different systems of administering medicines. By whatever name you call your method of giving drugs you must be guided in the act by one of two principles, the rational or the empirical; and the difference between these is soon illustrated. Suppose that to a weak anæmic patient with relaxed arteries, unable to sleep because when he lies down the blood pours too freely through the dilated vessels to the brain, you give digitalis and iron, you will probably brace up the arteries, and by removing the condition on which the insomnia depended you will succeed in inducing sleep. You will then have acted rationally. But if in such a case you simply give a hypnotic, chloral hydrate, morphine or some other, you will procure sleep it is true; your patient may be satisfied—nay, even thankful—and perhaps so satisfied that he may repeat the dose, and this not once only, but many times, until he has at last acquired the narcotic habit. I need not tell you that in this case the prescription will have been both empirical and wrong. It is possible, however, that a prescription may be at the same time empirical and right, for so long as the mode of action of a drug is not understood, the drug, if given at all, must be administered empirically. Quinine, e.g., was given advantageously in malarial disease long before either its power of checking protoplasmic movement was understood and even before the protoplasmic parasite of the blood corpuscles in ague had been discovered. Facts such as these, however, afford no excuse for sinning against light, but should, on the contrary, stimulate us to contribute something to the increase of the knowledge which, in proportion as we gain it, tends to raise us from the level of the charlatan to the plane of the philosopher.

To turn to the future of pharmacology: not only is the physiological action of a substance influenced by the nature of the elements it contains, the number and proportion of these, and on the particular manner in which they are grouped within the molecules, but this action may in many cases be modified in a definite direction at will. A convulsing substance like strychnine may, for example, be converted into a paralysing one, and a sedative such as morphine may be changed to one which will tend to excite convulsions by the mere introduction of an alcohol radical. These and many other kindred facts present to the mind of the pharmacologist a definite goal—viz., the point at which a knowledge of the physical properties, of the chemical composition and of the chemical structure of a substance, will enable him to predict the nature and extent of its value as a drug. The goal is distant, perhaps may never be attained, but so long as there is progress towards it the path being followed cannot be a wrong one, and I would now in place of my former definition of pharmacology describe it as physiology, extending its borders in a special direction, and proposing to itself a new problem—viz., the problem of the

relation of chemical structure to physiological action; remembering, however, at the same time, that physiology, deprived of the support which it now obtains from chemistry and physics, would be reduced from the condition of a growth deeply rooted and widely spreading to that of a hollow and decaying trunk.

Finally, I am concerned not only with pharmacology but also with the teaching of it. This suggests a thought in connexion with the subject of instruction in general and I address myself now more particularly to my pupils.

Cowper says of knowledge and wisdom that "far from being one they have ofttimes no connexion," and a similar caution may perhaps be not altogether out of place respecting instruction and education. The one is as devoid of life as the other is instinct with vitality, and it may be asked, What is the vital spark which transforms the dead, dry bones of instruction into that living, radiating something which we recognise as education? It is nothing less than thinking—thinking in the sense of the third and highest mental operation of the logician. You and I may lack the richness of endowment of a Newton or a Darwin, but we possess, though in a less degree, the faculties which made them great. The conceptions of "the divinely-gifted man," grand as they often are, spontaneous though they sometimes seem, like yours and mine are the outcome of previous thought. We read of the soul of things—not of persons only, but of things. This soul embraces much which is beyond our ken; but it includes amongst others this, the relation of things to other things; and without accepting the proposition that "everything is in everything" we must admit that all things have some sort of relation to each other, and in proportion as we can grasp such relations will any knowledge we acquire be valuable to ourselves and potentially useful to others. Now, in order to help you in fitting yourselves to acquire, each within the limits possible to him, an aptitude for perceiving these relations I should like to give you a suggestion. Some men never travel without a Bible, others without a copy of a poet or some other favourite author. I would say to you, not only travel, but live, with some difficulty, some problem, which in your leisure moments you are always seeking to unlock, or rather with two such, one connected with, and one independent of, your special work. You may not solve the problems you propose, but you will solve others by the way. The habit will suggest to you not only subjects for reading but also materials for practical work; it will increase your knowledge; it will enlarge your judgment; it will widen your culture; it will drive *ennui* from your path, and it will be strange if at the end of your threescore years and ten you have not valid ground for feeling that the world is in some degree the better for your life. I will now conclude, and I think I cannot do so better than in altering somewhat a line of a late distinguished professor of this university and saying-Think clear, see deep, and you will bear fruit well.

SOME RESULTS OF OPEN-AIR TREATMENT OF PHTHISIS AT BOURNEMOUTH.[1]

BY ARTHUR RANSOME, M.D. CANTAB., M.R.C.P. LOND., F.R.S.,

CONSULTING PHYSICIAN TO THE MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.

Two years ago I had the honour of bringing to notice the systematised treatment of phthisis in the open-air as pursued on the continent and in America. The treatment of phthisis by abundance of fresh air had undoubtedly long been the practice of some medical men, both in Bournemouth and elsewhere, but it seemed desirable to point out how well adapted Bournemouth was for the establishment of properly equipped sanatoria in which the treatment could be carried out in its entirety. Since then several such establishments have been started in this neighbourhood, two of them the houses of medical men, Dr. Pott and Dr. Johns, two of them hotels, and it seemed to me that this would be a good opportunity for bringing together the results of the treatment both in these places and in the various lodging- and boarding-houses in which it has been practised as thoroughly as possible under the circumstances. I have myself some notes of a few cases which I have seen, for the most part in consultation with other medical men, and I have put them together in the hope that others will bring forward similar cases, so that we may have an insight into the mode of working of the method, and thus be in a position to judge as to its efficacy.

Before bringing forward these notes, however, it may be desirable to discuss the question of what circumstances are essential for this mode of treatment. In the first place, neither a particular latitude on the earth's surface nor any great altitude can be considered absolutely necessary. Of the more important sanatoria on the continent some are placed at high altitudes, others almost at the sea level. As Dr. Léon-Petit points out, "1850 mètres and 35 mètres above the sea level are the two extreme limits represented by Arosa and Malchow, and other sanatoria are placed at various intermediate degrees in the scale of altitude." Some of them are installed in the severe climates of Silesia and Saxony, others on the foggy banks of the Rhine, one at least in a valley of the Black Forest, and several on high plateaus, amongst long-enduring snow, but where the atmosphere is pure and sunny. Each of these places has its advantages and disadvantages, but all of them can show a fair proportion of cures. In a recent paper[2] Professor von Ziemssen discusses this question and passes in review the relative merits of high and ordinary altitudes. He concludes that the only advantages in favour of mountain climates are "the pure, dry air, the slight wind in winter." He then points out the disadvantages of treatment at high altitudes. Marked atmospheric changes occur not unfrequently (wind, rain, snow) and are injurious to the patient. They make the acclimatisation of many patients difficult, and patients with high temperatures, especially those who do not reside in the sanatoria, may become decidedly worse. Other objections are the wearisome journey with all its bad effects, the separation from the family, the comfortless conditions in severe illness and in case of death; further, the financial anxiety and the economy necessitated. All these have a bad effect upon the patient. When the advantages and disadvantages are compared, the former are not so clear as to indicate the unconditional recommendation of treatment at high altitude.

I cannot resist the temptation also to quote Dr. Walshe in his excellent work on "Diseases of the Lungs" (p. 385): "No climate will stamp out phthisis, wherever acquired, either in the individual or in the stock. To imagine that there exists a specific power in any combination of atmospheric conditions, to stop the evolution of local mischief and eradicate the tuberculous diathesis, is not a whit less illusory than the people's creed, which ascribes sovereign virtues to 'native air.' But climate may, and does, prolong the existence of the phthisical. It does this, either by modifying nutrition and vitality in the mass, or by lessening the activity, perhaps warding off the occurrence of certain secondary states (say bronchitis, hæmoptysis) which might of themselves have proved the real causes of death. In either fashion climate takes its occasional share in bringing about the nearest approximations to real cure therapeutically obtainable."

The attributes which a climate intended for open-air treatment ought to possess are thus laid down by Dr. Léon-Petit and may be found in certain localities in almost every country. "The best climate is that which restricts the least the daily duration of the stay of the patient in the open air." 1. It is obvious that pure air is indispensable and therefore that we must avoid proximity to large towns or of factories giving forth soot, dust, or deleterious gases. 2. The soil upon which the sanatorium is to be built should be sandy, without damp, and affording the smallest possibility of fog after sunset. Plains well exposed to the south or broad valleys fully open to the sun are particularly favourable on condition that they are sheltered by hills against north and north-west winds. "The immediate neighbourhood of a forest of pines is likewise very desirable both as a purifier of the air and as a shelter in summer against the heat, and in bad weather against the wind." 3. The phthisical patient must not feel himself to be in a barrack or in a prison; he should have before his eyes something better than walls. An extensive view exercises upon both mind and body a reflex action that is most beneficial. An elevated site, and gentle slope from it, is therefore indicated. Well provided

[1] A paper read before the Bournemouth Medical Society on April 20th, 1898.

[2] Münchener Medicinische Wochenschrift, No. 1, 1898.

Table showing Results of Open-air Treatment of Seventeen Phthisical Cases.

No.	Sex.	Age in years.	Duration of treatment.	Periods of fever.	Gain or loss of weight.	Remarks	Result.
1	M.	29	2 years.	None.	+ 28 lb.	Third stage; both sides.	Great improvement; quiescent 18 months.
2	F.	23	2½ years.	3 weeks.	+ 28 lb.	Third stage; both sides.	Great improvement; quiescent 2½ years.
3	F.	21	6 months.	2 weeks.	+ 8½ lb.	Third stage; left apex.	Quiescent for 3 years.
4	M.	22	2 years.	None.	+ 9½ lb.	First stage; left side.	Quiescent 2 years.
5	M.	18	1½ years.	3 weeks and 2 weeks.	+ 19 lb.	Second stage; right side.	Quiescent 15 months.
6	F.	28	4 months.	10 days.	+ 5 lb.	Second stage; right side.	Improvement.
7	M.	45	6 months.	2 or 3 of 1 week.	Gain of 7lb. at first; now varies.	Second stage, advancing to third.	Temporary improvement.
8	M.	27	4 months.	1 week.	+ 10 lb.	Second stage; right apex.	Quiescent 1 year.
9	F.	26	3 months.	—	—	Third stage; right apex.	Temporary improvement; lost sight of.
10	F.	35	—	2 periods of 2 weeks.	—	Third stage.	Quiescent 15 months.
11	F.	30	6 months.	None.	—	First stage; right apex.	Quiescent 5 months.
12	M.	23	6 months.	Several attacks.	—	Third stage; both sides.	Temporary improvement for 3 months; disease progressing afterwards.
13	F.	34	6 months.	1 week; 4 slight attacks.	+6 lb. in 6 weeks.	Third stage; both sides.	Quiescent 4 months.
14	F.	49	4 months.	3 or 4 days.	+9 lb. in 2 months.	Third stage; right side.	Quiescent 4 months.
15	F.	24	6 months.	2 weeks.	+ 11½ lb.	Second stage; right side.	Quiescent 4 months.
16	F.	16	15 months.	Several attacks.	+ 12 lb.	Third stage; both sides.	Quiescent 6 months.
17	M.	4	2 years.	Many months.	—	Doubtful cavity right apex; whole lung consolidated.	Recovered.

Table added by Dr. Francis Pott and showing Results in Four other Cases. The diagnosis was confirmed by bacillary search.

18	M.	28	36 days.	None.	+ 12½ lb.	Old mischief quiet, right apex; second stage, left apex and scapular.	Stay only long enough to teach patient to live.
19	M.	35	85 days.	3 weeks.	+ 21 lb.	Cavity small, right supra-scapular; second stage, left subclavicular.	Cough and expectoration ceased. Immense improvement maintained now 10 months.
20	F.	34	100 days.	Continuous.	+ 6¾ lb.; subsequently lost.	Mixed infection; active cavities both chests.	Sudden death; syncopal; no œdema.
21	M.	31	120 days.	99° F., evening; 9 weeks.	+ 14 lb.	Absolutely fixed chest; scattered active mischief both sides.	Relative improvement maintained 8 months in spite of return to clerical duties.

with fresh water, if possible from a spring, it should be sufficiently extensive to afford a large garden, or better still a park, surrounding the building. 4. The access to a sanatorium for phthisical patients should be as easy as possible, and it should not therefore be far from a railway station, and the roads in the neighbourhood should be in good order. I need scarcely point out how entirely all these conditions are fulfilled at Bournemouth and in its immediate neighbourhood.

Dr. Léon-Petit has also some excellent remarks upon the best form of construction of a sanatorium, with its dormitories, verandahs, kiosks, the best modes of ventilating without draught, heating, cleaning, &c., but we have not now to deal with these subjects. It is of more importance to consider the management of the patient and the attitude towards him of his medical attendant. A few points relating to these subjects may perhaps be discussed with advantage. In the paper already mentioned I ventured to point out that as regards the patients the treatment involves (1) for many of them rest in the recumbent posture for the greater part of the day, generally in open verandahs or shelters, sometimes in the open grounds; (2) careful but full feeding; (3) "massage" in certain cases; (4) in others carefully graduated exercises; (5) the judicious use of baths or cold sponging; (6) the provision of suitable amusements; and (7) appropriate medicinal treatment. In all these things the constant supervision of the medical attendant is absolutely necessary; upon him also depends the gradual education of the patient to the new *régime* and the infusion into him of a cheerful and hopeful state of mind.

I should like again to dwell a little on the importance of the *rôle* of the medical man. The hygienic rules for the treatment of a phthisical patient are simple enough; but their application to each case is often difficult and delicate. In the first place the physician should have full faith in the efficacy of this method for the cure of a large proportion of the cases; without this he can hardly inspire the necessary confidence not only in the patient but also in his attendants. These last are often the most difficult to convince. In the next place he should have sufficient knowledge of the extent of the disease and of the temperament of the phthisical patient to enable him to arrive at something like a just prognosis, so that he may be able to speak hopefully to some and to warn others, or rather their friends, of the gravity of the case. In every case it must be remembered that whilst phthisis is certainly curable, at any moment it may become incapable of anything more than alleviation. There are not a few cases in which the disease runs its course of destruction almost without a break, even when they are placed under the most favourable circumstances. It is important that these cases should be recognised from the outset, if possible, and the friends warned not to expect too much from the treatment. On the other hand, there are not a few cases of advanced disease in which the occurrence of periods of quiescence gives some hope of permanent improvement. We can probably all of us remember persons who have attained advanced ages who had been in their youth condemned to death as "consumptives." In every suitable case the physician should know how to inspire hopefulness. As Voltaire has said, "The hope of cure is already half the cure." Very often under the open-air treatment this hopefulness is encouraged, and to some extent justified, shortly after its commencement. In most cases, after the first few weeks of the treatment, the fever disappears, the night sweats are arrested, the cough ameliorates, and owing to the rest and abundant feeding the weight increases. Instances of cure in apparently hopeless cases judiciously cited by the medical man also serve sometimes to enhearten a despairing patient.

I would again emphasise what I said in my former paper

as to the need of constant supervision of the phthisical patient, by his medical attendant. It is required at every part of the treatment. It is particularly necessary in the early stages of the process, when the patient has to be gradually acclimatised to the open air and when the greatest tact has to be used to overcome his prejudices and to combat the constant fear of catching cold or of taking "a chill." The aim is to have perfectly pure air everywhere about the patient day and night, but the air of an inhabited chamber is seldom absolutely pure, as may be judged from the fact that it so rarely contains free ozone. Even with the windows wide open ozone cannot often be detected within it. In the daytime, therefore, it must be our object to have the invalid either in the open or lying down in an open verandah or kioak for as long a time as possible. In the night-time we have to be satisfied with windows as widely opened as the degree of velocity of the wind will permit. With most patients these objects can only be attained by gentle measures and they have to be led judiciously towards their full attainment, carefully screened from all sensation of draught and thoroughly protected by suitable clothing. When their education in this respect is completed it is remarkable how well they bear exposure to the coldest air and how greedily they seek for it of their own accord. The dread of taking cold soon vanishes when they find how rarely this accident happens in the open air.

The extent to which the patient must assume the recumbent position has also to be carefully regulated. There are some to whom it is only needful for about an hour after each full meal. Others have to lie down most of the time they are in the open, as it is found that they cannot be kept thoroughly warm in any other position. Many of these latter persons have in addition to be submitted to massage in order to keep up muscular tone and to assist nutrition. The amount of exercise and its nature have to be prescribed and its effects watched by the medical attendant, and the amusements permissible have to be rigorously laid down. Whilst the fullest feeding possible has to be aimed at the particular diet each invalid can most readily take and profit by has to be ascertained and the cooking sedulously attended to. Dettweiler's saying, "*Ma cuisine c'est ma pharmacie*," must be taken very seriously. Wonderful results have been obtained by the "stuffing" processes of Debove and Walther, but our aim should be true physiological feeding, an endeavour to nourish the body to the utmost, without overtaxing the eliminatory organs. This object can only be attained by watchful supervision. Baths and bathing also need discrimination in their application, but so applied they are often of great service in carrying out this treatment.

Lastly, without unduly exalting medicinal treatment I am of opinion that it also requires careful study to adapt it to each case. The routine practice of simply ordering a few capsules of creasote or guaiacol, or certain small doses of their carbonates, cannot be said to fulfil all our obligations in this regard. It is for these reasons that I venture to urge upon all general practitioners who have phthisical patients under their charge a very constant attendance upon their invalids and an active interest in their daily management. Without this it cannot be said that the open-air treatment of phthisis, as inaugurated by Dr. Brehmer, has been thoroughly carried out, and not a few failures, such as we have seen returning from Davos and other health resorts, will often be found to have taken place in consequence of shortcomings in the necessary discipline and supervision.

The few patients whom I have been able to induce to try open-air treatment, which I have now to bring before notice, have been, for the most part, under the charge of medical men who have adhered more or less completely to the conditions just formulated. They are only 17 in number, but in all but 2 they were ascertained to be tuberculous by the "bacillus search." In the two cases no sputum was obtainable and one of them was a child, aged four years, with signs of a cavity at the apex of an entirely consolidated lung. This may have been non-tuberculous.[3] The period of time during which they have been under observation is too short to justify any conclusions as to the likelihood of complete cure; it is only possible to point to evidences of improvement in their general condition and of, at any rate temporary, quiescence of the disease. A number (6 or 7) of obviously hopeless cases, in which the disease progressed from bad to worse, but in which from the outset some degree of open-air treatment was tried, have been omitted from the list; but it may be mentioned that even in these cases there was apparent some amelioration in their condition from the use of abundant aeration. It will be found from the Table, in which I have summarised the more complete cases, that 2 of them gained about 28 lb. in weight during the treatment; 1 gained 19 lb.; 9 others gained weights varying from 5 lb. to 12 lb.; 1 was stationary, and of 4 the weight was not taken. In 7 cases the disease is quiescent now and has been for periods of from one year to two and a half years. Most of these may probably be put down as deserving of Dettweiler's designation of "relative cures." 5 others are also now quiescent and have been quiet for periods of from four to six months, and these must still be regarded as under suspicion; 1 is simply noted as having improved, and 3 as having improved for a time and then relapsed, the disease now progressing. The child mentioned as being a doubtful case has now entirely recovered. As I have already remarked these results are still inconclusive, but so far as they go they seem favourable to a more prolonged trial of the system. They compare favourably with the results which we were in the habit of obtaining from the older methods of treatment, combined simply with free ventilation, without such systematic exposure to the open air. They are at least not less favourable than those reported from the various sanatoria on the continent.

Bournemouth.

[3] 10 showed signs of excavation, 5 were in the second stage and 2 were in the first.

AN IMPROVEMENT IN COLOTOMY.[1]

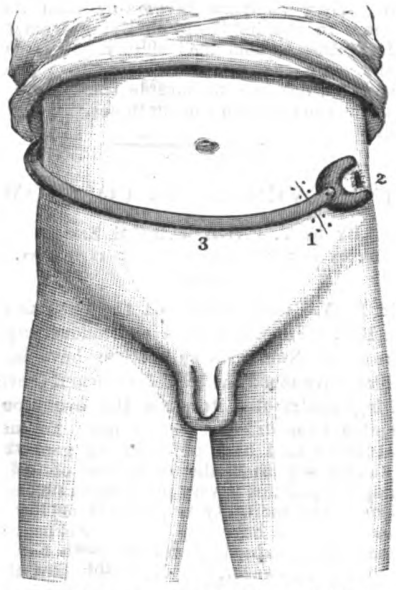
BY F. T. PAUL, F.R.C.S. ENG.,
SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

SINCE Mr. H. A. Reeves published his first cases of iliac colotomy in 1882 there has been a continuous improvement in general results. Numerous suggestions have been made, some of which have stood the test of time and prevail whilst others, having contributed towards the evolution of the present practice, have dropped out of use. To judge from such opportunities as I have of observing general surgical results I should say that the operation of colotomy in ordinary hospital practice is very much more successful than it used to be. The mortality is probably as low as under present conditions we have any right to expect and the inconvenience of prolapsed bowel is much less frequent. There still remains, however, the drawback that the patient has practically no control over the act of defecation. Even when the motions are well formed and the bowels are moved only once a day that motion must be passed, no matter how inconvenient the occasion, whenever reflex contractions occur in the colon. At various times I have had trusses made for colotomy patients, but whether designed to relieve prolapse or unconscious defecation they have never been a genuine success. In the matter of control the artificial anus resulting from colotomy is not only greatly inferior to the natural orifice but is much less perfect than the artificial anus obtained after excision of the rectum. The most complaisant operator will probably allow that there is room for improvement in this direction.

The suggestion I have to make is the adoption for colotomy of the principle introduced by Hahn into the operation of gastrostomy and now, as slightly modified by Frank, commonly used in that operation. The principle is that a portion of the viscus is withdrawn from the abdomen by a direct wound, attached to the deeper part of this wound, and then passed under the superficial tissues and opened on the surface at a distance. This method of performing gastrostomy is most successful in preventing leakage of the contents of the stomach and it appeared to me that it might prove equally valuable as applied to the colon. The plan adopted is as follows. An incision is made at the usual site in the line of the internal oblique fibres. The sigmoid is withdrawn and attached to the deep part of the wound by one or two sutures only and it is then passed directly backwards for about 2 in. to 2½ in. between the external and internal oblique muscles, where it is brought to the surface, opened and sutured, the original wound being completely closed

[1] Abstract of a paper read before the St. Helen's Medical Society on Feb. 11th, 1893

I have operated on three cases, on two as above, but in the third case by dividing the bowel, the rectal end being brought out at the lower end of the original wound, and the upper end being passed between the tissues and brought out posteriorly. The artificial anus in this case was a very good one, but the other opening emitted a foul discharge from the cancer which did not yield to treatment, and was more unpleasant than when such discharge is passed *per anum*. Division of the bowel considerably increases the severity of the operation, and I think I should only be inclined to practise it where there was a long expectation of life and in a case in which the sigmoid did not accommodate itself, owing to mesentery or bulk, to the other method. This operation appears to me to be a decided improvement on the ordinary colotomy. The artificial anus has a most natural look, but there does not seem to be, as I at first hoped there would have been, any natural control over the act of defecation. Whether the abdominal muscles could be trained to act in this way after a time I cannot say, but at any rate a truss applied as in the figure with a horseshoe



An improved colotomy. 1, The original wound closed. 2, The artficial anus. 3, Salmon and Ody truss with horseshoe pad.

pad seems to act admirably. It compresses the bowel where it runs in the abdominal wall, and quite prevents the escape of fæces until it is removed. This operation takes rather longer than a simple iliac colotomy, but it is not at all severe. Two of the patients were old men with advanced cancer of the rectum and both stood the operation well. The third patient was a woman with incurable syphilitic stricture; she has, I hope, many years to live. It is certainly an advantage that by this method the bowel may be opened at once without any fear of contaminating the peritoneum. The devious track and the ease with which the distant orifice can be perfectly and closely sutured to the skin remove all danger on this score. For some years I have always opened my colotomies at once through a glass tube, but am glad to feel that it is quite safe to return to the old plan of completing the operation outright. At the same time I would not advise the adoption of this method in all cases, and as a matter of fact have not used it in the last two. When the mesentery is very short it would not often be desirable to divide the bowel, as would be necessary under those circumstances, nor could this operation be conveniently performed in any but the sigmoid region. In cases of complete obstruction with distension, also, the glass tube method would generally be preferable; but, after all, the vast majority of colotomies are performed in the sigmoid region and upon patients with sufficient stamina and sufficiently long mesenteries to render the operation, as I have described it above, quite feasible.[2]

Liverpool.

[2] A fourth case recently completed has proved quite successful with the help of the truss.

THE VALUE OF CERTAIN DRUGS IN THE TREATMENT OF GOUT.

BY ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P. LOND.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS IN ST. MARY'S HOSPITAL.

Two methods of treating gout, and especially chronic gout, have for some time past been more or less employed by medical men. They are treatment by means of alkalies and treatment by means of salicylates. As far as I can discover these methods of treatment both originated from the supposition that uric acid is present as such in the fluids and deposits of gouty subjects and that this uric acid was rendered soluble and was therefore removed from the system both by alkalies and by salicylates. It is now well known that uric acid is always present in gouty subjects either in the form of sodium quadriurate or biurate. It is also well known that the chemical and physical properties of both these substances are entirely different from those of uric acid. As it therefore appeared to me that the object of employing alkalies and salicylates in gout originated in a misconception, and as I have for some time believed that both these methods of treatment are wrong in principle and in action, I thought it desirable to submit the matter to experimental investigation.

REASONS FOR BELIEVING THE TREATMENT OF GOUT BY ALKALIES TO BE ERRONEOUS.

The treatment of gout by alkalies is mainly based on the assumptions that uric acid is present as such in the blood and tissues and is rendered soluble by the administration of alkalies, that uratic deposits of sodium biurate are dissolved by alkalies, and that the system of a gouty person is pervaded by a general acidity which is neutralised and removed by alkalies. It will be seen that these assumptions do not stand the test of experimental inquiry. With regard to the first assumption, it is now well known that in gouty subjects uric acid is never present as such in the blood and tissues, but is always combined with sodium as the quadriurate or biurate. The only way in which alkalies could beneficially affect the quadriurate would be to delay its conversion into the biurate. In order to test this point I conducted a series of experiments so as to ascertain the effect of artificial blood serum to which different alkalies had been added on the decomposition of sodium quadriurate. In all the experiments the artificial blood serum employed was Sir W. Roberts's standard solution.[1] This was employed instead of blood serum in order to obviate the objections which have been raised to the use of blood serum in such experiments—viz.,—The tendency to variations in its alkalinity. Moreover, as shown by Sir W. Roberts, this standard solution reacts with uric acid and with the quadriurates and biurates in the same manner as blood serum itself.

OBJECTS OF CONDUCTING THE EXPERIMENTS WITH SODIUM QUADRIURATE.

These experiments were undertaken in order to ascertain whether any of the drugs ordinarily employed in the alkaline treatment of gout possess any power when introduced into the circulation of restraining the precipitation of sodium biurate from the quadriurate contained in the blood. Such experiments would show whether any such drugs would be of use either in delaying or partially arresting an attack of gout or in lessening the formation of gouty deposits. When sodium quadriurate is mixed with water it is decomposed into a uric acid moiety and a sodium biurate moiety, the uric acid appearing immediately it is set free in the form of ovoid or spindle-shaped crystals. These crystals appear in a very short time after the contact of the quadriurate with water—generally in from one to five minutes—whilst the sodium biurate passes into the gelatinous form, which, if sufficient water be present, is dissolved. If instead of water an alkaline medium be employed to decompose the quadriurate, such as blood serum or artificial blood serum at the temperature of the human body, then as long as free alkaline carbonate is present the uric acid moiety of the quadriurate, instead of crystallising out as uric acid,

[1] Croonian Lectures, 1892, p. 76.

unites with the sodium carbonate to form sodium biurate, which first assumes the amorphous form. After a time this amorphous biurate becomes gradually converted into the needles of the crystalline biurate. The time therefore which elapses between the saturation of the blood serum with sodium quadriurate and the first appearance of needle-shaped crystals of sodium biurate represents the inhibitory influence of the medium on the crystalline precipitation of sodium biurate. The experiments were conducted in the following manner.

METHOD OF CONDUCTING THE EXPERIMENTS WITH SODIUM QUADRIURATE.

Ten milligrammes of sodium quadriurate were well rubbed with ten drops of a 0·1 per cent. solution of the drug in artificial blood serum and the mixture was then placed in a small corked tube and kept at 100° F. Every half hour a small quantity of the mixture was removed and examined under a high power of the microscope and the time at which crystals of the sodium biurate first appeared was noted. A similar experiment, for purposes of comparison, was made with the quadriurate and artificial blood serum alone. I experimented separately in this way with potassium bicarbonate, potassium citrate, lithium carbonate, lithium citrate, sodium bicarbonate, sodium phosphate, piperazine, and lysidine. The results are shown in the following table:—

TABLE I.—*Showing the Influence exerted on the Decomposition of Sodium Quadriurate by Artificial Blood Serum alone and by Artificial Blood Serum containing 0·1 per cent. of Various Drugs in Solution.*

Solvent.	Sodium biurate crystals appeared after the lapse of—
Artificial blood serum	Two hours.
Ditto, containing 0·1 per cent. potassium bicarbonate	,,
,, ,, ,, potassium citrate ...	,,
,, ,, ,, lithium carbonate ...	,,
,, ,, ,, lithium citrate	,,
,, ,, ,, sodium bicarbonate ...	,,
,, ,, ,, sodium phosphate ...	,,
,, ,, ,, piperazine	,,
,, ,, ,, lysidine	,,

These results show that none of the drugs mentioned in the table exercise the slightest effect in delaying the conversion of the quadriurate into the biurate even when present in far larger proportions than can possibly be introduced into the blood by the medicinal administration of these drugs.[2] Therefore it appears that the treatment of gout by alkalies and salts of the alkalies does not delay the conversion of the quadriurate into the biurate.

DOES THE TREATMENT OF GOUT BY ALKALIES INCREASE THE SOLUBILITY OF SODIUM BIURATE?

With regard to the second assumption, that the administration of alkalies increases the solubility of the biurate deposited in the joints and tissues, Sir W. Roberts has shown that sodium bicarbonate and sodium phosphate diminish the solubility of sodium biurate, while potassium bicarbonate exercises no influence whatever on its solubility. He fails to find any direct object in the administration of alkalies for gout, and he has seen gouty attacks recur with full severity when the urine has been for a long time maintained persistently alkaline by the administration of bicarbonate and citrate of potassium. That the administration of alkalies might increase the solubility of the biurate appeared at one time to be probable from the results of some experiments performed by Sir A. Garrod. He immersed small pieces of cartilage infiltrated with sodium biurate for forty-eight hours in aqueous solutions of the carbonates of lithium, potassium, and sodium respectively. At the end of that time he found that the cartilage immersed in the lithium solution was restored to its natural condition; that in the potassium solution was much acted upon, while that in the sodium solution appeared to be unaltered. These results are somewhat in opposition to those of Sir W. Roberts and as neither the experiments of Sir A. Garrod nor those of Sir W. Roberts represent the conditions under which alkalies when introduced into the circulation would act on sodium biurate, I thought it desirable to reinvestigate the subject as far as possible under such conditions.

INVESTIGATIONS OF THE EFFECTS OF VARIOUS ALKALINE DRUGS ON THE SOLUBILITY OF SODIUM BIURATE.

These experiments were undertaken in order to compare the solubility at 100° F. of sodium biurate in artificial blood serum and in artificial blood serum containing different proportions of the various drugs. The experiments were carried out in a similar manner to that described in my Goulstonian lectures.[3] I experimented separately with the following drugs: potassium bicarbonate, potassium citrate, lithium carbonate, lithium citrate, sodium bicarbonate, sodium phosphate, piperazine, and lysidine. Much greater proportions of the drugs were employed than could possibly be introduced into the blood by medicinal administration. The results are shown in the following tables:—

TABLE II.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Potassium Bicarbonate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000.
Ditto, containing 0·01 per cent. potassium bicarbonate	0·10 ,,
,, ,, 0·10 ,, ,, ,,	0·10 ,,
,, ,, 0·20 ,, ,, ,,	0·11 ,,

These results show that potassium bicarbonate would not in the slightest degree increase the solvent power of the blood for gouty deposits.

TABLE III.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Potassium Citrate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000.
Ditto, containing 0·01 per cent. of potassium citrate	0·10 ,,
,, ,, 0·10 ,, ,, ,,	0·10 ,,
,, ,, 0·20 ,, ,, ,,	0·11 ,,

These results show that potassium citrate would not in the slightest degree increase the solvent power of the blood for gouty deposits.

TABLE IV.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Lithium Carbonate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·005 per cent. of lithium carbonate	0·11 ,,
,, ,, 0·01 ,, ,, ,,	0·11 ,,
,, ,, 0·10 ,, ,, ,,	0·15 ,,

These results show that lithium carbonate would not in the slightest degree increase the solvent power of the blood for gouty deposits even when present in far larger proportions than could be introduced into the blood by medicinal administration. Lithium salts are usually given in doses of 1 gr. to 5 gr. three times a day, whereas to get 0·01 per cent.

[2] In order to have 0·1 per cent. of any drug in the blood it would be necessary to introduce 600 gr. of that drug at once into the circulation of an adult man of average weight.

[3] THE LANCET, April 17th, 1897, p. 1073.

of a lithium salt into the blood it would be necessary to introduce 60 gr. of the salt at once into the circulation of an adult man of average weight.

TABLE V.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Lithium Citrate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·005 per cent. of lithium citrate ...	0·11 ,,
,, ,, 0·01 ,, ,, ,,	0·11 ,,
,, ,, 0·10 ,, ,, ,,	0·11 ,,

These results show that lithium citrate would not in the slightest degree increase the solvent power of the blood for gouty deposits.

TABLE VI.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Sodium Bicarbonate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·01 per cent. of sodium bicarbonate.	0·10 ,,
,, ,, 0·10 ,, ,, ,,	0·09 ,,
,, ,, 0·20 ,, ,, ,,	0·08 ,,

These results show that sodium bicarbonate would slightly decrease the solvent power of the blood for gouty deposits.

TABLE VII.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Sodium Phosphate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·01 per cent. of sodium phosphate	0·11 ,,
,, ,, 0·10 ,, ,, ,,	0·11 ,,
,, ,, 0·20 ,, ,, ,,	0·11 ,,

These results show that sodium phosphate would not in the slightest degree increase the solvent power of the blood for gouty deposits.

TABLE VIII.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Piperazine.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·01 per cent. of piperazine	0·09 ,,
,, ,, 0·10 ,, ,, ...	0·11 ,,
,, ,, 0·20 ,, ,, ...	0·13 ,,

These results show that piperazine would not in the slightest degree increase the solvent power of the blood for gouty deposits even when present in far larger proportions than could be introduced into the blood by medicinal administration. Piperazine is usually given in doses of 5 gr. three times a day, whereas to get 0·10 per cent. of piperazine into the blood it would be necessary to introduce 600 gr. of the drug at once into the circulation of an adult man of average weight.

TABLE IX.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Lysidine.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000.
Ditto, containing 0 01 per cent. of lysidine	0 09 ,,
,, ,, 0·10 ,, ,, ...	0·10 ,,
,, ,, 0·20 ,, ,, ...	0·10 ,,

These results show that lysidine would not in the slightest degree increase the solvent power of the blood for gouty deposits, even when present in far larger proportions than could be introduced into the blood by medicinal administration. Lysidine is given in doses of from 30 gr. to 120 gr. three times a day, whereas to get 0·20 per cent. of lysidine into the blood it would be necessary to introduce 1200 gr. of the drug at once into the circulation of an adult man of average weight.

FURTHER EXPERIMENTS AS TO THE INFLUENCE OF POTASSIUM AND LITHIUM SALTS ON THE SOLVENCY OF GOUTY DEPOSITS.

As it appeared to me that the experiments of Sir Alfred Garrod, previously referred to, into the solvent effect of potassium bicarbonate and lithium carbonate on gouty deposits were scarcely comparable with what occur. when these drugs are acting *viâ* the blood and other fluids of the body, I thought it desirable to repeat the experiments under different conditions. I therefore investigated the solvent action on gouty deposits of artificial blood serum impregnated with quantities of potassium bicarbonate and lithium carbonate respectively; the quantities of the drugs used were in excess of those which could be present in the fluids of the human body when full doses are being administered. The artificial blood serum impregnated with potassium bicarbonate contained 0·01 per cent. of that drug, which is equivalent to the introduction at once of 60 gr. of the drug into the circulation of an adult and the after maintenance of that amount in the circulation. The artificial blood serum impregnated with lithium carbonate contained 0·0015 per cent. of that drug, which is equivalent to the introduction at once of 10 gr. of the drug into the circulation of an adult and the after maintenance of that amount in the circulation. The experiments were carried out in the following manner.

A piece of cartilage well and uniformly infiltrated with sodium biurate which had been removed from a gouty joint at a post-mortem examination was divided into three equal pieces. One piece was suspended in a bottle containing 100 c.c. of artificial blood serum, the second piece in a bottle containing 100 c.c. of artificial blood serum impregnated with potassium bicarbonate, and the third piece in a bottle containing 100 c.c. of artificial blood serum impregnated with lithium carbonate. The bottles with their contents were kept throughout the experiments at the blood heat and every twenty-four hours fresh supplies of fluid were introduced, so that the first piece of cartilage was constantly bathed in artificial blood serum at the blood heat, the second piece in artificial blood serum impregnated with potassium bicarbonate, and the third piece in artificial blood serum impregnated with lithium carbonate. By this method of procedure it was considered, as regards any solvent effect that the drugs might exert on the gouty deposit, that the results would be fairly comparable with what occurs when potassium or lithium salts are medicinally administered. The pieces of cartilage were removed every twenty-four hours and examined by means of a lens and the experiments were continued until all the sodium biurate was dissolved out of the cartilage. The solution of the sodium biurate from the cartilage proceeded at the same pace in the three pieces and was in no way accelerated by the presence of the potassium bicarbonate or the lithium carbonate. The sodium biurate was completely dissolved from the three pieces of cartilage on the fifteenth day. These experiments indicate that the quantities of potassium bicarbonate and lithium carbonate which could by ordinary dosage be introduced into the fluids of the body can exercise no influence on the solvency of gouty deposits, and the results obtained

support the views of Sir William Roberts that potassium bicarbonate and lithium carbonate exercise no influence on the solubility of sodium biurate.

The net result of all these experiments is that the treatment of gout by alkalies or by piperazine or lysidine does not increase the solubility of the biurate deposited in the joints and tissues. Levison holds very similar opinions with regard to the alkaline treatment of gout. He considers that the administration of the ordinary alkalies, of lithium salts, or of piperazine, with the object of either dissolving sodium biurate or of preventing its deposition, is decidedly useless. He also found that the administration of piperazine exerts no influence upon the amount of uric acid excreted.

A GENERAL ACIDITY OF THE SYSTEM NOT ASSOCIATED WITH GOUT.

The third assumption, that in connexion with gout there is a general acidity of the system which causes a diminished alkalinity of the blood, is opposed to the results of recent investigations on the subject. The experiments of Klemperer and my own experiments[4] show that the alkalinity of the blood of gout is but very little, if at all, diminished and that corresponding variations in the alkalinity of the blood may frequently be met with in healthy individuals. Moreover, the experiments previously published by myself[5] demonstrate that a diminution in the alkalinity of blood serum containing uric acid in solution does not facilitate the deposition of sodium biurate from it nor does a diminution in the alkalinity of blood serum diminish its solvent power for sodium biurate. It appears, therefore, that there is no ground whatever for the assumption that the treatment of gout by alkalies tends to neutralise a so-called general acidity of the system and so renders the blood a better solvent of gouty deposits.

REASONS FOR BELIEVING THE TREATMENT OF GOUT BY SALICYLATES TO BE ERRONEOUS.

Just as the treatment of gout by means of alkalies is based on the entirely erroneous supposition that uric acid is present as such in the fluids and deposits of gouty patients, so the main reason for giving a salicylate in gout is based on the assumption that it unites with uric acid throughout the system and so effects its removal from the system and its elimination in the urine. That sodium salicylate does cause an increased elimination of uric acid in the urine, at all events in the early stages of its administration, is undoubted. This is shown by the following daily determinations which I made of the total uric acid excretion of a healthy man before, during, and after treatment with sodium salicylate. The diet was of the same nature throughout the experiments.

TABLE X.—*Showing the Daily Excretion on Successive Days of Uric Acid by a Healthy Man before, during, and after Treatment with Sodium Salicylate.*

—	Daily excretion of uric acid in grammes.
Before taking salicylate	0·547
	0 589
	0·731
Average	0·622
Fifteen grains of sodium salicylate taken three times a day	0·852
	0·942
	0·826
	0·784
Average	0 851
Salicylate left off	0 340
	0·581
	0 543
	0·677
	0·686
Average	0 565

That this increased elimination of uric acid is due, however, to the removal of ready formed uric acid stored in the system is, in my opinion, incorrect. In the first place it must be remembered that any uric acid deposited in any of the organs or tissues of gouty subjects is deposited in the form of sodium biurate, and the result of the following experiments shows that artificial blood serum, containing sodium salicylate in much greater proportions than could be introduced into the blood by the medicinal administration of the drug, has not the slightest increased solvent effect on the biurate.

TABLE XI.—*Showing the Solubility at 100° F. of Sodium Biurate in Artificial Blood Serum alone and in Artificial Blood Serum containing Different Proportions of Sodium Salicylate.*

Solvent.	Sodium biurate dissolved.
Artificial blood serum	0·11 per 1000
Ditto, containing 0·003 per cent. of sodium salicylate	0·11 ,,
,, ,, 0·006 ,, ,, ,,	0·11 ,,
,, ,, 0 01 ,, ,, ,,	0·11 ,,
,, ,, 0·10 ,, ,, ,,	0·11 ,,

These results show that sodium salicylate would not in the slightest degree increase the solvent power of the blood for gouty deposits even when present in far larger proportions than could be introduced into the blood by medicinal administration. Sodium salicylate is usually given, in the treatment of gout, in doses of 15 gr. to 20 gr. three times a day; whereas to get 0 1 per cent. of sodium salicylate into the blood it would be necessary to introduce 600 gr. of the drug at once into the circulation of an adult man of average weight. Dr. J. Fawcett,[6] who likewise finds that sodium salicylate produces an increased uric acid excretion, considers it improbable that the increase can be explained by a mere clearing out of retained uric acid.

I also find that artificial blood serum containing sodium salicylate in far larger proportions than could be introduced into the blood by medicinal administration has no effect whatever in delaying the conversion of sodium quadriurate into the biurate, as is shown in the following table.

TABLE XII.—*Showing the Influence exerted on the Decomposition of Sodium Quadriurate by Artificial Blood Serum alone and by Artificial Blood Serum containing 0·1 per cent. of Sodium Salicylate in Solution.*

Solvent.	Sodium biurate crystals appeared after the lapse of—
Artificial blood serum	Two hours.
Ditto, containing 0·1 per cent. of sodium salicylate	Two hours.

It therefore appears from the results of the experiments given in Tables XI. and XII. that sodium salicylate has no direct action either in delaying the decomposition of sodium quadriurate or in effecting a solvent action on deposits of sodium biurate. The supposed solvent effect of sodium salicylate for gouty deposits does not therefore exist. What I believe to be the correct explanation of the increased elimination of uric acid in the urine during the administration of sodium salicylate is that salicylic acid unites readily with glycocine and so conveys an increased amount of that body to the kidneys, where by its combination with urea an increased amount of uric acid is necessarily formed. This increased formation of uric acid is directly detrimental to gouty subjects and on that account I consider that salicylates are contra-indicated in gout.

CONCLUSIONS.

1. The ordinary alkalies, the lithium salts, piperazine, and lysidine, do not exercise any special solvent effect on sodium biurate and their administration to gouty subjects with the object of removing uratic deposits in the joints and tissues appears to be useless.

2. Sodium salicylate does not exercise any special solvent effect on sodium biurate. Its administration with the object of removing uratic deposits in the joints and tissues appears to be useless, and, moreover, it is apparently contra-indicated in gout on account of its leading to an increased formation of uric acid in the kidneys.

Weymouth-street, W.

[4] Brit. Med. Jour., April 23rd, 1898.
[5] THE LANCET, April 17th, 1897.
[6] Guy's Hospital Reports, 1895.

OBSTRUCTIVE LARYNGEAL AFFECTIONS AND THEIR INFLUENCE UPON CHLOROFORM ANÆSTHESIA.

BY H. BELLAMY GARDNER, M.R.C.S. ENG., L.R.C.P. LOND.,

ASSISTANT ANÆSTHETIST TO CHARING-CROSS HOSPITAL; ANÆSTHETIST TO THE NATIONAL ORTHOPÆDIC AND MALE LOCK HOSPITALS.

THE fears which are so generally entertained as to the danger of giving an anæsthetic to patients suffering from any form of obstructive laryngeal affection lead me to put forward a few observations founded upon several severe cases of this nature which I have lately been called upon to anæsthetise. Not only do the majority of such patients pass through the anæsthesia remarkably well, but, as I shall hope to show, there is reason to believe that the element of asphyxia produced by a partial mechanical obstruction of some weeks' duration in the patient's upper air-passage is responsible for a maintenance of blood-pressure and increased respiratory activity which, so far from causing alarm, may, with due recognition of its limits, be positively of value to the anæsthetist during the narcosis. In ordinary chloroform anæsthesia a very shallow type of respiration is often witnessed which cannot be disregarded by the administrator as a warning of impaired central activity; it requires the most diligent watching, for, being inaudible and hardly palpable, irregularity may without further notice be succeeded by complete cessation. Further, also, under the influence of shallow breathing the pulse is small and slow and the general circulation, as evidenced by pallor of the countenance, shows marked signs of depression. When the breathing is inaudible Dr. Hewitt[1] has found that "the administrator may usually cause a softly snoring sound by pressing the lower jaw backward." I have frequently proved this manœuvre to be an extremely valuable one in producing an artificial stertor, which acts as a good guide, and having marked the *increased depth of respiration* which ensues in nearly every instance when it is resorted to am also convinced that though the increase is compensatory in character it has two important practical results, because (1) it prevents the stagnation of chloroform vapour of increasing strength in the lungs, and (2) adds a considerable impetus to the venous circulation by augmenting the suction action of the thorax. That this latter action is a powerful factor in emptying the large veins I have witnessed in operations exposing the internal jugular vein at the root of the neck, when it can be seen that this vessel partly flattens at each cardiac diastole in expiration, but collapses completely during deep inspiration. Now during partial respiratory obstruction, until compensatory thoracic movements have been established, there is a deficiency of oxygen in the circulation which centrally stimulates the respiratory muscles to further efforts; the same condition also causes a general vaso-motor constriction with consequent rise in blood-pressure and it is therefore to the proximity of incomplete respiratory compensation that I attribute the absence of those symptoms of depression which might be expected in patients with chronic laryngeal obstruction under chloroform.

The administration of chloroform to patients with a partial laryngeal obstruction is clinically a somewhat comparable procedure to the exhibition of nitrous oxide gas with small percentages of oxygen in surgical operations. The valuable experience gained in the gradual onset of symptoms due to reduction of the oxyhæmoglobin in the blood in these latter cases (easily rectified by increasing the supply of oxygen to be inhaled) has shown definitely that not only in theory is it possible to take advantage of these two factors in the respiratory and vaso-motor compensatory mechanism, but in actual practice the administrator can feel and perceive at every breath where the limits of this slight oxygen deprivation lie and can detect by the depth of air-intake and tendency of facial colour the phenomena which will follow during several ensuing minutes. It cannot with certainty be stated that the elimination of carbonic acid gas is retarded in cases with mechanical obstruction in the air passage, but, as it is probable, I would here suggest a reference to the remarkable result obtained by Dr. Augustus Waller during his experiments as to the direct action of anæsthetics upon isolated nerve, which showed that when CO_2 was mixed with chloroform vapour in the gas-chamber the recovery of electromobility in nerve-tissue was more pronounced than after chloroform alone.[2] This bears very directly upon the cases I shall relate and should be carefully investigated in future work. At this point the foregoing remarks should be clearly defined as a dangerous doctrine for any but those who are in constant association with the administration of anæsthetics. The actual fatal result of a more or less *sudden* obstruction to respiration during chloroform narcosis has been so frequently reported and the warning is so thoroughly appreciated by all experienced administrators that this paper cannot, I think, be misunderstood in merely offering an explanation of certain satisfactory symptoms in otherwise desperate cases.

CASE 1. *Double abductor paralysis of the vocal cords.*—A man, aged fifty-seven years, of powerful build, height 5 ft. 11 in., with bulky abdomen, had abductor paralysis of his vocal cords for twenty-six years and suffered with laryngeal stridor and dyspnœa on any slight exertion. His arterial system was not markedly degenerate and his pulse was 96 per minute. His chest expansion was very feeble owing to paralysis of the intercostal muscles in the upper six spaces, but the diaphragm and abdominal muscles were working vigorously. Removal of the malignant glands in the neck and primary growth at the right base of the tongue were decided upon. On April 9th, 1897, chloroform was given on a Skinner's mask. When the stage of surgical narcosis was reached loud inspiratory stridor supervened with extreme abdominal efforts; complete obstruction to air-entry seemed imminent, but by head extension and raising of the chin respiration settled into a very deep and regular rhythm. The lips and ears were a trifle dusky, but the pulse remained full and strong for over an hour and a quarter, the rate being on the average 114 per minute. After this tracheotomy was performed and the pharynx was plugged to prevent inhalation of blood during removal of the tongue; by means of Junker's inhaler chloroform was continued through the tracheal tube; the pulse, however, fell to 72 and became less regular in force and rhythm while the face grew paler and the respiration shallow. Half the tongue was removed and the patient did well subsequently; but it was clear to me that when the partial laryngeal obstruction had been eliminated by tracheotomy the circulation began to fail directly as the respiration became less vigorous.

CASE 2. *Multiple papillomata in the larynx.*—The patient was a boy, aged eight years. He was thin, of dark complexion and nervous temperament, with severe dyspnœa and retraction of the lower intercostal spaces due to obstruction to inspiration by the laryngeal growths. He was chloroformed for the removal of the latter *per vias naturales* without laryngotomy. Before commencing his lips were slightly cyanosed and his pulse was small and rapid. The breathing grew deeper with stridulent inspiration as the narcosis proceeded, the pulse became stronger and fuller under its influence, while the colour remained the same as before. Seated astride the couch I then raised him against my own chest into the sitting position for the use of the laryngoscope while I continued the chloroform administration through Hewitt's tubular mouth-gag from a Junker's inhaler. The respiratory mechanism maintained its deep and regular efforts whilst the forceps were introduced several times into the larynx and portions of growth were removed. Though I have anæsthetised this patient on nine occasions in the above manner at intervals of a week or more his pulse has not flagged under the anæsthetic nor has the breathing shown irregularity from central causes; and this is the more remarkable in the vertical posture, which is apt to favour syncope in cases without respiratory obstruction. In this instance increasing dyspnœa had been present for three months before the first operation.

CASE 3. *Epithelioma of the larynx.*—A woman, aged sixty-five years, fairly well nourished, suffering from a malignant growth at the posterior margin of the upper aperture of the larynx, had several attacks of acute dyspnœa, the last an hour before operation. Chloroform was administered, breathing grew deep and audible (as would be more usual under ether), with marked improvement in the pulse and colour in the

[1] Anæsthetics and their Administration, p. 229.

[2] Dr. A. Waller: Brit. Med. Jour., Nov. 20th, 1897, p. 1473.

third stage of anæsthesia. After a quarter of an hour the trachea was reached and opened, but directly air entered and the obstruction was entirely relieved breathing became shallow and almost ceased, the pulse, which had been full and strong before, became small and slow, and pallor of the face appeared, which only gave place to returning colour and respiration after three or four strong compressions of the chest walls. This remarkable sequence of circulatory phenomena was due, in my opinion, to the sudden loss of stimulation to the respiratory mechanism which had been working vigorously under the influence of partly venous blood and thereby strongly emptying the right heart by ample thoracic movement.

CASE 4. *Epithelioma of the larynx.*—The patient was a man, aged sixty years, thin, wiry, and alcoholic, his voice was almost gone, and he had laryngeal stridor and dyspnœa on exertion. There was deep, diaphragmatic respiration under chloroform; his colour was somewhat dusky, but his pulse was strong and regular at 96. Tracheotomy was performed. No pallor or respiratory cessation occurred here, but the breathing becoming quiet and shallow on insertion of the tube the pulse fell in force and frequency at the same time.

CASE 5. *Tuberculous disease of the right thyroid cartilage.*—The patient was a boy, aged eighteen years. He was very thin and anæmic, with a hard swelling over the right side of the larynx. He was suffering from severe dyspnœa painful to witness. When requested to fill his chest the upper part expanded, but breathing usually was mainly diaphragmatic. He had hoarseness for two years previously and increasing respiratory obstruction for two months, culminating in attacks of acute asphyxia during the three previous nights. Sleep was now impossible, but the patient could lie down flat. His pulse was 84, small and weak, though regular. Chloroform was taken on Skinner's mask with regular hoarse inspirations which passed into a deep rhythm, though air entry was severely obstructed. Operation was begun. The pulse was good. When, however, the head was extended backwards the brawny swelling in the throat almost entirely occluded the passage of air. The face and ears were deeply cyanosed, secondary pallor commencing. The pulse was still regular. The head was flexed, the mouth was opened, and the tongue was drawn forward; the tissues over the swelling were divided and breathing was much freer. Forty minutes from beginning high tracheotomy was performed. After insertion of the tube some obstruction arose from ropy mucous, but allowing the patient to come round a little this, with a little blood, was coughed up, and at the end of one and a half hour's operation he finished well, was warm, of good colour, and with a pulse at 84.

To illustrate the very grave and alarming symptoms which arise under chloroform from *sudden* obstruction to breathing in a previously unobstructed patient the following case may prove of value.

CASE 6. *Accidental division of the right recurrent laryngeal nerve.*—The patient was a male, aged thirty-five years, thick-set and well nourished, suffering from hygroma of the thyroid gland on the right side. Breathing was normal. A.C.E. mixture was administered on Rendle's mask throughout; there was typical anæsthesia during the first half-hour of operation, when the right recurrent laryngeal nerve was accidentally cut by the operator; inspiratory stridor set in and gradually became more marked. There was, however, no real dyspnœa till after operation, when the obstruction from paralysis of the right vocal cord became very severe and despite head extension and drawing forward of the tongue extreme cyanosis and irregularity of the pulse supervened with very deep inspiratory efforts. Secondary pallor accompanied this acute asphyxia and the surgeon was compelled to intubate the larynx with an O'Dwyer's tube to relieve the symptoms. When the breathing became quieter the patient was removed to bed and after complete recovery from the anæsthetic the tube was coughed out and he subsequently did well.

In certain of the foregoing cases, though tracheotomy was performed, it was not undertaken for the purpose of alleviating asphyxia during anæsthesia, but had been designed beforehand as part of the remedial treatment for the disease; in this last case, however, the very grave symptom of cardiac irregularity supervened rapidly upon respiratory obstruction, and it was this secondary circulatory failure which rendered laryngeal intubation or tracheotomy necessary to save the patient's life.

Welbeck-street, W.

CLINICAL REMARKS ON SOME ADVANCED FORMS OF URETHRAL STRICTURE TREATED BY A COMBINED URETHROTOMY AND PERINEAL SECTION.

BY REGINALD HARRISON, F.R.C.S. ENG.,
SURGEON TO ST. PETER'S HOSPITAL.

IN some clinical remarks I recently offered[1] on the commoner forms of urethral stricture I reserved for separate consideration certain instances where the methods of treatment then referred to were unlikely to prove of much benefit for the reasons that either the obstructions were too "burn-scar"-like and contractile to dilate or too tough or extensive to divide from within the urethra. In addition to such characteristics these strictures are not unfrequently complicated with fistulæ or tortuous routes in the perineum and scrotum through which both urine and pus escape. Hence the discomfort of the patient is often greatly added to. Cases answering to this description are generally regarded as being best treated by some form of perineal section or, as it is sometimes called, external urethrotomy and it is to this point I desire now to confine myself. As a contribution to this subject I published a series of cases[2] where the usual operation of perineal section as undertaken for stricture in the deep urethra had been greatly simplified and its safety and efficiency increased by combining with it internal urethrotomy. Strictures of the class now under notice are but rarely impassable to some form of instrument and as by reason of the urinary fistulæ which so often complicate them they are seldom urgent in their nature time is allowed not only for effecting an entrance into the bladder by the natural way, but also for ascertaining what may be the outcome of some kind of dilatation. Assuming that the former is accomplished, though dilatation proves futile, the combined operation probably offers the best solution of the difficulty. In describing it, together with such modifications as I have adopted since the publication of my first paper on this subject, I will take in illustration two typical instances in which it was employed.

CASE 1.—A man, aged fifty-one years, whom I saw and operated upon in 1890 had been the subject of a stricture with a strong tendency to contract for some years and had undergone no less than six operations for it, including a divulsion by Holt's method and five internal urethrotomies at various intervals and places. For some months before I saw him the stricture had been contracting and closing in spite of the patient's well-directed efforts with suitable bougies to keep it open. Straining to urinate was constant and prevented continuous sleep, and there was some cystitis with probably pyelitis. It was clear that a free relief must be afforded as structural kidney complications appeared imminent. I performed an internal urethrotomy with Teevan's modification of Maisonneuve's instrument, as I thought that the latter might not stand the strain put upon it by the cartilaginous character of the tissues which had to be divided. This being done I passed a full-sized grooved staff (No. 12 English) into the bladder. As the latter was evidently gripped in the deep urethra I had the patient placed in the lithotomy position and I divided in the median line from without inwards such contracted tissues as remained. I thus opened the urethra and found by passing my finger first into the bladder and then hooking it forwards along the urethra in the direction of the penile orifice that the walls of the canal had now been rendered free and unresisting. A full-sized gum-elastic drainage-tube (such as I have elsewhere described and figured[3] in connexion with the larger subject of bladder drainage) was passed into the bladder through the wound and retained. The parts were well washed out with a solution of perchloride of mercury (1 in 6000). The drainage-tube was finally withdrawn on the sixth day and the wound soon closed. Eight years have now elapsed since this operation was practised.

[1] THE LANCET, April 23rd, 1898.
[2] Brit. Med. Jour., July 18th, 1885.
[3] Surgical Disorders of the Urinary Organs, 4th edition.

The patient remains in good health and suffers no further inconvenience from his urinary organs than having occasionally to pass a full-sized bougie for himself. I frequently meet him.

CASE 2.—This patient, aged forty-five years, had a tough contractile stricture which had resisted dilatation and was complicated with several urinary fistulæ of two years' standing. I operated upon him in 1892. He was treated in the same way as the preceding patient and in addition the various fistulæ were opened up and scraped. The result was equally satisfactory and is so far permanent.

Perineal section carried out on these lines has been found to present many advantages. In the first place it is easier to effect a division of the hard and condensed tissues of the perineum, such as generally surround strictures of this kind, upon a fairly large staff than upon a small one or even upon the shouldered staff which Syme used for marking the commencement of the contracted portion of the canal. The freedom or otherwise with which the large-sized instruments move in the canal is sufficient to determine the necessity for proceeding at once with the external section, as well as the precise locality and degree of the contraction which remains. It may seem at first sight in combining these two operations that the magnitude of an ordinary perineal section is increased. This, however, is not the case, as the division of more or less of the obstruction from within the canal has not infrequently proved sufficient to completely clear the urethra, whilst it invariably tends to limit considerably the extent of any external section which may still be required. Further, it must be remembered that there is no kind of wound involving the deep urethra which heals so kindly or is so free from those constitutional symptoms which occasionally follow operations on this canal than that where a temporary drain is established for the urine. Again, this point is importantly supported by the results following rupture of the deep urethra from external violence. Cases of this kind where a perineal section is performed and a temporary drain established compare most favourably, both immediately and remotely, with those where the treatment consists in the retention of a catheter, when this can be passed, the points of distinction being in the former class of cases the absence of septic symptoms of a serious nature and the more favourable character of the scar which results. There is no worse kind of stricture to manage than that following an extensive rupture of the deep urethra and its treatment by what may be described as the closed method. It is on grounds such as these that I believe the combined operation proves of much benefit in the treatment of some of the most serious and complicated forms of urethral stricture.

Before concluding these remarks I will briefly refer to a class of strictures which I have only incidentally noticed. This is the structurally impassable stricture—impassable alike to instruments and urine and associated invariably with an extraneous route for the urine, probably through the perineum. The latter condition is the result either of nature's effort to provide escape for the urine by abscess and fistula or of the surgeon's, more promptly and directly, by incision. In endeavouring to restore a urethra of this kind and to close a well-worn fistula the surgeon will fully recognise the mechanical and physiological difficulties before him not only in reproducing a portion of the canal which to all intents and purposes is obliterated, but in subsequently fitting it to take up the functions connected with the process of natural, or even aided, micturition. It requires no great amount of surgical ingenuity to establish the continuity of the urethra so far as instrumentation is concerned, but to secure a reasonable degree of control or influence over the restored portion of the canal is by no means certain. On the other hand, experience and trial have not infrequently shown that a good urinary fistula has proved an excellent substitute for a bad urethra.

Lower Berkeley-street, W.

TORQUAY NATURAL HISTORY SOCIETY.—The report presented at the annual meeting of this society showed that there were 198 members and associates. A special vote of thanks was awarded to Mr. C. H. Wade, M.A. Oxon., M.R.C.S. Eng., L.R.C.P. Lond., for the large amount of time and trouble he had devoted to the society.

A CASE OF RECURRENT CANCER OF THE BREAST TREATED BY OÖPHORECTOMY AND THYROID EXTRACT.

BY G. ERNEST HERMAN, M.B., F.R.C.P. LOND., F.R.C.S. ENG.,
SENIOR OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL, ETC.

A PATIENT, aged forty years, consulted me as to a lump in the left breast. The patient's weight was then 10 st. 3 lb. She had had two children, the last thirteen years ago. Menstruation was regular. The characters of the lump led to the opinion that it was cancer, and the patient was advised to see a surgeon. The result of this advice was that in October, 1890, Mr. Treves removed the left breast. The whole mamma was removed, but as no glands were discovered in the axilla the axillary space was not evacuated. The breast after removal was cut into, and the tumour was found to present all the characters of cancer so well marked that it was not thought necessary to complete the diagnosis by microscopical examination. The patient recovered well from the operation. In July, 1893, her weight was 11 st. 2 lb. In November, 1895, it was 11 st. 1 lb. In the beginning of 1896 she began to lose flesh. In May, 1896, she weighed 9 st. 12 lb., and in July 8 st. 13 lb. After this she gained a little, reaching 9 st. 6 lb. in October. Towards the end of December she noticed a lump in the armpit, which induced her to again come for examination. As a result of this on Jan. 4th, 1897, Mr. Treves cut down first upon a lump just above the clavicle and then upon the lump in the armpit. The lump above the clavicle was found to be an indurated fixed gland in such close relation to the subclavian vein that its removal was unadvisable. When the axilla was exposed, a mass of new growth was found quite surrounding the axillary vessels. There were also nodules in the pectoralis major. The new growth was so extensive that the complete removal of the axillary growth could have been effected only by amputation of the upper extremity, and if this had been done the supra-clavicular nodule would have remained. The incisions were therefore closed without any attempt to remove the recurrent growths. The wounds healed well.

As there was no prospect of cure by any other treatment, the case in which Dr. Beatson observed disappearance of recurrent cancer of the breast after oöphorectomy and the administration of thyroid extract was put before the patient and her husband, and after consideration they decided to accept this chance of cure. Menstruation had been irregular for about three years, but had not ceased. She had last menstruated on Jan. 3rd, 1897. On March 2nd, 1897, I removed both ovaries. They presented small cysts but were otherwise healthy. As soon as the vomiting caused by the anæsthetic had passed off the patient began to take thyroid extract; at first the glycerine extract made by Allen and Hanburys, then either tabellæ from Allen and Hanburys or tabloids from Burroughs, Wellcome and Co. She has taken this ever since in as full doses as she could, varying from 10 gr. to 15 gr. daily. She has occasionally had to diminish the dose on account of dyspeptic symptoms—vomiting and epigastric pain—thought to be produced by it. On Sept. 27th, 1897, she came up for examination. Mr. Treves and I examined the parts. The supra-clavicular nodule was no longer to be felt. The axillary artery could be felt pulsating, apparently quite free from growth around it. The patient's weight, which on March 27th, 1897, was 8 st. 4½ lb., is now (May, 1898) 8 st. 10½ lb. On May 5th, 1898, the patient was seen by Dr. G. C. Tayler of Trowbridge, who reported as follows: "I examined the operation scars this day and find that they are pale—almost the colour of the neighbouring skin—soft, no adhesion to the subjacent parts, and no deposits of any kind in the surrounding tissues."

In this case, as in one published by Dr. Beatson, recurrent cancerous growths atrophied after removal of the ovaries and the administration of thyroid extract. The length of time since the operation during which the patient has remained well—fourteen months—is enough to justify the assertion that the course of the disease has been modified by the treatment.

Since the publication of Dr. Beatson's case Mr. Stanley Boyd and Mr. Watson Cheyne have reported cases of oöphorectomy for mammary cancer, but it is not stated in their reports that thyroid extract was given. Thyroid extract has very powerful effects upon the body, and I think Dr. Beatson's practice cannot be said to have been followed if thyroid extract has not been given. Cases treated by oöphorectomy without thyroid extract do not justify a conclusion as to the uselessness of oöphorectomy *plus* thyroid extract. My reason for combining oöphorectomy with thyroid extract was simply that Dr. Beatson's successful case was treated in that way. The explanation of the benefit which seems to me the probable one is that based on the protozoon theory of cancer—that the withdrawal of the ovarian secretion, coupled with the presence of an excess of the thyroid secretion, makes the tissues of some persons a less fit food for the cancer protozoon.

I have since treated some cases of uterine and vaginal cancer by oöphorectomy and thyroid extract, but the results are not yet complete enough for publication.

Harley-street, W.

THE LOSS OF SEXUAL POWER IN TABES DORSALIS.

BY R. CUNYNGHAM BROWN, M.D. DURH.,

CLINICAL ASSISTANT TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE; LATE JUNIOR HOUSE SURGEON AND SENIOR ASSISTANT HOUSE SURGEON, HUDDERSFIELD INFIRMARY.

Loss of sexual power is one of the most constant disturbances of function encountered in tabes, being present in at least 70 per cent. of cases of over two years' duration. Leimbach[1] found it present in 58·25 per cent. of all cases of whatever duration, and in 15·54 per cent. it was one of the earliest symptoms of the disease. Before investigating, however, this disturbance of function it may be well to glance at the normal mechanism. Erection is a complex process largely reflex in nature, having for its afferent limb fibres passing from the glans penis and penis to the upper sacral and lower lumbar cord and for its efferent limb fibres passing from the cord to branches supplying the pudic and dorsal arteries of the penis and the transversus perinæi and bulbo-cavernosus muscles. Erection therefore depends partly on the presence of afferent stimuli ascending from the penis, but may also be initiated or inhibited by cerebral impulses. Ejaculation is an act more dependent than erection on the presence of afferent stimuli. The afferent impulses in this case also come mainly from the glans penis. The efferent impulses are spread over a larger area than in the case of erection, effecting peristaltic contraction of the muscles of the epididymis, vas deferens, and prostate, and later rhythmic contractions of the levator ani, sphincter ani, constrictor urethræ, &c.

Tabes being mainly, if not entirely, a disease of the mechanism subserving the production and transmission of afferent impulses, it is to be expected that the loss of sexual power in tabes should be found to be due to the diminution or loss of those afferent impulses concerned in the act. The larger contention, that tabes is entirely a disease of the mechanism subserving the production and transmission of afferent stimuli, is outside the range of this paper, but in this connexion Dr. Warrington's paper[2] on the effect of section of the posterior roots on the cells of the anterior horn and that of Dr. Schaffer[3] on the changes in the cells of the anterior horn in tabes are of great value. Clinical experience, however, shows clearly the part which loss of afferent stimuli plays in the production of loss of sexual power. Of 12 cases of tabes taken at random 2 were women and not examined from this point of view. Of the remaining 10, 8 had suffered from tabes for a period of two years or more, and in these loss of sexual power was present in 6. None of them were old men, only one being over forty years of age. Now in every one of these 6 cases in which there was loss of sexual power there was absolute analgesia of the glans and comparative or absolute analgesia of the rest of the penis. 4 of these had in addition comparative loss of tactile sensibility in the penis and glans, but in the other 2 tactile sensibility was normal. Further, in the 4 cases in which there was no loss of sexual power there was no affection of sensibility of the penis or glans. These figures are very significant and indicate very clearly that the alteration in sexual power is closely related to the diminution or loss of afferent impulses from the skin and possibly deeper structures of the glans and penis.

The loss of sexual power is gradual in onset and exists in proportion to the amount of analgesia of the glans. In the majority of cases examined, also, the condition might be described as belonging to one of two stages: (1) that of loss or diminution of voluntary sexual power with persistence of involuntary erection and emission; and (2) loss of both voluntary sexual power and involuntary emission. In the first stage analgesia of the glans alone or accompanied by diminished tactile sensibility is present, but the testicles are not atrophied and testicular sensation is present. In the second stage there are in addition atrophy of the testicles and loss of testicular sensation. The first stage passes gradually into the second, but a considerable time may elapse before complete loss of sexual power is established. In one case, three years after the loss of voluntary power, erection and emissions of purely cerebral origin occurred with regular frequency. This persistence of emission of cerebral origin shows that the efferent paths may remain capable of function long after the reflex process is impossible and indicates the afferent nature of the lesion. As to the site of the morbid processes at work it is impossible to speak with certainty at this stage. Gumpertz,[4] however, has demonstrated changes very early in tabes in the peripheral nerve structures, and it is, at any rate, possible that this, as well as other symptoms of tabes, is due to disease commencing not in the posterior spinal ganglia or in the posterior root at its junction with the cord, but in the extremely peripheral nerve structures subserving the production and transmission of afferent impulses.

Chancery-lane, W.C.

[1] Leimbach: Deutsche Zeitschrift für Nervenheilkunde, 1896.

[2] Warrington: A paper read before the Liverpool Medical Institution on April 21st, 1898. THE LANCET, April 30th, 1898.

[3] Schaffer: Monatsschrift für Psychiatrie und Neurologie, Berlin, 1898, Band iii., S. 64-98.

[4] Gumpertz: Berliner Medicinische Wochenschrift, 1898, Band xxxv., p. 62.

VITALITY: AN APPEAL, AN APOLOGY, AND A CHALLENGE ADDRESSED TO BROTHER PRACTITIONERS.

BY

LIONEL S. BEALE.

(*Continued from page 1050.*)

AMONG the untenable propositions enumerated not the least extravagant is that in which the growth of living things is classed with the process of accretion or aggregation in the non-living world. Only watch the gradual living growth as seen by all in the little child. Can the faintest analogy be pointed out between this vital growth and any inorganic process whatever? Think of the increase of the several complex tissues, for example, in the arm or in a finger. As the member grows in length, do not the nerve plexuses distributed to the peripheral parts become separated by a gradually increasing distance from the nerve centres, and does not this change occur not only without interruption but at the same time that steady improvement in nerve action is taking place? Do not new tissue formations, new growth, and new nerve action all actively proceed and simultaneously? How, then, can such phenomena be caused, directed, and regulated by physics or swayed by chemistry?

If we study but a small particle of the growing tissues in properly prepared microscopical specimens we shall find millions of minute bioplasts among the tissues formed during growth—the vital phenomena and tissue formation and action proceeding with great regularity during the whole period; not only so, but evidence of anticipation of a future condition, of preparation for further growth and arrangement of tissue. Thus the complete development and action of the several tissues and their continued and healthy action are provided for during youth, adolescence, maturity, old age, decrepitude, up to death—one stage so gradually passing

into the next that healthy individuals are scarcely aware of the occurrence of any change at all.

All growth through living nature is effected by living matter (bioplasm) alone. Who can show that any tissue of any living thing in this world is formed by *aggregation*, *precipitation*, *deposition*, *a sort of crystallisation*, or by the "differentiation" of a previously homogeneous exudation-plasma?

Minute anatomical and chemical investigation and biological observation enable us to form in some degree a mental picture of the changes affecting the bioplasts of the tissues and of their action during life, and to form some idea of the phenomena which actually occur and which succeed one another from the time when the speck of living matter began to increase and multiply exceedingly, and some of the resulting bioplasts first began to produce perhaps only soft temporary tissue, to the time when the formation of lasting tissue and the construction of the several organs was complete, and their action became necessary to the well-being of the organism now developed and attaining its normal and permanent characters. The longing on our part to find out exactly how the several parts and organs of a complex organism are formed, and precisely how they act and what work they do is certain to lead to real advance of hygiene, psychical knowledge, and medicine.

Much, indeed, has been and is being gained in this direction, but our knowledge is still far from being accurate, definite, and complete in many important points which will certainly ere long be determined. Nevertheless, I appeal to all to consider whether the results of minute anatomical research and our knowledge of the minute structure and mode of action of various tissues and organs are not at this time really in advance of some of the doctrines still held and taught far and wide upon these matters—nay, upon the question of the nature of the endowments and the mode of increase of the very simplest living particles in nature; and I fear it will yet be some time before a clear and accurate account will be given and generally accepted of what goes on at the moment when a molecule of non-living matter receives its vital endowments. Indeed, I doubt whether any student of any department of living nature can acquire from our best works on physiology a definite notion of the ordinary processes which are necessary to his existence from moment to moment and to that of every living particle in the life world.

The importance of the thorough investigation of the physical and chemical phenomena of the living body is unquestioned, but is it not a fact that during the last forty years or more there has been a persistent and most determined effort on the part of some highly distinguished philosophers as well as physiologists, physicists, and chemists, and even physicians, to persuade mankind that all vital actions are in their nature but physical and chemical, while no one has succeeded in proving his case or even in adducing evidence that his contention is likely to be established in the future? The chemico-physical investigation of living nature has rightly been regarded as a highly important department of scientific work and thought, but is it quite suited for the training of the medical student, or, indeed, for students generally? Nor is it the fact that only undue prominence has been given to the importance of physical and chemical phenomena, for has not the influence of vitality in determining the course and character of the physical and chemical changes in matter during the living state been by some recent as well as by ancient authorities wholly ignored and denied? Unfortunately, too, physico-chemical doctrines of life have been accepted and made popular, and in consequence many thoughtful persons have been persuaded that these views, if not at this time completely established, would certainly be proved to be true some time hence, just as the idea of the evolution of life somehow from the non-living has gained credence, although there is not a fact convincing to the reason to be adduced in its support. Indeed, no one who advocates the physical doctrine of life has even attempted to explain to us the exact difference between a particle of matter in the living state and the same particle when death has occurred. Does not the vast, far-reaching influence of special vital power which is associated with a modicum of matter preclude the possibility of vital actions being only physical and chemical? Has any true analogy been pointed out between this far-reaching vital power over matter which perhaps is not to come under its influence for many years, and any physical or chemical action whatever? But some might say, "chemical action goes on after life has ceased in certain cases, as shown by considerable rise in temperature," to which the reply is that "in the situations where heat is being evolved in the dead body for some time after 'death' has taken place, particles of living matter or bioplasm still exist and continue to live until the temperature has ceased to rise.

Is it not indeed very doubtful whether the wonderful work of highly skilled scientific workers in physiological chemistry and physics in the splendid laboratories rightly provided in many institutions in every part of England will result in establishing the longed-for conclusions with reference to the nature and cause of vital processes, though quite recently another step towards that desired consummation of the universal operation of physical law seems to have been made by the discovery of "living crystals," of which I saw, or thought I saw—or did I dream I saw—the announcement? Almost daily new substances are discovered and bodies of wonderful properties extracted from a compost consisting of many textures, as well as the special secreting cells, vessels, &c., of an organ removed from a dead animal and beaten up into a soft pulp and then subjected to various chemical operations. But what right have we to assume that any of the substances at last obtained in a pure, perhaps in a crystalline, form were actually present when the organism was alive and the several bioplasts were performing their active vital functions? Is it reasonable to conclude that any theory based upon the results of such post-mortem operations ought to be accepted by us as even a probable solution of the facts, or that anything is likely to be gained by such methods of investigation concerning the nature of life? The conditions present in the laboratory are absolutely different from those in and around every particle of matter which is alive.

Is it not wonderful, therefore, that a few authorities still advocate a physiology consisting of chemical and physical phenomena, a physiology which would seem to be but a department of physics and chemistry—a physiology without vitality? No explanation whatever has been offered by the advocates of this abiotic physiology of the manner in which according to their view the chemical and physical actions are determined, governed, or regulated, or of the means by which the never-ceasing analytical and synthetical operations are carried on, or why the atoms—if atoms there be—change their places and relations to one another, or what governs their constant movements, or how their behaviour during life differs from their behaviour when life has ceased. But men are getting dissatisfied with a physiology and philosophy which postulates a living nature without vitality. Some of us rebel at being called mechanisms built by the sun, or laboratories of a kind, or machines for the conversion of energy. Nor can we any longer find comfort in the comprehensive words "protoplasm," "metabolism," "differentiation." We want to learn in what particulars Life differs from Non-life, or to be compelled by fact and reason to admit that there is but a difference of degree—the one state passing gradually into the other state.

Every attempt to account for the formation, construction, and action of tissues and organs of anything living without the recognition of vital agency has signally failed. Deposition from fluid, the gradual concentration of a solution, conversion, condensation, and processes allied to crystallisation have been proposed and found wanting. Much conjuring is still done by that learned word "differentiation," which seems to have satisfied many and silenced or soothed appeals for information. Can anyone point to one instance in all living nature in which tissue or structure has appeared in the absence of living matter or bioplasm? Each little morsel of tissue is formed by a particle or a portion of a particle of living matter passing into the *formed state*, while the rest of the particle may continue to grow and furnish more bioplasm for subsequent conversion into formed material or tissue. The process of formation really depends upon changes determined by and prepared for during the life of the bioplasm, and must, as it seems to me, be referred to vital power, which ceases at the *moment of formation*. So slowly, so gradually, does tissue formation proceed that it is impossible at present to see and follow the change from *living* to *formed* in any one spot of a specimen placed for examination under high magnifying powers; but by careful comparison of different parts of the same specimen in which tissue formation is going on a correct idea of the operation may be formed.

The particular characters and composition of the tissue

must then, as it seems to me, be referred to the vital power of the bioplasm which was concerned in its production. As I have shown long ago, no tissue can add one particle of new tissue to that which is already formed, and I venture to think this fact has been proved by the evidence that was advanced some years ago and illustrated by my drawings. The formation of the various special compounds which characterise different secretions, as bile, saliva, &c., as well as the so-called products of disintegration, are also results of the conversion of matter that *was living* into these substances. *Formation* therefore is absolutely different from all forms of precipitation, deposition, crystallisation and the like, and is one of the wonderful changes due to *Vitality*. All crystals are non-living and nothing that lives is crystalline.

I challenge opponents to advance evidence against the view that *formation*, *nutrition*, *disintegration*, *oxidation* as they occur in the living world, are dependent upon *Vitality*; that structureless living matter, *bioplasm*, is the only substance capable of building up and breaking down, of forming tissue and removing it, of taking up matters resulting from disintegration and of conversion. So far from it being correct to say that these processes are results of physical and chemical change, are they not just as much dependent upon *Vitality* as the chemical operations in the laboratory are dependent upon *the chemist?* So in the production of tissues and chemical compounds characteristic of particular and higher forms of life, between the constituents of the *food* on the one hand and these *formed matters* on the other, several kinds of bioplasm live and multiply, form and die, before the results which have been foreseen as it were from the first are accomplished—all through the complex processes, *living matter* being the sole metabolic substance and *Vitality* the sole metabolic *agent*.

Biology, though the most recent, is by no means the least important of the "'ologies." The course of physiology of man which used to be so useful to the student training for the practice of medicine has of late years, under the influence of purely scientific professors devoted to their subject, many of whom have been engaged in original research as well as in teaching medical students the general principles of physiology, grown to such an extent, both in length and in elaborate complexity, that a division of the teaching labours of this department has been rendered necessary, and the course has been divided into physiology proper, histology, and elementary biology. The last has been regarded as a course preparatory to that of pure physiology and has usually been in the hands of a separate scientific teacher who has not yet advanced to special professorial dignity. In this elementary course is taught something of the use of the microscope and the best methods of preparing tissues for examination. The professor of physiology is now relieved of a difficulty resulting from the pupil not having been grounded in general knowledge of living nature before he entered upon the study of physiology proper.

In this biological course every student can gain some insight into the phenomena of life as observed under simple conditions in living organisms including plants. He sees and may contemplate the wonderful vital movements of living matter or bioplasm as exhibited in the amœba, living leucocytes, mucus, and pus corpuscles of man, also in the "cells" of Vallisneria and in the hair-like bodies of the flower of Tradescantia, a plant which will grow in the heart of London and other large cities. The student also gains some information about the general structure of some of the invertebrata and the general anatomy of the lower vertebrata as shown in the respiratory, circulatory, and digestive organs, and perhaps the nervous system of the fish, the frog, the bird, and the mammal. Under the new regulations this course of elementary biology may be taken at one of the several schools, colleges, or institutions now established in many parts of the country for teaching certain branches of elementary science and some technical subjects connected with secondary education for the people. By this arrangement the student of the future will be better prepared than his predecessors for entering upon the study of certain departments of science absolutely necessary for those who are training for our profession, and indeed fit subjects of general education. In these days ought not everyone to be acquainted with the broad facts of life and death by which these very different states of matter are, and have ever been, sharply separated in nature? And is it not true that living matter should have an appropriate name by which it would be for once and for all marked off from matter in any other state—a name indicating its unique position in the material universe and its exceptional endowments—so distinct from all known material characters and properties? In *bioplasm* we have a word which is well defined, and unlike *protoplasm*—that may be living or dead or even cooked and yet be protoplasm. The instant bioplasm dies it ceases to be bioplasm and resumes the state of ordinary non-living matter. I have for many years considered bioplasm to be the most suitable word for the matter which is alive, and for some time it has been inserted in most of our modern dictionaries. It may be well to note that in the New Sydenham Society's "Lexicon of Medicine and the Allied Sciences," by Mr. Henry Power and Dr. Leonard Sedgwick, among the words having the root *βίος* we find the following:—"biological," "biologist," "bioplasm," "bioplast," "biosis," "biotic," "biotomy," "bioscopy," "biolysis," "biogenesis," and "abiogenesis."

Physical and chemical physiology has advanced so much of late years that for its profitable study a good knowledge of chemistry and physics and a course of practical work in the laboratories is necessary. This for the general student of medicine would not be possible even though the medical course were extended to ten years. An advanced knowledge of physical physiology and familiarity with the numerous delicate and complex instruments required in the pursuit of this department would be of little service to the medical student in the future practice of his profession.

The case, however, is very different with regard to biology, for we are dealing with vital actions and deranged vital phenomena during our whole life, and it is certain that a knowledge of the minute anatomy of tissues and of the mode of their production and action must be of great assistance to us when we are trying to form a correct idea of what is actually wrong in the tissues of the person whose sufferings we are endeavouring to relieve and whom we are hoping soon to restore to the normal condition of health.

Of all the progressive changes carried out in medical education of late years I believe the recognition of biology as an essential subject to be one of the most important additions to our curriculum—not only because for the first time our students early in their medical training are enabled to gain some general knowledge of living nature of interest to every intelligent person and absolutely necessary for a knowledge of man's structure, but also because what the student learns in this course may suggest to him certain new lines of investigation which may assist in advancing medical learning and the good management of the sick and injured.

In elementary biology the student learns how to prepare tissues for microscopical examination and the best means of clearly displaying structure and the colourless structureless bioplasts concerned in tissue formation and in promoting the circulation of fluid in the interstices of the tissues by which their healthy state and normal action are preserved.

As time goes on the new biology will become one of the most important subjects of early medical education, and there is every probability of its taking its place as a necessary subject in the general education of everyone, and I have no doubt that elementary biology will soon be taught in all national and board schools. Indeed, already a few school teachers are attending courses of biology in order that they may undertake the teaching of this very important subject.

(To be continued.)

THE LATE MR. C. W. PRICE.—An inquest was held in Cardiff on May 25th upon the body of Mr. Charles Williams Price, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., formerly of Court House, Caerphilly, who had died from the effects of opium poisoning. The jury returned a verdict that the deceased had died through opium poisoning and that there was no evidence to show in what state of mind he was at the time.

A GRAND festival concert will be held at the Crystal Palace on Saturday, June 25th, in commemoration of the sixtieth anniversary of the Queen's coronation. Madame Adelina Patti will make her first appearance at the Crystal Palace since the Handel Festival of 1880 and will be supported by Miss Clara Butt, Mr. Edward Lloyd, Mr. Santley, and the London contingent, numbering some 3000 voices, of the Handel Festival Choir. A varied programme of first-class music will be provided.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RUPTURE OF THE LIVER; FORMATION OF CYSTIC SWELLING CONTAINING BILE-STAINED FLUID.

BY ARTHUR RUSSELL ALDRIDGE, M.B., C.M. EDIN.,
SURGEON-CAPTAIN, ARMY MEDICAL STAFF.

THE case related in THE LANCET of March 21st, 1898 (p. 719), by Mr. C. Whipple under the above heading, and about which it is remarked that probably no similar one has been recorded, induces me to send the following notes of a case in which the symptoms were very similar, though there was no history of injury except muscular violence.

The case occurred a few years ago, and was under my care during the early stage only, so I am unable to give very complete notes. An officer, aged twenty-four years, who had been in India about a year, enjoying good health during that time, while training a raw and hard-mouthed pony with polo stick and ball suddenly felt pain in the right hypochondrium. After a few hours this became very severe, and on examining him it was found that there was severe pain and tenderness, most marked at a point just below the costal margin, a little to the right of the middle line. A slight puffy swelling could also be detected over the costal cartilages near this spot. The symptoms were attributed to rupture of some fibres of the rectus muscle and the patient was treated accordingly, but after a few days, the pain continuing, a swelling began to appear just below the costal margin. As fluctuation could be felt in this it was aspirated and one and a half pints of slightly blood-stained clear fluid were withdrawn. On examination, besides showing the presence of blood, the fluid gave the reactions for bile acids and pigment, but though carefully searched for no hydatid hooklets or membrane could be found. During this time the patient's temperature remained slightly above normal. From this time the case came under the care of another medical officer and the history was briefly as follows:—After about a week, the fluid having reaccumulated, the cyst was again aspirated and similar fluid removed. On a third tapping a short time later the fluid proved to be slightly purulent. The cavity was now opened by incision, about a pint of pus was removed, and a drainage-tube was inserted, but in spite of daily antiseptic irrigations of the cavity symptoms of septic infection appeared and the patient died from this. No post-mortem examination was made. The exact nature of this case has always remained a matter of uncertainty to me.

Malta.

GENU RECURVATUM.

BY ARTHUR S. TAYLOR, M.D. CANTAB., F.R.C.S. ENG.

THE condition known as genu recurvatum, described by Mr. Sheild in THE LANCET of May 28th, is sufficiently rare to make it desirable that all cases should be carefully noted, whether the deformity be severe or slight, in order that some rules should be arrived at for treatment. I think that the following case, though of a decidedly milder type, is very instructive.

The patient had had four children previously. The labour in each case had been tedious but straightforward. When she was in about the fourth month of her pregnancy she had a bad fall over a rope and injured her knee. This fact was, of course, made much of later, but the real interest of the accident lay in the question as to how far it may have been responsible for any malposition of the child's legs or for the course of after-events. It is curious how often there is a history of injury in these cases. The confinement was expected some time in February, 1898, and indeed about this time the liquor amnii escaped and feeble labour pains came on. The child, however, was not born until March 17th—i.e., one month later. The labour was difficult owing to the size of the child and forceps had to be used. The head was born in the first vertex position. The condition noticed at birth was the following. The legs appeared to be rather short but otherwise the whole body was well developed. The right leg was hyper-extended on the thigh about 10° beyond the straight and could only be flexed through 45°. There were two transverse furrows in front of the knee-joint. I thought I detected a rudimentary patella, but could not be positive. The left leg was hyper-extended about 30° and could not be flexed at all. The same transverse furrows were present, but there was no trace of a patella. I expected that the child would have to wear some kind of support for the rest of her life and ordered gentle massage and flexion. The condition on June 1st was as follows. Neither leg could be hyper-extended. Both legs could be flexed until the heel touched the buttock. There was a well-marked patella to be felt in the tendon of the right quadriceps extensor and a less well-marked one in the left tendon. The transverse furrows more or less remained.

This case appears to me to be rather one of faulty or arrested development than of malformation. The sequence of events seems to be this. The mother had a fall about one month later than the date at which the patella cartilage first appeared. Possibly the result of this was to extend the legs on the abdomen, the hip-joints being completely flexed. The quadriceps extensor being relaxed the stimulus necessary to the proper development of the sesamoid bone was removed. This condition would be accentuated in my case during the last month owing to the escape of the liquor amnii. The posterior crucial ligaments would also develop somewhat too short and limit flexion. The interesting point is that after birth and under normal conditions development has proceeded on the proper lines. In Mr. Sheild's case there was definite malformation and at the end of eight weeks no improvement had taken place. At the same time great injury is likely to follow forcible manipulations in such young subjects and no good will be done if the quadriceps extensor tendon is bound down to the shaft of the femur. If such a condition could be ascertained I would recommend subcutaneous section of any opposing bands. But in any case it seems worth while to wait a few months. Ossification commences in the patella in the third year and it will be easier to ascertain the exact condition when the child has developed somewhat, and the more simple cases like my own will escape operation.

Surbiton-hill.

TWO CASES OF THE EXTERNAL EAR COMPLETELY CUT OFF AND SUCCESSFULLY REPLACED.

BY F. A. PURCELL, M.D., M.CH. R.U.I.,
SURGEON TO THE CANCER HOSPITAL.

IN THE LANCET of June 4th Dr. William J. Brown reports an "Extraordinary Case of Horse-bite; the External Ear completely Bitten Off and Successfully Replaced." This paper recalls two cases which occurred some years ago in my own practice in which the external ear was completely cut off and which I successfully grafted on.

The first was that of a groom who came to fisticuffs with his horse in his loose box; he got knocked down and the horse trod on his head and completely cut off the man's external ear. The man secured his ear and came to me without delay.

The second case was that of a lad. While at play he rolled down the stone steps of an area. In his fall his external ear was cleanly cut off. His mother brought him at once to me, bringing the ear with her.

I adopted the same method in replacing the ears in both cases. As I had been successful in the first I hoped to be so in the second, as the result proved. The moment I got the ear I placed it in warm water nearly blood-heat, washed it and cleaned it; then I washed and prepared the patient. I applied the ear and noted all landmarks to make sure of its accurate adaptation. I passed interrupted horsehair sutures all round, without tying them until the last was passed; by this means the needle was able to be inserted through both edges, having noted the corresponding spots by jagged skin or otherwise. When the sutures were tied taut the ear fell into its exact position. I had no trouble with the curled-up edges. The ear was then covered with gauze and wool and bandaged. I ordered the application of a small flannel bag loosely filled with table salt; this to be heated in a saucepan over the

fire until made hot and renewed when cool. This bag was then laid over the ear outside the dressings and bandage. My object was to keep the ear warm and restore the circulation. In both cases the ear became united. I saw the patients many times after; the ears were of good colour, but became numb when they were pinched.

Manchester-square, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF VESICO-UTERINE FISTULA; CLOSURE BY TURNING CERVICAL CANAL INTO BLADDER; SUBSEQUENT OÖPHORECTOMY.

(Under the care of Dr. WILLIAM DUNCAN.)

WE cannot but agree with Dr. Duncan that the case he has recorded below is probably unique. As to the mode of formation of the fistula it is not unlikely that the explanation suggested is correct, but it may possibly have followed a coincident tertiary syphilitic ulceration of the vagina and therefore be not necessarily traumatic. The method employed to close the gap was exceedingly ingenious, and its suitability was fully demonstrated by its success. It would be of interest to know whether, in cases such as this where the only outlet from the uterus is through the bladder, the urine makes its way into the cavity of the uterus, and if so, whether the mucous membrane of that organ tolerates the urine.

A single woman, aged thirty-three years, was admitted into Prudhoe Ward, Middlesex Hospital, on Jan. 1st, 1898, complaining of constant discharge of urine from the vagina. There is nothing of note in her family or personal history. She had one child nine years ago. The patient was sent to Dr. Duncan by the house surgeon of a provincial infirmary, who gave the following account of her case: "The patient first came under our notice two years ago suffering from acute iritis; this was very persistent. We believed it to be of a syphilitic nature and eventually did an iridectomy. Ten months ago she was admitted with a large tumour on the right side of the abdomen; it had apparently no connexion with the pelvis and was situated immediately beneath the liver. Abdominal section was performed on July 2nd, 1897, and proved the swelling to be an enormously distended uterus with walls like an ether bag. The incision was closed and the os uteri was dilated with Hegar's dilators; the membranes were then punctured, allowing the escape of a very large quantity of fluid. The patient was sent back to the ward and eighteen hours later a four or five months' fœtus arrived without any artificial aid. It was putrid and stinking. I gave a uterine douche after delivery and then handed the douching on to an experienced nurse to do night and morning. A week after delivery the bed was saturated with urine. On examination the vagina was found to be intact, but on inserting the finger about an inch into the cervical canal a communication with the bladder was felt. About a month later I was deputed to close it. After about two hours' work and having cut away the whole of the anterior lip of the cervix I managed to close it with a dozen sutures. It held for a week and then broke down."

On admission to Middlesex Hospital the patient was somewhat anæmic-looking. The heart and lungs were normal. There was a central cicatrix extending from the umbilicus to the pubes. The vulva and vaginal outlet were marked by syphilitic scars. *Per vaginam* urine was dribbling away. High up in the roof of the vagina there could be felt an opening into the bladder larger than a shilling. The margins felt thickened and indurated. On Jan. 23rd, under anæsthesia a careful examination was made with the patient in the lithotomy position. The anterior lip of the cervix was completely absent, the posterior lip was 2 in. long, and to its upper third the margins of the fistulous opening were firmly adherent. The opening into the cervical canal could not be seen, even when the posterior lip was pulled down by means of a volsellum forceps. On passing the finger into the bladder a phosphatic calculus of the size of a filbert was detected and removed. It was evident that it would be impossible to dissect off the bladder from the cervix in order to free completely the margins of the fistulous opening and bring them together, so Dr. Duncan decided that the only course lay in an attempt to fix the vaginal portion of the posterior lip of the cervix into the opening and thus close the fistula, but at the expense of diverting the uterine canal into the bladder.

On Feb. 3rd, gas and ether having been administered and the patient placed in the lithotomy position, the vaginal mucous membrane was removed from the margins of the fistula, leaving a raw surface about ¼ in. wide; next the anterior surface of the posterior cervical lip was completely converted into a raw surface. With a very curved Hagedorn needle the raw surfaces on the vaginal wall were brought into intimate contact with the raw surface on the cervix by means of seven silkworm-gut sutures fastened with coils and shot. A winged indiarubber catheter was placed in the bladder so that the urine could run off into a bottle as quickly as it entered the bladder. The subsequent progress of the case was uneventful; the stitches were removed a fortnight later. There was no trace of leakage into the vagina. On the 16th as the urine was slightly alkaline it was decided that the bladder should be gently washed out twice daily with a warm boric acid solution. On the 23rd the urine was normal and the irrigation of the bladder was discontinued. On the 25th blood appeared in the urine, but there were no clots or shreds. The urine was of specific gravity 1017 and was acid. The patient felt some little pain in the abdomen. On March 3rd it was noted that blood continued to pass with the urine for four days and then ceased. Dr. Duncan advised the patient to let him remove her ovaries and tubes so as to prevent bladder troubles at her menstrual periods; to this she consented.

On March 9th, gas and ether having been administered, a 4 in. incision was made through the scar of the operation which was performed nine months previously. The omentum was found to be intimately adherent to the abdominal wall down to within 2 in. of the pubic crest. Into this space, where the omentum was non-adherent, the ovaries and tubes were drawn up and removed completely in the usual way. The abdominal wound was then closed with continuous silk sutures in two layers (fine silk for the peritoneum and thick silk for the remaining structures). Convalescence was uninterrupted. On the 16th the bowels were relieved by an enema, the continuous sutures were removed, the wound had perfectly healed, and there was no moisture in the vagina. The patient could hold her urine for eight or nine hours. On April 6th the patient was very well and left the hospital to go home.

Remarks by Dr. DUNCAN.—This case—which is, I imagine, unique, not only in the manner in which the fistula was produced, but also in the subsequent treatment—presents several points of much interest. It was evidently in the beginning one of hydramnion, which condition sometimes renders diagnosis of pregnancy difficult. The deflection of the uterus to the right side probably made the medical men put aside the question of pregnancy, but it should not have done so, as it is by no means uncommon to find the gravid uterus deflected to one or other side of the middle line, especially to the right. Then as regards the formation of the fistulous opening it is impossible to say definitely whether it was caused by Hegar's dilators or by the nozzle of the syringe which was used twice daily by a nurse to give an intra-uterine douche. If, however, the injury had been caused by Hegar's dilators one would have expected the urine to commence to dribble through the vagina on the third or fourth day instead of on the eighth. The tissues of a gravid uterus are easily torn through, besides which this woman was syphilitic and any damaged structures would be more likely to break down than in a healthy patient. At all events the case well illustrates the necessity for using great gentleness and care in dilating a gravid uterus and in the use of an intra-uterine douche, which latter, in my opinion, ought never to be relegated to a nurse however experienced she may be. Having detected a fistulous opening into the cervical canal the usual course is to draw down

the cervix with volsellum forceps and then to separate the bladder wall from the uterus until the fistula is freely exposed, when it should be closed with sutures as in a vesico-vaginal fistula, leaving the opening into the cervical canal to close up of itself. In this case probably the house surgeon was unable to reach the opening in the way just mentioned, so he had to cut away the whole of the anterior lip of the cervix and one sympathises with him for having to exercise his 'prentice hand on such a difficult case. When the patient was admitted under my care I reluctantly came to the conclusion, after a careful examination, that the only way to close the fistula was by bringing the posterior lip of the cervix forwards and uniting it with the bladder wall; this of course necessitated deflecting the uterine canal into the bladder and making the woman sterile. Lastly, although cases have been recorded in which women have menstruated through the bladder without ill result it seemed to me best to avoid subsequent risks by performing cöphorectomy.

MADRAS GENERAL HOSPITAL.

TWO CASES OF FILARIAL DISEASE.

(Under the care of Surgeon-Captain F. J. CRAWFORD.)

CASE 1.—A man went to the Madras General Hospital on March 14th, 1897, suffering from filarial disease, the trouble for which he sought relief being periodical attacks of pain and swelling in both groins, with swelling of the "testicles" and fever. From his own account it was evident that the attacks, which were becoming more severe and frequent, were making life a burden to him. The sense of heaviness and uneasiness, the irritation of the pelvic and genital organs, the consequent fits of nervous depression and the melancholy state of mind caused by inability to carry out his marital duties were graphically described in a letter written by him while he was waiting his turn for operation in the hospital. He said that if he could not obtain relief he would end his life and his appearance and general demeanour tallied well with this statement. He was troubled with nocturnal emissions and though quite a young married man the well-known mental depression which characterises such cases was well marked in him. On examination there was discovered on the right side a hydrocele which was not of the ordinary kind, but quite soft and flabby, the skin as well being slightly thickened. Both groins were the seats of swellings which consisted of several distinct glandular enlargements and enlarged lymphatic vessels, giving to the touch the characteristic boggy feeling, gradually subsiding to some extent on firm pressure. The affection had lasted for some years and the swellings had gradually become more marked. Exacerbations occurred every month or so, at which times the local trouble increased, and on these occasions the patient's mental condition, according to his own account, was one of great despondency and anxiety about himself. He made no secret of the almost uncontrollable impulse which he had during the attacks to put an end to his life. The hydrocele was first operated on and after letting out the pinkish milky fluid the tunica vaginalis was freely removed. The affection, in fact, was treated in exactly the same manner as an ordinary hydrocele. Healing readily took place and the patient remained in hospital because subsequently to healing his groins felt heavy and swollen when he was standing. The operation on the hydrocele was performed on March 17th, and on April 14th, after he had been completely cured of the hydrocele, the left groin was operated on, as it presented more urgent symptoms than the other. Two enlarged glands were removed from the inguinal region and they presented on dissection small cavities containing milky fluid, one large gland, which was like a horseshoe in shape, curling behind the vessels on the inner side and having a large portion posterior to them. Several lymphatic vessels, which were much enlarged, were cut during the operation but they gave no trouble after being caught with artery forceps. The wound healed within a week by first intention and on the 21st the right groin was cleared out. This gave more trouble owing to the number and large size of the lymphatic vessels, the field of operation being obscured by the amount of milky fluid which exuded notwithstanding the efforts to tie the vessels. The cavity quickly refilled each time it was swabbed out and required packing with eucalyptus gauze before being dressed. This gauze was removed on the next day and the subsequent healing took place readily under a firm antiseptic dressing; the limb was kept in the flexed position for a few days. There was no swelling of the limb itself due to the lymphatic obstruction either before or after the operation. This very interesting case was rendered of further interest by the subsequent history. The patient left the hospital with the operation incisions completely healed and remained with friends in Madras for a couple of weeks before returning to his native place. About ten days after leaving the hospital he returned to say that he had just had a slight attack, but this time the skin of the scrotum had become thick and heavy without either of the groins giving him trouble and without any implication of what he called the "testicle," alluding, of course, to the tunica vaginalis, which was the seat of trouble during his former attacks. This fact pointed to the existence of lymphatic obstruction in the neighbourhood without actual enlargement sufficient to show on the surface of the body. The emissions which were so harassing no longer occurred and he stated that he was "quite a new man." He will probably return to the hospital some day with a lymph scrotum and a further operation will be necessary. Taking the case, however, as a whole no one will doubt the propriety of the different operations performed and their success in affording relief.

CASE 2.—The patient was a Eurasian who was admitted to the hospital for a troublesome swelling in the right groin in the region of Scarpa's triangle. It was the seat of periodical enlargement accompanied by fever and uneasiness. The disease had lasted for many years and was limited to this region. No symptoms pointed to the involvement of other lymphatic vessels. A longitudinal incision exposed a mass of lymph tissue which was composed of several moderately enlarged glands and dilated vessels. Oozing of lymph was free during the removal and it was found to be impossible to secure all the discharging points. The upper half of the incision was therefore stitched and the cavity was firmly packed with antiseptic lint. Several ounces of lymph must have been lost. Healing, though delayed by the fact that the wound was obliged to be kept open, was complete and uneventful. The oozing of the lymph ceased on the third day and did not recur and the patient left the hospital with his local trouble quite cured. On examining the removed mass a probe could readily be passed along the dilated vessels, which were seen to anastomose freely. No filariæ, however, were detected in the tumour.

Remarks by Surgeon-Captain CRAWFORD.—Some interest has been excited by a paper read recently before the Bombay Medical and Physical Society on filarial disease. This disease is common in Southern India and the Madras General Hospital is seldom without a case in its surgical wards which is either being operated on or awaiting operation. After long trial we have arrived at fairly definite rules to guide us in the treatment of this affection by operation. The disease which is known as filariasis cannot now be looked upon as being of purely a local character in any instance. When a patient is attacked by the parasite he probably remains a victim as long as he lives. The question of operation therefore resolves itself into the treatment of the different local troubles and inconveniences arising from the blocking up of the lymphatic system in different parts of the body. Many of these local troubles are subjected to operation with very decided success, so much so that there is neither doubt nor hesitation on the surgeon's part provided that the general condition is satisfactory—in fact, the ordinary limitations attending all surgical procedures which are undertaken where life itself is not in the balance. I need only mention lymph scrotum, filarial hydrocele, and abscesses occurring in the course of lymphatic vessels where dead parent worms lie embedded. Though the system may still contain numbers of the parasites there is no doubt regarding the utility of the procedure and the relief obtained. In these cases, though the disease is the result of interference with the flow of lymph, the glands and the main lymphatic vessels themselves are not found to exhibit symptoms. In another class of patients the blocking of the lymphatic system in a part shows itself in dilatation of the lymphatic trunks, which contain a pinkish milky fluid and have thickened walls. These dilatations occur usually in the neighbourhood of glands and on careful dissection enlarged lymph vessels may be seen passing into and others passing from them to other dilatations or to the glands close by. Accompanying these are enlarged glands due either to

thickening of their tissue and proliferation of the numerous lymphoid cells they contain or to enlargement of the lymph spaces in their structure. The groin is commonly affected, both the femoral and inguinal regions participating in the trouble and frequently on both sides. It is extremely probable in these cases that the pelvic and other internal lymphatics are also enlarged, especially where the affection is symmetrical, and at first sight it would appear that removal of the groin glands would give only temporary relief of the symptoms and be followed in a very short time by a return of the local trouble in its former severity. Surgical interference, however, yields more favourable results than this. That treatment is urgently needed in many cases is seen by the number of patients who come to our wards and by the severity of the local symptoms. One of the cases related above is a good example of this. As swelling occurs at periodical intervals, the sense of weight and fulness increases, pain, weariness and lassitude are complained of, with reflex irritation of all the pelvic organs, rendering the patient's life a misery to him. The fever, too, is severe and quite incapacitates him in his work, sometimes each attack lasting as long as ten days. A successful operation means much to the patient, and while it cannot be said to cure the general disease it takes away completely his local trouble. It must be remembered, too, that these local manifestations take years to develop. The surgeon in India is, of course, confronted with the difficulty of tracing the subsequent histories of many of his patients and this may detract from the value of individual accounts of cases; but so far as it has been possible to trace them patients are quite satisfied with the treatment and its subsequent result. Local recurrence, too, is practically unknown.

The wounds caused by complete removal of filarial glandular enlargement and lymphangiectasis have always been looked upon here as in no way differing from ordinary surgical wounds and no case so far has occurred to induce us to look upon them in any other way. Careful dissection is naturally required, but owing to the small area involved one pair of hands suffices to carry out the necessary steps of the operation and external contamination is reduced to a minimum. For this reason we look upon these cases as peculiarly suited to operative measures. Considering the comparative simplicity of the measures and their results as detailed above I would not have thought it necessary to write on this form of local consequences of filarial disease had not very different results been obtained in Bombay following these operations. I am not aware that any elaborate statistics have been compiled on this individual subject, but the fact is we in Madras have not thought it necessary. We have looked upon all local filarial manifestations as being subject to ordinary surgical considerations when the question of operation was suggested by the arrival of a patient exhibiting them.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Uterine Fibroids in Young Women.—Complete Incontinence of Urine cured by Ventro-fixation of the Uterus.—Exhibition of Specimens.

A MEETING of this society was held on June 1st, Dr. C. J. CULLINGWORTH, the President, being in the chair.

Dr. HERBERT SPENCER read a paper on Two Cases of Fibro-myoma of the Uterus removed by operation from women under twenty-five years of age. The diagnosis of the nature of the tumour was verified by examination with the microscope and the ages of the patients by obtaining their certificates of birth. In the first case, in which the age of the patient was twenty-four years, the tumour weighed 4 lb. 9½ oz. and was removed by amputation after laparotomy, the pedicle being treated extra-peritoneally. In the second case, that of a patient aged twenty-three years, the tumour with the uterus weighed 16¼ oz. and was removed by vaginal hysterectomy after the peritoneum had been opened in an attempt to enucleate the tumour. The patients were in good health two years and one year after operation respectively. A brief abstract was given of 40 recorded cases of uterine fibroid tumours occurring in women under twenty-five years of age. In at least 11 of the cases the diagnosis was clinical and in only 4 cases was the diagnosis verified by examination with the microscope. Dr. Spencer concluded that uterine fibro-myoma is rare before the age of twenty-five years and very rare before the age of twenty years and that there is no satisfactory record of its occurrence before the age of puberty.—Dr. BOXALL gave details of his case referred to by Dr. Spencer. The patient was born on Aug. 9th, 1870. She was therefore just twenty-three years of age when she came under observation in August, 1893. On account of pain and fever an operation was performed. Two fibroid nodules not larger than a nutmeg were visible on the abdominal surface of the uterus near the fundus. A mass in the left broad ligament was enucleated and removed with the uterus and appendages, the pedicle being secured by a clamp outside the abdomen. The mass proved to be composed of involuntary muscle growing from the left side of the uterus. Under the microscope it exhibited the ordinary characters of a fibro-myoma.—Dr. HERMAN, in reference to some remarks by Dr. William Duncan, said that his opinion as to the practicability of enucleation in the case of the tumour shown by Dr. Duncan at the November meeting of the society remained the same as it was in November. He did not think Dr. Duncan had shown (as was stated in the Transactions) that the uterus might easily have been perforated had enucleation been attempted. He thought, on the contrary, that by morcellement the fibroid could easily and safely have been removed. He did not think Dr. Spencer's case showed that any greater damage attended enucleation, for his patient had recovered as well as she could have done after abdominal hysterectomy and without the disadvantage of an abdominal scar. He (Dr. Herman) thought the preliminary dilatation was most safely done by tents.—Dr. PETER HORROCKS did not think that the paper was intended to provoke a discussion on the relative merits of enucleation of fibroid tumours of the uterus and their treatment by hysterectomy. It had been said by Mr. Alban Doran that these tumours never occurred, or were practically unknown, before the age of twenty-five years. It must be admitted that true fibroids—that is, fibro-myomata—of the uterus were rare before the age of twenty-five years and were unknown before puberty. They were also much commoner in single women than in married women, and in women who had never been pregnant than in women who had. Moreover, the tumours began to atrophy, as a rule, after the climacteric. All these facts proved that in some way fibroids were associated with active menstrual life.—Dr. LEWERS agreed with the remarks which had been made by Dr. Herman as to enucleation. He considered that the justifiability of enucleation *per vaginam* depended chiefly on the position of the fibroid in relation to the uterine wall. When the fibroid was so situated that its largest diameter projected free in the uterine cavity and only a moderate part of the tumour (one-third or less) still remained embedded in the thickness of the uterine wall enucleation by morcellement *per vaginam* was free from any great risk and was the proper treatment for the case. When, however, examination showed that the largest diameter of the tumour was still in the thickness of the wall of the uterus he regarded enucleation as exceedingly dangerous.—The PRESIDENT said that in the course of a discussion upon a specimen of fibroids of the uterus in a woman twenty-six years of age shown for him by Dr. A. F. Stabb fifteen months ago Mr. Doran had remarked that a monograph on the subject of fibroids in early life was much wanted. Such a monograph had now been produced. It was to be hoped that Fellows would henceforth recognise the importance of recording on the lines Dr. Spencer had laid down as essential for scientific accuracy all cases that came under their observation of uterine fibro-myomata occurring in young subjects. As regards enucleation *per vaginam* he was bound to say that in his experience this method had proved more dangerous than removal of the entire uterus.—Dr. SPENCER, in reply, said that the object of the paper was to show that fibro-myoma of the uterus did occur in women under twenty-five years of age. Its rarity, judged by public records, was shown by the fact that Dr. Boxall's was, as far as he knew, the only other case fully and satisfactorily described by an English author. He had not discussed the treatment of these cases, but he might say

that enucleation of submucous tumours *per vaginam* had given him very good results and was an exceedingly valuable operation.

Dr. MACNAUGHTON JONES read notes of a case of Complete Incontinence of Urine cured by Ventro-fixation of the Uterus.

The following specimens were shown:—

Mr. DORAN: Blood Concretions in the Ovary.

Mr. BLAND SUTTON: An Ovary containing a Calcified Ball, probably a large calcified corpus fibrosum.

Mr. A. BURTON: A Deformed Fœtus.

Dr. HORROCKS: A Uterine Fibroid undergoing Cystic Degeneration.

Dr. LEWERS: Primary Sarcoma of the Body of the Uterus (Deciduoma Malignum), the patient remaining well sixteen months after hysterectomy.

Dr. A. ROUTH: (1) An Ovarian Dermoid Cyst removed by the Vagina during Pregnancy; and (2) Ruptured Tubal Gestation of from three to five weeks' duration.

Dr. W. DUNCAN: A Five-months' Fœtus born with Placenta and Membranes Intact.

HARVEIAN SOCIETY OF LONDON.

Jacksonian Epilepsy.—Idioglossia.—Insufficiency of Pulmonary and Mitral Valves.—Heart Disease.

A MEETING of this society was held on May 26th, the President, Dr. J. F. GOODHART, being in the chair.

Dr. JAMES TAYLOR showed a case of Jacksonian Epilepsy. The patient three months before admission to hospital had a fit commencing in the right foot, spreading upwards, and leading to loss of consciousness followed by weakness of the right side but not by any speech affection. There had been other attacks of a similar nature, and since the last the weakness of the right leg had persisted and was accompanied by weakness of the other lower extremity. Dr. Taylor thought that the symptoms pointed to a local lesion, probably gummatous, over the leg area in the left cerebral hemisphere. There was no optic neuritis and now no headache, although headache had been present.—The PRESIDENT asked whether syphilitic vascular lesions were not more commonly found in such cases than gummata.—Dr. TAYLOR, in reply, said that in his experience the condition giving rise to localised fits was more frequently a thickening of the meninges than arterial disease.

Dr. LEONARD GUTHRIE showed a case of Idioglossia associated with Pseudo-hypertrophic Paralysis. The patient, a boy aged seven years, was a well-marked example of pseudo-hypertrophic paralysis. The symptoms were of about two years' duration. The lower extremities were chiefly affected, the gastrocnemii and vasti externi being extremely large and firm. A brother of his had died from this disease at the age of fifteen years. The term "idioglossia" had been given to the peculiar defects of speech exhibited by this patient. It was open to objection because the subjects did not speak a peculiar language of their own; they spoke English, but mis-pronounced letters and words. In this case the defect consisted in the substitution of consonants for each other and in the substitution of vowel sounds for certain consonants. (The patient then illustrated his mode of speech by repeating the alphabet, reciting certain nursery rhymes, and singing a well-known hymn.) It was shown that whilst capable of producing all the elementary sounds of which language is composed he used them in the wrong place and was unaware whether or not he produced them correctly. The defect was therefore rather in his ear than in his motor vocal apparatus. He was unable to discriminate shades of difference between sounds. In favour of this view was the fact that he had almost no ear for music. If his attention could be gained he could be made to frame his lips and tongue in imitation of the speaker and then he pronounced letters and words correctly. But his attention soon wandered and his utterance became as faulty as before. His auditory memory was probably defective; his visual memory was certainly so, because he could not copy letters correctly unless he could keep his eyes on the copy and on his pencil at the same time. Such cases were sometimes much improved by training on the oral method. Dr. Guthrie did not regard the condition as pathological but as an exaggerated form of defective enunciation common in minor degrees. The patient's elder brother (who died from pseudo-hypertrophic paralysis) and also a younger sister had similar defects of speech, but there was no causal connexion between pseudo-hypertrophic paralysis and idioglossia.

Dr. MACLURE showed a woman, twenty-four years of age, who was the subject of Insufficiency of the Pulmonary and Mitral Valves. She had suffered from cardiac symptoms ever since she could remember and her life till two years ago had been spent in various hospitals. She came under his notice eighteen months ago and remained bed-ridden till last March when she had an attack of mania, since which time her general health had much improved. A to-and-fro murmur could be heard loudest in the pulmonary area and conducted downwards to the left of the sternum. The apex beat of the heart was felt in the fifth intercostal space in the nipple line. There was a presystolic thrill at the apex with other evidence of double mitral disease. Against the view that the case was one of mitral disease pure and simple were the point of maximum intensity and characters of the to-and-fro murmur, whilst the absence of Corrigan's pulse, capillary pulsation, and of much hypertrophy and dilatation of the left ventricle pointed to pulmonary rather than aortic disease.—Mr. JACKSON CLARKE observed that the appearance of a swelling in the left supra-clavicular region was due to a very sharp spinal curve (scoliosis) high in the dorsal region. This degree of scoliosis would be sufficient to account for some of the dyspnœa present.

Dr. G. A. SUTHERLAND showed a boy, aged nine years, who was suffering from Heart Disease. His peculiar complexion and the duskiness of his hands suggested a congenital lesion. There were also definite evidences of acquired endocarditis and pericarditis. The extensive area of præcordial dulness and pulsation further suggested the possibility of mediastino-pericarditis, to which support was lent by the extremely chronic character of the pericarditis. — Dr. ALEXANDER MORISON, remarking on Dr. Sutherland's case, considered that in view of the cyanosis present and the great transverse dimensions of the heart congenital stenosis of the pulmonary arterial orifice with patent septum ventriculorum suggested itself; but further examination of the case, associated as it was with triple rhythm and chronic pericardial friction, pointed rather to mitral regurgitation with pericardial adhesion. The case exhibited by Dr. Maclure he regarded as one of mitral stenosis. He could not satisfy himself that there was any pulmonary arterial reflux.

EPIDEMIOLOGICAL SOCIETY.

Enteric Fever at Norwich.

A MEETING of this society was held on May 20th, Professor J. LANE NOTTER, President, being in the chair.

Dr. W. H. COOPER PATTIN read a paper on Enteric Fever at Norwich. The city, he said, was on the chalk, which was there about 1000 feet deep, and where it did not come to the surface was thinly covered by loose drift gravels. The water-supply, in the hands of a company, was drawn from the River Wensum, which rose on a plateau nearly thirty miles distant, flowing through a purely agricultural district. The intake, which averaged 1,500,000 gallons per diem, was about a mile above the city, the nearest source of serious pollution being a paper mill four miles higher up the river. The arrangements for subsidence and filtration were excellent and the water was served from covered storage reservoirs by gravitation at the rate of 18 gallons per head a day, but the actual quantity available was greater, since one-fifth or until recently one-fourth of the population obtained their supply from private wells, and very few houses had baths. These wells were shallow and more or less suspicious, and he had during his five years of office obtained the closure of nearly 200. The sewerage was by no means satisfactory, the old sewers being very ill-laid; they were freely ventilated by gullies and shafts and the flow of the sewage was assisted by Shone's ejectors, but bad smells were frequent, especially on the escarpment of the higher ground. There was no adequate hospital accommodation for fever patients and secondary or successive cases in the same house were of frequent occurrence. Only a minority of the houses were provided with water-closets, the usual form of convenience being the "bin," a sort of combined privy, ash and refuse pit, or a pail closet, but there was as a rule only a single pail, which was emptied by the scavenger but never cleaned. Notification of infectious diseases had been in

force since 1880, but the few cases and apparently high case mortality during the first few years were probably to be explained by imperfect diagnosis of the milder forms of enteric fever. Since 1883 the cases had varied between 106 and 314 per annum, and the deaths between 19 and 36, except in 1885, in which year with 584 cases and 92 deaths the disease assumed the proportions of an epidemic. The average for the whole period had been 214·5 cases with 30·5 deaths, or a mean case mortality of 14·5 per cent. Dr. Cooper Pattin then gave analyses of the age incidence, the relative overcrowding of the affected houses, the proportion of the houses attacked supplied with the company's water and from wells, the relative incidence of disease on houses with water-closets, pail-closets, and bins respectively, proximity to sewer gullies, the state of the yards and other domestic sanitary conditions, the occupations of the persons attacked, and the possible influence of milk, shellfish, and the conditions under which the food was kept for the last three years. As regards age 43 per cent. were under fifteen years, and the persons attacked belonged almost exclusively to the working classes; but beyond the facts that while a fourth of the houses in the city were provided with water-closets only one-tenth of the cases occurred in such, and that 70 per cent. of the affected dwellings were surrounded by soil sodden with impurities, no definite conclusions could be drawn from these figures.

Dr. PARSONS expressed his belief that the direct transmission of enteric fever from one person to another was more frequent in the overcrowded dwellings of the poor than was commonly supposed and remarked that the case mortality to a great extent depended on accuracy of diagnosis, that the lesser incidence on houses with water-closets might be due to the more cleanly habits of the occupants in other respects, and that outbreaks caused by milk were often so local and limited as not to influence the general prevalence of the disease and to be seen only in spot maps.

Dr. CHILDS asked if Pettenkofer's ground-water theory had been worked out in Norwich.

Dr. BULSTRODE and Dr. REGINALD DUDFIELD criticised the statistics, as did Dr. WILLOUGHBY, who pointed out the fallacies consequent on the relations between the incidence of the disease and the several factors under consideration having been calculated on the affected houses only instead of on the total number in the city. He called attention to the probability under the conditions described of the contamination of wells at great distances from the source of pollution.

MANCHESTER THERAPEUTICAL SOCIETY.

Diuretin.—"*Glucophenin.*"

THE fifth meeting for the session 1897-98 was held at the Owens College on May 25th, Dr. J. DIXON MANN presiding.

Dr. DRESCHFELD read a paper on Diuretin. After referring to the experimental results and clinical experiences of this drug recorded by some continental observers Dr. Dreschfeld stated that he had employed diuretin in many cases during the past eight years and he considered it a valuable remedial agent. He had found it act well in acute Bright's disease, especially in cases in which the urine was scanty. He had frequently seen the urine increase in amount from 12 or 15 to 80 or 100 oz. in the twenty-four hours. In post-scarlatinal nephritis the drug did not seem to give such good results. In chronic parenchymatous nephritis he had found it act when digitalis and other drugs had not succeeded, but the effects were only temporary. There was no definite reduction of the amount of albumin. On the other hand, there was no evidence of irritating action. In interstitial nephritis the results had been disappointing and in these cases toxic effects were more liable to occur. As regards its use in heart disease Dr. Dreschfeld had found diuretin of great value in cases of mitral disease, especially when the dropsical symptoms had come on suddenly. In aortic disease the results had not been so satisfactory: there was no relief to the anginal symptoms, no great diuresis, and the drug was not always well borne. In simple dilatation without valvular lesion where digitalis had failed diuretin had sometimes succeeded. In cirrhosis of the liver the effects of diuretin were sometimes startling. He had seen diuresis amounting to four or five quarts of urine in the twenty-four hours. The cases which seemed to respond best to diuretin were those in which dropsy had developed suddenly. In older people with ascites coming on gradually diuretin had failed. In two cases of pleuritic effusion Dr. Dreschfeld had observed rapid recovery under the use of diuretin, but in other cases no marked effect was observed. In cases of peritonitis no relief had been obtained; he had not tried the drug in pericarditis and did not think it likely to be of much use. Dr. Dreschfeld considered diuretin to be a useful and powerful diuretic, acting probably on the epithelium of the convoluted tubules of the kidney. He gives it in from 10 to 12 gr. doses three times a day at first, increasing to 30 gr. doses if necessary. As regards its ill-effects, sometimes diuretin is not well borne, producing nausea, vomiting, and occasionally signs of collapse. Often when diuretin alone does not answer it succeeds on combining it with digitalis.—The SECRETARY, on behalf of Dr. STEELL, showed a series of charts illustrating the Diuretic Effects of Diuretin in cases of aortic disease, mitral disease, functional heart disease, cirrhosis of the liver, and pleurisy. One of the charts showed a marked diuretic effect obtained three times in succession in the same patient. Dr. Steell gives diuretin in 2 gr. doses every hour day and night. In two cases of Bright's disease he had observed hæmaturia following the use of diuretin and had not employed the drug in such cases since.—Dr. MANN had observed similar results to those described by Dr. Dreschfeld, but he had obtained no good effects in cases of large white kidney. In heart cases he had found diuretin very useful. In cirrhosis of the liver he had observed little result, perhaps because the cases were of more gradual onset. He had found theobromine alone very useful and suggested that theobromine in some soluble form might be more advantageous than diuretin, which was sometimes depressing owing to the salicylate of sodium which it contained.—Dr. WILD and Dr. COUTTS also took part in the discussion.

Dr. WILD then made a preliminary communication on the Constitution and Pharmacological Action of a New Synthetic Compound "Glucophenin," in which the phenetidin molecule was combined with a glucose molecule. The product was a crystalline solid, soluble in water, and almost tasteless. The drug showed a remarkable absence of toxic effect and there was already some evidence of therapeutic value in certain cases.

Reviews and Notices of Books.

Die Infectiös-eiterigen Erkrankungen des Gehirns und Rückenmarks. Von WILLIAM MACEWEN, M.D. Glasg. Autorisirte Deutsche Ausgabe von Dr. PAUL RUDLOFF. (*Pyogenic Infective Diseases of the Brain and Spinal Cord.* By WILLIAM MACEWEN, M.D. Glasg. Authorised German Edition by Dr. PAUL RUDLOFF.) Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1898.

THERE are few surgical works which more merit the honour of translation into a foreign language than the one wherewith Dr. Macewen enriched our literature some five years ago. By common consent this admirable monograph upon the "Pyogenic Infective Diseases of the Brain and Spinal Cord" was admitted to be amongst the most scientific and practical writings upon a subject which opened up new prospects for the successful intervention of surgery in a class of disease which hitherto had been regarded as almost beyond the reach of such interference. Thus apart from its intrinsic merits the work assumed from the first a very important position in surgical literature. Its thoroughness and accuracy are such as cannot but commend it to the favour of the profession in Germany, accustomed as they are to exhaustive literary enterprises, and Dr. Paul Rudloff has doubtless gauged rightly the cordial reception which the book will receive in his country. He has, too, acquitted himself well in the task of translation and has wisely refrained from adding anything to a book which is so largely based on the personal experiences of its author. We may briefly recall the fact that the work opens with a compendious and faithful description of the surgical anatomy

of the temporal region, the cerebral membranes and sinuses, and then deals with the pathology of cerebral abscess and meningitis, the clinical chapters treating first of the symptoms of cerebral abscess and then of sinus thrombosis. Then come a chapter upon treatment and a final summary of the results obtained by the author in his surgical advances in these regions. On these results of a series of operations, commencing with the opening of an abscess in the temporo-sphenoidal lobe in 1881, there is little need to dwell. They comprise operations on the mastoid in middle ear disease, for suppurative pachymeningitis and lepto-meningitis, thrombosis of the longitudinal and the sigmoid sinuses, as well as for cerebral and cerebellar abscesses. And the encouraging results obtained, constituting true surgical triumphs, have become familiarised to the profession, thanks mainly to the pioneer work of the Glasgow surgeon.

Handbuch der Gynäkologie. In drei Bänden. Herausgegeben von J. VEIT (Leiden). Zweiter Band. Mit zahlreichen Abbildungen. Wiesbaden: Verlag von J. F. Bergmann. (*Handbook of Gynæcology.* In Three Volumes. Edited by J. VEIT (Leyden). Vol. II. With numerous Illustrations. Wiesbaden: J. F. Bergmann.) 1897. Pp. 814.

WE had occasion to notice with approbation the first volume of this valuable work in which the editor has had the advantage of the coöperation of some of the best gynæcologists in Germany, amongst whom may be mentioned Professor E. Bumm of Basel, Professor A. Döderlein of Leipsic, Dr. H. Fritsch of Bonn, and Professor W. Nagel, Dr. R. Olshausen, Dr. R. Schaeffer, and Dr. G. Winter, all of Berlin, besides others with not less illustrious names. The distribution of the subjects amongst the contributors has been carefully made and the several memoirs are written by men not only of acknowledged ability but who are in most instances well known to be familiar with the subject which has been assigned to them.

The second volume opens with an article by Dr. Heinrich Fritsch of Bonn on the Diseases of the Bladder in the Female and is illustrated by 50 woodcuts. The teratology of the bladder is given, followed by some statistics in regard to the capacity of this organ. He finds that the quantity of urine passed by women as a rule varies from about 1½ oz. to 10 oz., a certain number voiding a small quantity with frequency as a precautionary measure against possible emergency. In cases of cystitis, in which the bladder was washed out and the patient directed to complain as soon as pain was felt, the injection of from 10 to 12 cz. of water usually produced discomfort. When, however, from any slowly operating cause the bladder becomes distended as much as 38 oz. of urine may be evacuated with the catheter and in one instance he drew off 109 oz. Dr. Fritsch, whilst enumerating the causes of cystitis in accordance with the scheme of Dr. Barlow—viz., (1) chemical; (2) bacillogenous, including tuberculosis, bacterium coli, urobacillus liquefaciens septicus of Krogius and Schnitzler, coccobacillus of Rovsing; and (3) coccogenous, including diplococci, staphylococci, streptococci, and gonococci—holds that this view cannot be as yet unconditionally accepted because there is a want of accordance in the statements of different authors, Krogius in particular having observed a bacterium without cystitis and, conversely, cystitis without microbes. When micro-organisms are found in the bladder they may easily have been introduced by a want of care in the cleansing of catheters, and acute cystitis may be established within a few hours of such introduction. At the same time there can be little doubt that microbes may penetrate into the bladder and be shown to be present in the urine without a catheter having been at any time introduced and, indeed, a sufficient proof of such spontaneous entrance is afforded by the occurrence of gonorrhœal cystitis. Dr. Fritsch gives a striking picture of the consequences which may befall an unfortunate patient who is pregnant and who suffers from retroflexion of the uterus in the hands of an ignorant midwife, for with retention of urine, with congestion, hyperæmia, infection, and injury to the bladder from the unskilful attempts to introduce a catheter it would be a wonder, he remarks, if cystitis were not produced, and in such cases fatal septic peritonitis is not uncommon. In the treatment of cystitis, besides injections of boric acid he recommends salol taken internally in doses of 30 or 40 grains per diem, salicylate of soda, potassium chlorate, and opium and belladonna.

A good account is given of urogenital fistulæ, upon nearly 200 cases of which Dr. Fritsch has operated during the last ten years, all with one exception having been caused by injuries inflicted during childbirth. He gives drawings of various specula, forceps, retractors needle-holders and needles, as well as of a table and appliances well adapted for the performance of operations for the relief of this affection. Many drawings also illustrate the direction in which incisions should be made and the manner in which the sutures should be introduced. He recommends sterilised water, boric acid in 4 per cent. solution, and silver nitrate in ½ per mille solution for the purposes of irrigation.

In the chapter on Inflammations of the Uterus by Professor Döderlein it is shown that whilst various bacteria inhabit the vagina none are found in the cervix or in the body of the uterus or in the Fallopian tubes. This constitutes an important criterion for diagnosing the healthy from the inflamed uterus, and the concordant results of many observers demonstrate that there is one group of cases of metro-endometritis which arise without the coöperation of bacteria and another which includes the varieties denominated septic and saprophytic, gonorrhœal, tuberculous, syphilitic, and diphtheritic. Each of these is minutely described.

Just one-half of this volume is devoted to the subject of Myoma of the Uterus, which is subdivided into six sections. Professor K. Gebhard of Berlin gives the anatomy and histology of myoma; Dr. J. Veit of Leyden its symptomatology, diagnosis, and prognosis; Dr. R. Schaeffer of Berlin the treatment of the affection by electricity; Dr. J. Veit the palliative treatment and the vaginal operations required for its removal; Dr. R. Olshausen of Berlin the abdominal operations for myoma; and the same writer the relations of myoma to pregnancy. The subject, therefore, is treated in the most exhaustive manner and the account here given of this formidable and formerly very fatal disease may be regarded as the most complete and instructive that is extant. True myoma, in which the tumour consists exclusively of muscular tissue, is only found in the early stages of its development; at a later period its becomes mingled with connective tissue and is then known as fibro-myoma or fibroid. Such tumours are often numerous in the same uterus and may attain a very large size. In regard to position, they may be submucous, interstitial, or subserous. Many woodcuts are appended to Dr. Gebhard's paper showing their position and form. A special variety of myoma is adenomyoma, in which gland tubes are found supposed by some to be the uterine glands and by others to be the remains of the canal of Gaertner, but which have been demonstrated by Recklinghausen to be either the uterine glands or remains of the Wolffian body. The pathological changes which may take place in myomatous tissue (such as atrophy, calcification, fatty and amyloid degeneration, necrobiotic degeneration, and gangrene) and the mixed tissue which may appear (such as enchondroma, sarcoma, osteoma, carcinoma, rhabdomyoma, and malignant leiomyoma) are all fully described. The diagnosis of myoma and of its complications is given with great care and minuteness of detail by Dr. Veit. The section on the treatment of myoma by

means of electricity by Dr. Schaeffer is practical and will be read with interest by every practitioner, showing, as it does, the advantages of this method, which was first applied by Dr. E. Cutler and greatly improved and extended by Dr. Apostoli. The instruments required and the mode of their application are described in great detail and references are given to an immense number of cases by different operators which seem to have been in most instances attended with extraordinary success, though various surgeons are opposed to this plan of treatment probably from want of care in attending to the contra-indications, such as hysteria, intestinal catarrh, pregnancy, malignant degeneration of the myoma and fibrocystic degeneration and suppurative inflammation in the adnexa. Dr. Veit naturally discusses at some length the relative merits of the vaginal and abdominal sections for the removal of the tumour, and describes in detail the methods of operating through the vagina for the removal of myomatous polypi for the enucleation of submucous myomata and for the extirpation of the uterus, leaving the abdominal section to Dr. Olshausen. Dr. Veit lays down the rule that all tumours which occupy the pelvis or can be pressed down into that cavity can be removed through the vagina, though the steps of the operation must vary with the size of the tumour, its seat, and the extensibility of the cervix. In any case the whole of the tumour should if possible be removed at one sitting and Dr. Veit, if enlargement of the cervix is required, makes an incision directly downwards in the middle line.

The removal of fibroids by abdominal section and enucleation seems to us to be in every respect preferable to the vaginal operation and is strongly advocated by Dr. Olshausen in his article on the subject. The exposure and complete removal of the tumour or tumours is certainly more easily effected. The bleeding can generally be restrained by pressure without having recourse, as Dr. Olshausen states that on one occasion he practised, to ligature of the two internal spermatic arteries. Sepsis, if due precautions are adopted, can be avoided and damage to the bladder must surely be very exceptional, whilst this method has the immense advantage of leaving the organ in a fairly healthy condition, as is sufficiently proved by the circumstance that pregnancy has occurred on more than one occasion after it has been practised. Dr. Olshausen quotes a case under Dr. Biermer's care, however, in which after removal of a small fibroid vomiting followed by stoppage of pulse and arrest of breathing occurred—symptoms which a post-mortem examination showed were due to the entrance of air into the uterine veins and the formation of foam and froth in the right auricle. Dr. Olshausen himself has had 3 deaths in 38 operations, all from sepsis.

The mortality in the practice of different gynæcologists is given in great detail, Professor Chrobak after Dr. Olshausen taking the lead in the success which has attended his operations, for in 141 operations for myoma with 9 enucleations he had not a single fatal result, and Dr. Carl von Braun had in 8 cases only one death. Martin in 96 cases had 18 deaths. The accounts of these cases make it abundantly clear that the opening from without into the uterine cavity greatly increases the risks of the operation.

We regret we have no space to do more than allude to the section on Physical Methods of Examining the Bladder, written by Dr. F. Viertel of Breslau, in which the value of endoscopy is shown in the diagnosis of catarrh of the bladder, of hæmorrhage into it, and for the determination of the presence of tuberculosis, calculi, foreign bodies, and tumours in its interior. Many drawings illustrate the instruments which are in common use and an excellent bibliography precedes this as well as every other section of the work.

Technical Mycology. By Dr. FRANZ LAFAR, Professor of Fermentation-Physiology and Bacteriology in the Imperial Technical High School, Vienna, with Introduction by Dr. EMIL. CHR. HANSEN, Principal of the Carlsberg Laboratory, Copenhagen. Translated by CHARLES T. C. SALTER. In Two Volumes. Vol. I., Schizomycetic Fermentation. London: Charles Griffin and Co., Ltd. 1898. Price 15*s.*

THE study of Bacteriology has indeed opened a wide field. The subject is generally associated with disease, but we have learned and are still steadily learning how friendly is the action of by far the greater number of species of bacteria. The bacteria of disease, the pathogenic organisms, are after all but a tithe compared with the numbers and species which are found working faithfully in the interests of mankind. When specific non-pathogenic microbes are in healthy action and in out-numbering quantities the pathogenic microbes succumb and give up the race for existence. We have therefore to deal with countless microscopic engineers, so to speak, organisms productive on the one hand of evil and on the other of good, and our endeavours should be to study the conditions under which the former may be overthrown and their growth prevented, and to discover those congenial conditions under which the useful functions of the latter may not be frustrated or hindered but rather encouraged. The volume before us is doubly instructive. It shows the false conceptions of the past and it suggests in the future a field of enormous importance in the arts and industries and in sanitation by indicating how bacteria may be serviceably engaged in the production of a great number of useful substances and in the disposal as well as in the utilisation of effete and harmful products. When to destroy and when not to destroy bacterial life is the problem to be solved. Sanitary diagnosis has not infrequently erred in this direction to the detriment of life and at a considerable waste of public money. In the matter of sewage disposal perhaps we have the best example of the result of applying incomplete knowledge. At one time it was considered correct to sterilise sewage by chemical treatment and thus arrest the development of bacteria. The object was, of course, to destroy the pathogenic organisms. Such methods invariably failed not only from the economical point of view, but, it must be admitted, from the hygienic point also. It is well known now that when full opportunity is given to the action of the ubiquitous microbes sewage may not only be disposed of in the cleanliest possible way but converted into innocuous products which are a decided gain to vegetation. The benign functions of certain bacteria are being ascertained in other directions and a new application of bacteriological science appears which takes for its name the title of this book—viz., technical mycology. The chapters teem with interesting matter from beginning to end. Nor are the subjects which are discussed of interest to a few only. When the work is described, and correctly described, as "a practical handbook on fermentation and fermentative processes for the use of brewers and distillers, analysts, technical and agricultural chemists, pharmacists, and all interested in the industries dependent upon fermentation," it is obvious that the circle of readers whom it should directly interest will not be very narrow. Further, the student of pure science, the inquirer after truth, and the teacher will welcome such a valuable collection of material—material which has accrued from the labours of patient and ardent workers in bacteriological science during the last decade or so.

The plan of the work is as follows. Volume I., the copy of which is before us, treats of bacteria. The first chapters are devoted to an introduction to the subject, which is subdivided into three parts: I. The Theory of Spontaneous Generation; II. Theories of Fermentation; and III. The

Organisms of Fermentation. Under Division I. occurs the heading Schizomycetic Fermentation, the subject being classified into the following sections: Section I., General Morphology and Physiology of the Schizomycetes; Section II., General Biology and Classification of Bacteria; Section III., Principles of Sterilisation and Pure Cultivation; Section IV., Chromogenic, Photogenic, and Thermogenic Bacteria; Section V., the Heat-resisting Bacteria, their Place in Nature and their Importance in the Fermentation and Food-stuff Industries; Section VI., Lactic Fermentation and Allied Decomposition; Section VII., the Formation of Mucus and Allied Phenomena of Decomposition; Section VIII., Decompositions and Transformations of Organic Nitrogenous Compounds; and Section IX., Oxidising Fermentations. In the section on the filtration of drinking-water we find that no reference is made to the great purifying effect of sedimentation, as in the removal of micro-organisms from water by entanglement with finely-divided, insoluble substances in the act of subsiding. As both Sir Edward Frankland and his son, Dr. Percy Frankland, have shown, water may be rendered practically sterile by the addition in proper quantity of certain powdered insoluble substances, and on a large scale sedimentation is undoubtedly a most important factor in the bacterial purification of water for drinking purposes. All these sections afford most interesting reading. Here may be learned the best means of cultivating bacteria to useful ends in the arts and manufactures, the methods enjoined being clearly and practically indicated to the intelligent reader. The part played by bacteria in distilling and brewing, in the preparation of wines, in the manufacture of vinegar, in the dairy, in farming, in the preparation of agricultural fodder, and in the manufacture of tobacco and sugar, &c., are plainly described and the moral of it all is clearly conveyed. Next are chapters on the bacteria busily occupied in the great natural processes, the nitrifying organism, the nitrogen-assimilating organism, and the iron and sulphur bacteria. Chemists have failed to account for the great natural beds of iron, sulphur and saltpetre in various parts of the earth. It is probable that these after all are the harvest of the countless microscopic agencies evolving simple substances out of complex compounds.

We have said enough in evidence of the very interesting character of the book. It is the first work of the kind which can lay claim to completeness in the treatment of a fascinating subject. The plan is admirable, the classification simple, the style good, and the tendency of the whole volume is to convey sure information to the reader. We look forward with more than ordinary anticipation to the second volume.

Die Blennorrhöe der Sexualorgane und ihre Complicationen. Dargestellt von Dr. ERNEST FINGER, K.K.A.Ö., Professor der Dermatologie und Syphilis an der Universität in Wien. Mit 36 Holzschnitten im Text und 9 Lithographischen Tafeln. Vierte wesentlich vermehrte und verbesserte Auflage. 1896. Leipzig und Wien: Franz Deuticke. (*Gonorrhœa and its Complications.* By Dr. ERNEST FINGER, Professor of Dermatology and Syphilis at the University of Vienna. With 36 Woodcuts in the Text and 9 Lithographic Plates. Fourth considerably enlarged and improved Edition. 1896. Leipsic and Vienna: Franz Deuticke.) Pp. 396. Price 9 marks.

GONORRHŒA is a disease the importance of which has too often been under-valued; but, quite apart from its prevalence, the complications which accompany it are so extremely numerous that the treatment of the disease itself is certainly deserving of much more care than is frequently devoted to it. Professor Finger's work has been widely recognised from its first appearance in 1888 as probably the most thorough and complete treatise extant on the subject. This edition, the fourth, contains all recent additions to our knowledge of the subject, the chief new matter being the histology of Acute Urethritis, and of Gonorrhœal Rheumatism, Periostitis and Bursitis. Recent improvements in the methods of treatment have also been added.

The Treatment of Wounds, Ulcers, and Abscesses. By W. WATSON CHEYNE, M.B. Edin., F.R.S., F.R.C.S. Eng., Professor of Surgery in King's College and Surgeon to King's College Hospital and Paddington Green Children's Hospital, London. Second edition. 1897. Edinburgh and London: Young J. Pentland. Pp. xii. and 197. Price 3*s.* 6*d.*

WHEN reviewing the first edition of Mr. Watson Cheyne's little manual we praised it as being likely to serve as an admirable guide to the practical application of antiseptic methods. The author tells us in the preface to this, the second, edition that "continued experience shows that uniform results may be reckoned on if the methods here recommended are followed," and we fully agree that a surgeon who can count on obtaining healing by first intention by any method is fully justified in continuing to practise that method. The failures which often follow so-called "aseptic surgery" are not necessarily due to the method but to the want of care on the part of the person who applies it, and the aphorism which Mr. Cheyne has placed at the commencement of his book, "Suppuration occurring in a wound made by a surgeon through unbroken skin is due to some oversight on his part," is as applicable to "aseptic" as to "antiseptic" surgery.

LIBRARY TABLE.

Transactions of the Pathological Society of London. Vol. XLVIII. London: Smith, Elder, and Co. 1897.—No one who has the interests of British medicine at heart can be unmindful of the excellent work which is constantly being done in this and kindred societies. The present volume has, moreover, an especial claim to notice, for it marks the period of this society's jubilee, which was duly celebrated in October, 1896. The address of the President, Mr. Butlin, here reproduced, gives an interesting account of the origin of the society and of its progress and not obscurely hints that the tendency of the society will in the future be more and more towards experimental and chemical pathology rather than in the field of morbid anatomy in which its greatest achievements have hitherto been gained. Doubtless there is room for all aspects of pathology to be discussed at its meetings, provided always that the members bear in mind the fact that oral exposition of a subject need not of necessity embrace all the minuter details which will subsequently find a place on the printed pages. The volume also contains a list of the specimens of more or less historical interest which were gathered from museums to illustrate the society's work of fifty years. Of the communications during the session which are here printed and illustrated may be cited one on Actinomycosis of the Pleura by Dr. S. West, one on Multiple Cavities in Bronchopneumonia by Dr. H. Tooth, a communication on the Minute Anatomy of Intussusception by Mr. D'Arcy Power, a case of Acromegaly with Diabetes by Dr. N. Dalton, Non-calcifying Plastic Osteitis by Mr. Pitts and Mr. Shattock, on the Tabetic Foot by Mr. Targett, and on the Plurality of Ringworm Fungi by Dr. Colcott Fox. The volume is fully worthy to rank with its predecessors and affords evidence of the sustained interest taken in the work of the society.

An Atlas of Histology for the Use of Students. By ARTHUR CLARKSON, M.B., C.M. Edin. Bristol: John Wright and Co. 1898. Price 9*s.*—This little atlas is a separate issue of the 174 original coloured illustrations from the author's "Text-book of Histology," with just sufficient descriptive letter-press to make the drawings intelligible. The book is

well got up and the illustrations are clearly printed in colours. They are, of course, somewhat diagrammatic, but that is no drawback from the student's point of view. The modest price of the work should place it within everyone's reach and it will be of considerable assistance to beginners in histology. Although the figures are naturally less numerous than in the atlas by Klein and Noble Smith and are, perhaps, drawn with less finish, yet they compare not unfavourably with those of that expensive work. It is, perhaps, a pity that in the teaching of histology to medical students the tissues of the dog, the cat, and the rabbit, should so largely replace those of man. They can, of course, be more readily procured in a fresh condition, but in the case of most organs excellent human material can be got readily enough. Many a student is puzzled by the slight differences which exist between certain organs in animals and in man when he is first confronted with the latter in his more advanced studies. There are certain omissions in the present work to which attention may be drawn. The different varieties of leucocytes are now of such importance that they should certainly be figured in any modern atlas; no illustration is given of the mammary gland; and the enormous advances in nervous histology due to the methods of Golgi and others are altogether unrepresented. A few of the illustrations are not up to the standard of the rest—notably that of the human uterus—and in figure 97 the student would be led to believe that there were no glands in the rectum. The use of the term "squamous epithelium" for the lining cells of serous cavities and blood-vessels is also to be deprecated. Though we have mentioned these slight defects, yet the illustrations are, as a whole, so good and clear that we have no hesitation in recommending the atlas to students as an excellent and serviceable little work.

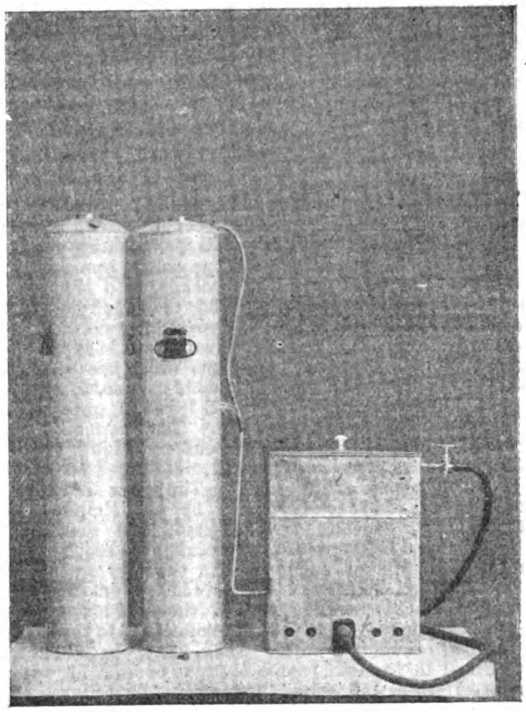
Liverpool Royal Infirmary Medical Report. Vol. II. 1897. Price 1*s.*—The second volume of the Liverpool Royal Infirmary Medical Report recently issued is larger than that of the previous year. The reports of the medical and surgical registrar have been extended by the addition of new sections upon the eye and x ray statistics, and by increasing the remarks upon the various surgical and medical cases wherever found necessary. There is an increase in the number of necropsies in the pathological report and in each case a brief *résumé* is given of the history and symptoms. Many rare specimens obtained from the post-mortem room have been added to the museum. The compilers have drawn up the statistical tables with every care and they hope that the present volume will prove of greater value both to the student of the infirmary and to those interested in the statistical work of a large hospital than the former volume. Much credit is due to Professor Boyce of University College, Liverpool, and to Dr. E. A. Smith and Dr. H. T. Nixon, the medical and surgical tutors respectively, for the care and labour which they have bestowed upon the present number.

Skin Diseases of Children. By GEORGE HENRY FOX, A.M., M.D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, &c., With Twelve Photogravure and Chromographic Plates, and Sixty Illustrations in the Text. London: J. & A. Churchill. Pp. 166. 1898. Price 12*s.* 6*d.*—Although it can hardly be said that there are any diseases of the skin in children which are not represented in the adult, yet there are many morbid conditions of this structure which occur much more commonly in childhood. The vulnerability of the skin in infants, the frequent digestive disturbances in the young, and the very great chance of contagion are doubtless in great part responsible for the frequency with which diseases of the skin are met with in early life. During the year 1896 Dr. G. H. Fox contributed a series of illustrated articles on certain skin diseases which are apt to occur in infants and childhood to the *American Journal of Obstetrics and Diseases of Women and Children*, and he has now issued them in book form with some additions, but the book is not intended to include a full account of all the cutaneous affections which may occur in the young, rather it deals only with those symptoms which are commonly met with in children. Eighteen diseases in all are described, and most of them are very artistically illustrated by reproductions of photographs. The most elegant of the illustrations are the photogravures, which are equal to anything we have ever seen in a monochrome representation of a disease of the skin. There are two coloured plates, which are good. The illustrations in the text are also reproduced from photographs and are satisfactory.

New Inventions.

THERMO-SYPHON AND RAPID STERILISER.

DR. R. MARTIN GIL, Medical Director of the Hospital "Noble" of Malaga, recognising the increasing necessity of employing a scrupulous asepsis in surgery and at the same time the difficulty of obtaining sterilised water rapidly in sufficient quantity, has designed a simple apparatus for the purpose and of which he sends us the following description:—



Dr. Martin Gil's Syphon.

"This apparatus consists of a series of tubes of tin-coated copper with an inner diameter of 5 mm. and forming 52 elements arranged in alternating series like the boilers of Velbill. These tubes communicate with other transverse tubes of 7 mm. interior diameter, these latter being attached to a further set of four tubes with an inside diameter of 10 mm. These four just mentioned support the other two sets. This collection of tubes forms a *bloc* of 25 cm. in length, 18 cm. in breadth, and 19 cm. in

height. The aggregate total length of the tubes if placed one after the other would be 17 m. and they are capable of containing half a litre of water. To one of the vertical tubes at the angles another thin tube is screwed, which conducts the water to two cylinders of which I shall speak further on. The multitubular boiler is screwed on to the inside of a copper box, forming a vessel or receptacle. With an ordinary gas, petroleum, or spirit lamp the water is heated and penetrates into the elements of the boiler, and as the heat also acts directly on it the process of ebullition soon takes place. A wire basket serves to contain the instruments to be sterilised. It is 26 cm. long, 20 cm. wide, and 10 cm. deep, thus being of sufficient capacity to hold the instruments required for an ovariotomy or the largest Doyen's retractors required to be used for vaginal or combined hysterectomies. A lid is put on when the instruments are being sterilised. It should not be put on during the sterilisation of the water.

"The question of proper receptacles for keeping cold and boiled or sterilised water without fear of its becoming infected before the operation is a matter that must also be attended to. For this purpose I have designed two cylindrical containers of galvanised iron of certain construction. Each of these vessels is capable of containing 15 litres and measures 85 cm. in height and 15 cm. in diameter. The upper is furnished with two brass mouthpieces which can be screwed on, thus closing it hermetically. By means of the one in the centre, which is the larger of the two, the water is emptied out, and through the smaller one, which is on the side, is inserted the tube that conducts the boiling water and serves at the same time, if left open when the water is poured into the irrigators, to form a compact jet without spray.

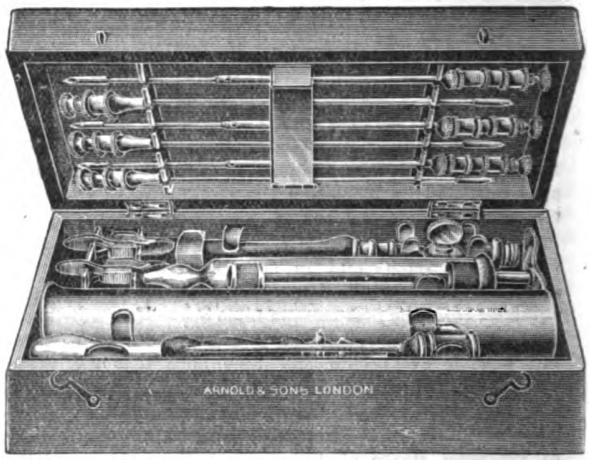
"Everything being ready the apparatus is started by admitting common water by means of a rubber tube connected with any water-tap or receptacle whatever and the upper vessel having been filled the valve communicating with the boiler is left open till this latter also becomes full and the lamp on the fireplace is then lighted. According as the water passes to one of the cylindrical vessels at the temperature of 135° C. under the pressure of a quarter of atmosphere developed by the steam generated in the boiler it becomes replaced by an equal quantity of water which enters hot from the upper vessel by means of a simple valve, ensuring the working of the thermo-syphon and precluding all danger from the steam. When the water begins to boil it takes 3 or 4 minutes to reach one of the cylinders, but according as the elements and the water of the upper vessel become heated the boiling of each half litre of water, which is the quantity contained in the tubular boiler, and its passage to the iron containers are effected in from 40 to 45 seconds. To sterilise the 30 litres of water capable of being contained in the two receptacles 30 or 40 minutes are required according to the pressure of the gas. We have already seen that the upper reservoir of the apparatus, after the water has been sterilised, serves to render the instruments aseptic, this process commencing 3 minutes after the 5 litres of water capable of being held in it begin to boil. The thermo-syphon is small in compass, being only 37 cm. in height, 29 cm. in front and 21 cm. from front to back. It weighs 7 kilos., and is therefore easily carried about. The water in one of the cylinders can be rapidly cooled by any simple method without being in any way infected, and that of the other one can be kept hot for mixing as required. The 30 litres capable of being held in the two are sufficient for all the requirements of a laparotomy, from the washing of the hands of the operator and those of his assistants, as also the preparation of aseptic solutions, to the washing of the peritoneum if needful. These vessels have been made cylindrical in form to enable them to be used for warming purposes. It is well known how frequently collapse supervenes in operations of the abdomen, and it is therefore always advisable to promote the warmth of patients who have been kept exposed to the air during the course of a lengthy operation while under the influence of an anæsthetic or who have had much hæmorrhage. In these and other cases the operator frequently freely employs a foot-warmer and for this purpose I have found nothing so handy as these vessels with two or three litres of water inside and placed wrapped in towels close to the patient.

"In military surgery, in the ambulances and field hospitals, as well as on board the battleships and transports for the conveyance of the wounded, it is well known that grave difficulties are met with in the practical application of a proper asepsis, and one of the greatest of these difficulties is that of not being always able to count upon a supply of sterilised water for the operations, the daily dressing of wounds, &c. This is from want of a rapid and easily-handled steriliser capable of affording the needed supply of water, with vessels to keep it aseptic for preparing the necessary solutions. With my thermo-syphon I think this obstacle can be surmounted even under the most unfavourable circumstances.

"In conclusion the thermo-syphon and the two cylinders are from their small bulk easily carried to the house of the patient, where all kinds of operations can be performed in complete accord with the canons of asepsis."

A NEW ASPIRATING INSTRUMENT.

THIS instrument, which was made for me by Messrs. Arnold and Sons, London, is a modification of Potain's aspirator and Dr. Garratt's syphonage instruments for tapping the chest. Its parts form (1) an exploring needle; (2) an aspirator; and (3) a syphon tube. The functions of all these it performs with a single insertion of the needle. It is constructed entirely on the model of Potain's aspirator, with this exception, that the mount for the cannulæ is a single tube and stopcock instead of being a V-shaped one. This change has been made in order that the whole of the tube can be cleared in the event of its becoming blocked and also to enable the pleural cavity to be completely shut off while the instrument is being changed from an exploring needle to an aspirator. The method of using this instrument is as follows:—The trocar and cannula having been introduced in the ordinary way the trocar is withdrawn and the stopcock turned off. The exploring syringe is then applied by means of an adapter, which is connected with it by means of a piece of rubber tubing. The exploration having been completed the tap is again turned off and the aspirator or syphon tube applied by means of



another adapter; the adapters used are the same as in Potain's aspirator. A metal test tube is provided for boiling the metal parts and bulldog clamps are supplied for the syphon tube. I have now used this instrument a great number of times and have found it simpler and quicker than the ordinary aspirator. On most occasions I used the syphon tube, which I prefer to the aspirator because it is continuous in its action and the aspirating force is uniform. The air-pump and (cork for) aspirating bottle form part of this instrument because it is sometimes required for very small pleural effusions surrounded by a thickened pleura, but on account of the infrequency with which it is required I prefer to have it in a separate case.

L. B. BURNETT, M.R.C.S. Eng.
Royal South Hants Infirmary.

ROYAL UNITED HOSPITAL, BATH.—As the result of a ball which was recently held in aid of the Royal United Hospital, Bath, the sum of £200 has been raised for the building fund of that institution.

THE LANCET.

LONDON: SATURDAY, JUNE 11, 1898.

THE General Medical Council rose at 7.30 P.M. on Tuesday, May 31st, having sat the whole of seven days and having dealt in a more or less thorough way—we fear we must say less rather than more—with a very large number of subjects. Upon the whole the new President has had a difficult experience. What was nominally the first meeting under his presidency began somewhat stormily and did not end much otherwise. The Council is full of his friends, who recognise his high authority, his unequalled experience of the Council's work, and his great business capacity. But even so he did not escape criticism and many thought that he might have prevented some of the personal episodes which disfigured the proceedings. The fact is that for the time being the air of the Council is heavily charged with personal electricity which breaks out in occasional storms. Let us hope that the storms will soon pass and leave the Council a better body for the discharge of its great duties. For better or for worse it includes in its membership a number of gentlemen of great ability but of incompatible temper, who no doubt all agree in wishing to make the Council efficient, but who continue to differ even on questions on which they are for all practical purposes agreed.

Amid the multifarious questions which occupied the attention of the Council we select one or two as important in themselves and also interesting as illustrations of the faulty way in which the Council too often does its work. Take, for example, the question of the use of unqualified assistants. The Council in November last carried a motion meant to increase the stringency of its rule on this subject. Roughly it conveyed the general impression that henceforth—without waiting till the year 1900—any employment of an unqualified assistant in the seeing or treatment of patients might involve the peccant principal in a serious charge before the General Medical Council. We pointed out at the time that there was a want of definiteness in the language, leaving in the minds of many practitioners an uncertainty as to the exact meaning of the Council. This uncertainty has been felt extensively by those who have been in the habit of employing unqualified assistants under their own careful supervision and, as they thought, in accordance with the views of the General Medical Council. Amongst such practitioners a wide and extensive panic has undoubtedly been created. The discussion on Tuesday on Mr. TEALE'S motion, which aimed at a reconsideration of the subject, shows that this uncertainty was not confined to such practitioners, but that it was actually shared by members of the Council. Mr. BROWN said that he would regard attendance on midwifery or an emergency case of any kind as not inconsistent with the November notice. He was sharply corrected by Dr. DONALD MACALISTER, who, as framer of the notice and chairman of the Business Committee, as well as in virtue of a clear and logical mind, speaks with authority on the subject. But it is well known that other and influential members of the Council share Mr. BROWN'S views and have given them categorical expression. The final result of the reopening of the matter is simply to leave things where they are and were. This means that this serious question is to be settled by cases and not by explicit instructions, that men employing unqualified assistants, no matter what the limitations, will be liable to answer for their conduct before the Council, and that no one can tell in any individual case whether the views of Mr. BROWN or of Dr. MACALISTER will prevail. This vagueness may be a master-stroke of policy in the view of certain minds, but it is not business and is a great practical cruelty to men wishing to do what is right under difficult and often hard conditions of practice.

We regret to say that the proceedings of the Council ended, as we have hinted, unfortunately. The resolution which was passed giving members power to see documents with the consent of the Council, or the Executive Committee, or the President, was not broad enough for Mr. HORSLEY (to whose letter in our columns last week we refer our readers), and although by silence he appeared to give consent to the resolution when it was under discussion, at the last moment of the Council's sitting he raised the whole question again on practically a formal motion. The President refused to allow the reopening of the subject. It would seem only fair before the rule by which the inspection of documents by members is condemned that it should be tested by experience. It is obvious that the documents of the Council must be safeguarded. Some of them affect the character of members of the profession against whom charges of misconduct may have been hastily and incorrectly made. All of them are of such a nature as to be valuable for use and reference and consequently their loss or damage could not be considered with equanimity. On the other hand, they can only be made useful by inspection and study, and we assume that in the future for any good purpose they will be available under reasonable conditions. Nothing could be more unfortunate than for the Council to offer an unmeaning opposition to such a use of its documents or an opposition which would convey the impression of fear lest its action or that of its legal advisers or officers would not bear investigation. It is understood to be the legal officers of the Council against whom Mr. HORSLEY'S shafts are most pointed, but it is a poor compliment to these old and well-tried servants to think that their work needs to be guarded from honest, even if somewhat severe, criticism. In this view it is much to be regretted that a committee was not appointed as the motion of Mr. HORSLEY and Dr. GLOVER suggested. An investigation by a committee is an entirely different thing from a personal inquiry and is much more likely to carry satisfaction.

ALTHOUGH the profession has not yet got over a certain amount of dissatisfaction that the recent Crown vacancy in the General Medical Council was not filled by a

general practitioner, it is generally recognised that the dentists have been fortunate in the appointment of Mr. TOMES. The discussion on dental education gave the new representative a good opportunity of justifying the selection of the Crown. There are two extremes in the views on this subject which need reconciliation in the Council. According to one party, represented in the debate by Dr. MCVAIL with his unfailing fervour of expression, the time is fully come when the dentist ought to be a surgeon and ought to have as complete a knowledge of surgery as any medical practitioner. According to another view, represented perhaps by Sir RICHARD THORNE, we are making too much of dentists and training them beyond the necessity of the case, with the effect that they are apt to think themselves fully fledged medical practitioners and to poach on the field of the medical man. The truth doubtless lies midway between these extremes and the General Medical Council has made an honest attempt to suggest a curriculum and an examination which will tend at once to make the dentist efficient and yet help him to see that it is no part of his duty to invade the domain of the medical practitioner. There is the less excuse for any such invasion when we consider the fact that coincidently with the development of the dentist's art the public have developed a praiseworthy solicitude about their teeth.

The warmth of the discussion in the Council was not, it should be said, entirely due to divergence in the views of the members. The real inwardness of the debate could be guessed at by those who remember that the Council is a very complex body and represents schools in different portions of the kingdom whose methods of education differ, whose interests are not always identical, and who are not altogether free from the jealousy of rival and competitive bodies. Whether chemistry should include physics, whether instruction should take the form of lectures or laboratory work, whether a dentist should know more than the anatomy of the mouth and how much more, whether his teaching on disease should enable him to recognise any lesions in the mouth of more than local significance, were questions which seemed almost to raise the temperature of the members concerned in their debate. It must be admitted that Mr. TOMES exercised a moderating influence and did much to show that it was in the interest of the public that the dentist should be more than a mere extractor or stopper of teeth and that the degree of medical education required of him had the effect of restricting him within the sphere of his own specialty. Medical men generally will recognise the truth of this view. Undoubtedly the less educated a man is the more conceited he is apt to be and the more likely is he to assume status and duties beyond those for which he is licensed. A great part of the interest of this discussion and of the whole question of the evolution of dentistry lies in the fact that it involves the larger question of specialisation in what is essentially medical work. How far is this process to go? How far is it fair to the medical profession and in the interest of the public to divide the human body into petty areas to be cared for by th se alone who have devoted their attention exclusively to such limited areas, as if these localities were not parts of the whole, and as if their diseases could only be understood and treated in this isolated way? If such specialisation is demanded by the public, how far should it be recognised and encouraged by the medical profession? The answer of the profession doubtless would be that it has gone far enough and that any further extension of it should be resisted. The legalisation of the dentist has not yet sufficed to raise all men who enjoy registration above the methods of tradesmen. Many advertise and vaunt their skill in a way altogether foreign to the methods and the tradition of the medical profession. But it has doubtless tended to check that evil, and the effect of education, as Mr. TOMES argued, has been considerable. Still, we must resist, on the score of science and of public interest alike, any more registration of specialties. And here we join hands with Dr. MCVAIL and admit that the medical art, as far as education goes, is one and indivisible, and must know no limitation of parts and recognise no division of the body into bits.

ON June 6th the trial of WALTER HORSFORD for the murder of his cousin ANNIE HOLMES, a widow, was concluded. After five days' investigation at the Huntingdon assizes before Mr. Justice HAWKINS the prisoner was convicted and sentenced to death. The facts of the case were briefly as follows. HORSFORD, who had recently married, had received an intimation from Mrs. HOLMES that she believed herself *enceinte* with the implication that he was the author of her trouble. In his reply he repudiated liability on the grounds that she had received monetary consideration and expressed a wish that no more letters should be sent to him, as he did not wish his wife to know of the relations which had existed between them. In December last HORSFORD purchased at a chemist's a large quantity of arsenic and 90 gr. of strychnine, alleging that he wanted them to exterminate vermin. One day early in January Mrs. HOLMES, who had been in her usual health, retired to bed taking with her a glass of water—an unusual circumstance. Shortly afterwards her daughter, aged about thirteen years, found her mother in great agony. The neighbours were called in and Dr. JOSEPH HERBERT ANDERSON, acting as assistant to a local practitioner, was fetched. He found deceased suffering from symptoms of strychnine poisoning and administered antidotal sedatives. Treatment proved of no avail and in a short time the unfortunate woman expired.

At the inquest HORSFORD in his evidence denied that he had had immoral relations with his cousin, or that he had visited her, or that he had sent anything to her. These statements were demonstrably contrary to fact, for he had been twice to see her and there was the letter above referred to. He was arrested on a charge of perjury and was subsequently indicted for wilful murder. After Mrs. HOLMES'S death some letters were found beneath the mattress of the bed, together with two papers, one of which though nearly empty contained a little strychnine whilst the other held 35 grs. of the alkaloid. On one of the packets was written "one dose take as told," and also the significant expression "it is quite harmless." The analysis

of the viscera and their contents revealed the presence of a large quantity of strychnine. From the characteristic symptoms and the chemical analysis there could be no shadow of doubt that the deceased had died from strychnine poisoning. The questions to be determined were—Was the alkaloid taken by accident or was it administered with a felonious intent? and if the latter, who was the guilty person? Although strict inquiries were made none other than HORSFORD likely to be known to Mrs. HOLMES and to be interested in her affairs was found to have purchased strychnine from the chemists for some distance around. Fortunately there was no difficulty in comparing HORSFORD'S known handwriting with the direction on the packet containing the powder. The likeness between the two was so striking that it scarcely needed an expert to appreciate it. Now, whether HORSFORD caused to be administered the poison with the intent to procure abortion—a proposition purely visionary—or to compass death mattered not. The post-mortem examination showed that Mrs. HOLMES had not been pregnant within a short period of her death. But even this mistake as to her condition would not have diminished the criminal responsibility, since the Act in considering the penalties for the procuring of abortion distinctly says "whether the woman be pregnant or not." The chief contentions for the defence were (1) that some other person than HORSFORD might have been the guilty party; (2) that the strychnine found in the papers might have been put unde the bed subsequently to the death of Mrs. HOLMES; and (3) that it was not likely that HORSFORD, "who only valued Mrs. HOLMES'S body at half a crown"—a sum he acknowledged to have given her—would sacrifice her body and soul at the risk of losing his own life. As regards the first, it may be remarked that there was not the slightest testimony that any other person than HORSFORD had any reason for taking her life. The other points are too puerile to merit discussion.

Touching the adequacy of motive we submit that the history of murders committed of malice aforethought shows that from an ordinary standpoint the prime cause is seldom commensurate with the deed—in fact, it is more often than not so utterly disproportionate that some ethical writers have questioned whether the act is not the final result of a state of mind that is hovering on, or that has passed beyond, the frontier of sanity. And, again, there is the propensity to trust in the chances which may favour the failure of detection of the crime. Since the time of PALMER no case of murder by strychnine poisoning so foul in every sense of the word has been brought to light as that now under consideration. United to his victim by ties of blood, in debt to her morally for the wrong he had done to her, HORSFORD hesitated not to treacherously take the life of a lonely widow and make her innocent children orphans, and all for the miserable gain of freedom from the consequences of his lust. The links in the chain, or rather the strands in the rope, of evidence were so convincing, so natural in their connexion and cohesion that none but the wilfully blind could for a moment hesitate to endorse the verdict. The compliment and thanks rendered by the jury to the presiding judge might be deemed superfluous, but *facile princeps* as is MR. JUSTICE HAWKINS in directing juries in criminal trials it seems to us that his latest exposition will be considered his masterpiece. Biassed undoubtedly he was, but in the justifiable sense to which the late MR. JUSTICE MELLOR gave his judicial sanction when he said "if the evidence is strong the summing up should be strong." It would be wrong on the part of a judge simply to enumerate the facts which might be arrayed against a prisoner or presented in extenuation or disproof of his alleged guilt. His remarks should be directive and not merely descriptive. They should be of such nature and strength as will assist the jury in arriving at a just conclusion.

Annotations.

"Ne quid nimis."

THE EXPENDITURE OF THE METROPOLITAN ASYLUMS BOARD.

THE expenditure of the Metropolitan Asylums Board and the inattention of the public to it have long been the surprise of those who take any interest in such matters. Those who are keen to replace our voluntary hospital system by a State-supported one should immediately begin their study of the working of this Board. The technical nature of the questions in architecture involved and their remoteness from the burning contests of politics, and a vague impression that everybody is benefited all round by the hospitals, in part account for the general apathy with which their administration is regarded. It is at least satisfactory to see indications that the Local Government Board is uneasy on the subject and keeps up its demand for more specific information. At the meeting on Saturday last a letter from the Local Government Board was read stating that the report of the Special Committee on the Brook Hospital expenditure did not give specific replies to the letter of the Local Government Board of Oct. 22nd; that the special committee did not employ a competent surveyor as suggested by them and as ordered by the managers; and that they were still of opinion that such a course should be adopted. It is also satisfactory to find that some members of the Board are alive to the seriousness of the facts. Mr. F. Purchese is reported in the *Times* of the 6th inst. to have characterised the construction of the hospital as a gross scandal, the cost exceeding the architect's estimate by £70,000, about £38,000 being for work authorised by the architect without the consent of the committee or of the Board. He moved for a special inquiry by the Local Government Board. It was finally decided to forward the report of the Special Committee, and a letter answering the questions raised and promising help to the Local Government Board in any further inquiries. We hope the Government will spare time from its larger cares to pay some attention to this question and the various bearings of it. The whole subject of the administration of the hospitals and their effect on the limitation of disease is one of immense public importance.

THE ADULTERATION OF DRUGS.

IN the matter of adulteration the subject of food is generally uppermost in the mind and of recent years the interest taken in suppressing fraud in this direction has been very keen, so as to have resulted at last in an organised movement urging upon the present Government the necessity of providing more effective measures. All this time the question of the sophistication of drugs is to a large extent likely to be lost sight of. Indeed, it has been proposed

to entitle the new Act simply the Adulteration Act, apparently without reference to drugs at all. The matter of keeping vigorously maintained a system of control in drugs is certainly next in importance to that of a similar control over food; it obviously directly concerns the public and, it need hardly be added, the medical adviser. Yet judging from the Government returns the ratio of drugs examined to food is most insignificant and not in accordance with public and professional requirements. In the last Local Government Board return (1896-1897) out of a total of 45,555 samples taken for analysis only 1380 specimens (about one-fortieth part of the total number) of drugs were taken, the extent of adulteration amounting to 11·3 per cent., against 9·2 per cent. in the case of food. It invariably happens when the authorities become active that offences are proved. Such was the case in Sunderland a few weeks ago, when several druggists were convicted for selling drugs of inferior quality. In Gregory's powder carbonate of magnesia had been used instead of oxide and in one case calcium carbonate. In another instance the powder consisted of two-thirds of sulphate of lime. Again, precipitated sulphur was shown to have contained a percentage of sulphate of lime, due probably to careless preparation; and, lastly, a druggist had supplied sublimated instead of precipitated sulphur. The proceedings in regard to drugs, unlike those in regard to the adulteration of food, are instituted upon a much more definite and satisfactory line, since, of course, the British Pharmacopœia lays down the kind and strength of the preparations sold. It is in a similar direction that new legislation is required in regard to food—that there may be definite standards fixed and more precise titular definitions of various articles of food. And in regard to drugs a greater proportion of samples than 3 per cent. should be taken under the provisions of the Food and Drugs Act by the authorities if a satisfactory standard of purity and quality is to be maintained.

MEASURES FOR PROTECTING TURKEY AND EUROPE AGAINST PLAGUE.

DR. ZAVITZIANO, United States Sanitary Commissioner at Constantinople, reports to his Government that, in spite of the steps of the International Sanitary Commission, there are many questions which render such steps delusive. He instances the condition of the sanitary defence of Bassorah.

"I reported," he says, "the arrival on the 10th inst. of the Steamship *Patna* from Bombay with 125 passengers. During the journey from Bombay to Karachi bubonic plague made its appearance on board. It was a fireman who fell ill and was landed at Karachi. A second case occurred off Bushi and a third at Bassorah. I have already written in my previous reports how much Turkey is exposed to the invasion of epidemics through the Persian Gulf and that the different members of the International Sanitary Commission expressed on the contrary their opinion, which is quite different, and according to which no epidemic ever entered Turkey from that way."

It has been frequently stated that only the cholera epidemic in 1882 entered through Bassorah and probably that of 1888-9. *Ex post facto*, now that a case of bubonic plague exists already in the would-be lazaretto of Bassorah, it has been decided that any ship arriving at Bassorah and having on board cases of bubonic plague will be turned back after the mail has been landed. The foreign sanitary representatives, seeing that in spite of the orders given by the sanitary authority the danger of the spread of the epidemic is always imminent, have decided (1) to present to the ambassadors or ministers whom they represent at the International Sanitary Commission a memorial according to which diplomatic action would be taken in order to compel the Ottoman Government to respect and put into execution the decisions of the International Sanitary Commission without modifying them and adhere to the sanitary conferences of Paris and Venice; (2) to cause a meeting of a commission in order to decide how to put into execution the decisions of said sanitary conferences and decide upon the necessary steps to be taken for the protection of Turkey and Europe against the plague; and (3) at last to insist upon the adoption by the Ottoman Government of an efficient system of hygiene and sanitary improvements of all the cities of the empire. We fear that to compel the Turkish Government to do such things as are included in the third heading, which would involve an immense expenditure of money from Constantinople to the Persian Gulf, is rather a hopeless task.

OBSTETRICAL SOCIETY OF LONDON: PRESIDENTIAL ADDRESS

WE have received the annual presidential address which was delivered before this society in February last and which has now been printed in separate form. As a rule the appreciation of these addresses is largely restricted to those who happen to be present on the particular evening when they are delivered, for the volume of the society's Transactions in which the address appears does not generally come out till about a year afterwards, by which time much of the interest, which is necessarily partly of an ephemeral character, has evaporated. This is certainly to be regretted when, as in the present instance, so much care has been taken in the preparation of the address. It contains especially a statement of the present condition of the society, which we are glad to see is one of vigorous activity and prosperity; a review of the work done in the past session; and an account of the life and labours of those Fellows of the society who have been removed by death during the year. We observe that the alterations made in the form of the certificate granted to midwives after examination by the society has not had the effect of diminishing the number of candidates, but that, so far from this being the case, the number is increasing. Dr. Cullingworth defines the position of the society in this matter as follows. He says: "It must be clearly understood that the society undertook the work merely as a temporary expedient and from a sense of public duty after having tried in vain to induce the Government to move in the matter, and that it will only be too glad to relinquish it whenever the State can be prevailed upon to take upon itself functions that properly belong to it and that it alone can adequately fulfil." It is interesting to observe that the papers read at the society's meetings last session were equally divided between midwifery and gynæcology—subjects naturally allied, which cannot without disadvantage be studied, or indeed practised, separately. To our thinking, it is the biographical portion of the address which especially taxes the industry and, we may add, the tact of the writer; he has to deal with the history of the lives of men who have been for the most part his contemporaries, who have been engaged in the same kind of work as himself, who have necessarily sometimes thought as he does and at other times perhaps held opinions largely at variance with his own. Dr. Cullingworth had to deal with four names of the first importance—viz., Sir Spencer Wells, Dr. Lusk, Dr. Braxton Hicks, and Professor Tarnier. We think his somewhat delicate task in writing a biographical sketch of each of these eminent men has been admirably performed. Dr. Cullingworth has not restricted himself to merely describing the comparatively uninteresting facts of birthplace, parentage, and the like in each case, but has given some account of the principal work done by each of them. Probably the sketch of the life of Professor Tarnier is the one which contains most that is not generally familiar. The work he did in adopting measures at the

Paris Maternité to reduce the mortality from puerperal fever—"in slaying the dragon of puerperal infection," to use Dr. Cullingworth's expression—calls for especial remembrance. The invention of the axis-traction forceps which, as is well known, was due to Professor Tarnier, constitutes, in Dr. Cullingworth's opinion, "the most important improvement that has been made in the construction of the instrument since the introduction of the pelvic curve." Altogether we may congratulate Dr. Cullingworth on having produced an interesting and instructive address.

HYGIENE IN INDIA.

IF any apology were needed for publishing an introductory treatise on Indian hygiene the lessons of the plague would amply suffice. The lamentable want of sanitary knowledge among the natives of India has been the cause of much sickness and suffering and any attempt to supply that lack of knowledge should be cordially welcomed. A little book has just been published by Surgeon-Captain Buchanan for medical subordinates in India[1], but there are others to whom the book would be useful and if it has a wider circulation than the author intends much good will be done. An Indian gaol, it would seem, according to the author, is the only place in India where a sanitarian has a free hand and where he can readily act up to his theories. From this *obiter dictum* some novelties in the book might be expected, but the author has not travelled very far from beaten paths, except in regard to certain special details which apply solely to a country like India. The book, however, does not pretend to be a classical treatise on hygiene and, as far as it goes, is really an admirable little work. The term "medical subordinate," according to the Indian jail code, means an assistant surgeon, an apothecary, or a civil hospital assistant, but it is not to be supposed that any one of these has undergone the training of a fully qualified medical man. Nevertheless they often have to undertake duties appertaining to the fully qualified practitioner, and any endeavour to make the subordinate less a machine in the more responsible departments of his work deserves great praise. After reading Surgeon-Captain Buchanan's little manual the subordinate should not only be able to carry out the orders of the medical officer more intelligently but to know why those orders are given.

DIFFUSE LIPOMATA.

THIS disease is characterised by the symmetrical formation of diffuse fatty tumours in the neck and much less frequently in other regions, such as the front of the abdomen, the back, the mammary region, the groins, the suprapubic region, the buttocks, and the extremities. In the neck the growths may become so large as to produce considerable deformity. The disease was first described by Brodie in 1846 and only a limited number of cases have been recorded since that time. In a communication recently made to the Société Médicale des Hôpitaux M. Launois and M. Bensaude stated that they were able to collect only 65. The term "lipoma" seems to be a misnomer, as Mr. Roger Williams has insisted on; the growths are local hypertrophies of the subcutaneous adipose tissue and may be regarded as a form of obesity. But the lymphatic system appears to be in some way specially concerned in their production. In an important paper published in the sixth-ninth volume of the Transactions of the Royal Medical and Chirurgical Society by the late Mr. Morrant Baker and Mr. A. Bowlby the writers remark that the fatty masses are prone to develop in regions occupied by lymphatic glands—viz., in the neck, in front of the pinna, and in the inguinal region, but they could not say for certain whether the glands were involved. M. Launois and M. Bensaude have brought forward further evidence in favour of the view suggested by Professor Hayem, that the affection has its origin in disease of the lymphatic glands. To the objection that the growths form sometimes in regions where no lymphatic glands are supposed to exist they reply that glands have been described in such regions—for example, in the external aspect of the deltoid, on the internal surface of the forearm, on the thorax, and on the abdominal wall—by Sappey and Cloquet, and recent researches show (see the thesis of Petit) how numerous are the groups not described by the authorities. A more important argument than the situation is the presence in the growths of glands more or less voluminous. Again, lymphangitis and splenic enlargement have been found and also alterations in the number of leucocytes in the blood. Virchow has already stated that the lymphatic glands may be the starting-point of lipomatous formations. Analogous to the disease according to this view is the perirenal accumulation of fat which may occur with renal disease. But in speculating on the nature of the disease the writers, strange to say, do not refer to its etiology. In England the disease has been observed almost without exception in persons addicted to alcohol; and general obesity is a well-known effect of the same cause. Possibly the reason is that alcohol does not, or has not been observed to, play the same part in the French cases, for the habit is not mentioned in the very complete analytical table which accompanies the paper, whilst it is frequently referred to in the English cases.

THE CLINICAL SOCIETY'S COMMITTEE ON ANTITOXIN IN DIPHTHERIA.

IN its main results the investigation into the use of antitoxin in diphtheria undertaken by a committee of the Clinical Society of London harmonises with the experiences which have from time to time been published in different quarters. The summary report read by Dr. Church at the last meeting of the society does not enter into details, but gives in general terms conclusions which are eminently favourable to the value of the treatment. The committee would appear to have taken great pains to avoid fallacies and to have made a rigid selection of the reports furnished to them from various hospitals in order that erroneous inferences might be avoided. By comparison of the series of cases treated with antitoxin with another series not so treated it would seem that the use of the serum was marked by a reduction in the fatality of diphtheria from 29 6 per cent. to 19 5, a reduction most marked in patients under the age of five years. But perhaps the most striking evidence of the efficacy of antitoxin, particularly when it is early administered and in adequate amount, is to be found in the results of tracheotomy. It would seem that since its employment there has been a diminution of cases requiring tracheotomy and, what is more obvious, a very marked lessening of the mortality amongst those subjected to this operation. A fall in fatality-rate from 71 6 per cent. to 36 0 per cent. speaks volumes and by itself must carry conviction as to the powerful action exerted by antitoxin upon the local process. The committee inquired into the relative results accruing from variations in the period of the disease at which the injections were made, and also the comparative effects of different amounts injected at once but we must wait for the full text of the report before being able to give their experience in these particulars. It was stated, however, that no connexion could be discovered between the amount of antitoxin injected and the subsequent occurrence of paralysis. It is instructive to

[1] A Manual of Jail Hygiene for the Use of Medical Subordinates. By Surgeon-Captain W. J. Buchanan, I.M.S. Calcutta: Bengal Secretariat Press. 1898. Price Rs. 3.

learn that in very nearly one-third of the cases some form of rash, mostly erythematous, occasionally urticarial, supervened at periods varying in the majority of from six to twelve days after the injection. These rashes were accompanied by rise in temperature in about one-half of the cases and in a certain number by joint-pains. As regards suppression of urine no difference was observed in the liability to this grave event amongst those treated and those not treated by antitoxin. The general result of the inquiry is succinctly yet sufficiently stated to have been "that in the cases treated with antitoxin not only is the mortality notably lessened, but the duration of life in fatal cases is also prolonged," and it is added: "The injection of antitoxin may produce rashes, joint-pains and fever; with these exceptions no prejudical action has been observed in the series of cases investigated to follow even in cases in which a very large amount of antitoxic serum has been used." This deliverance, modest though it be, made after most careful scrutiny of clinical facts, should go far to establish the routine employment of antitoxin and encourage the hope that as time goes on its efficacy may, by improved methods, be even more strikingly exhibited. The thanks of the profession are due to the committee and especially to its chairman, Dr. W. S. Church, and its secretary, Dr. W. Pasteur, for the manner in which their important task has been accomplished and the clearness with which its conclusions are stated.

THE GLYCERINATED CALF LYMPH ESTABLISHMENT.

As the result of inquiries which we have instituted as to the progress made by the Medical Department of the Local Government Board in the matter of a supply of glycerinated calf lymph we find that no definite decision can be come to as to the date when this lymph will be issued until after the passing of the Vaccination Bill. In the meantime the laboratories taken over by the Government at the premises of the British Institute of Preventive Medicine are being rapidly fitted with all the necessary appliances, and it is expected that work will commence there in about a fortnight, under the direction of Dr. F. Blaxall of the Westminster Hospital School of Medicine, who has been appointed bacteriologist in connexion with the new laboratories. It is also stated that special arrangements have been made as to stabling for the calves which will be used and for the regular transmission of the lymph in bulk to the laboratories. It is also a matter of satisfaction to be able to record that on putting to the test, by the primary vaccination of a large number of infants, some samples of glycerinated calf lymph which had been prepared by Dr. Copeman and Dr. Blaxall and had subsequently been kept in stock for no less than nine months every single insertion resulted in typical vaccine vesicles.

ULCERS ON THE CONJUNCTIVÆ IN SECONDARY SYPHILIS.

As the virus is diffused through the whole system in secondary syphilis, theoretically a lesion might occur in any position; but as a fact, on those parts exposed to observation—the skin and certain mucous membranes—the lesions show a preference for some positions and occur but seldom on others. This difference, like all others of the kind which are found when the whole system is exposed to a virus or poison, depends no doubt on structural or functional differences of various parts. The secondary eruption of syphilis scarcely ever affects the conjunctivæ and we know of no instance in which ulcers like those described in the following case have been observed, but that they were true secondary lesions admits, we think, of no doubt. The case is described in the *International Medical Magazine of Philadelphia*, April, 1898, by Dr. C. A. Veasey, and is accompanied by an engraving. A man, aged twenty-eight years, acquired syphilis. In the seventh month he came under treatment with a papular eruption and mucous patches in the mouth. Each upper eyelid was markedly swollen and red and there was a thin muco-purulent discharge. On eversion there were found symmetrically situated on the external halves of the palpebral conjunctivæ two extensive, irregularly outlined phagedænic ulcers, with undermined edges and covered with greyish yellow sloughs. Protiodide of mercury was given and the ulcers were cleansed with a solution of formaldehyde and occasionally stimulated with nitrate of silver. At the end of two months they had entirely healed, leaving slight scars, and the skin eruption and mucous patches had disappeared. The symmetry of the ulcers, the associated lesions, and the result of treatment completely establish the diagnosis in this case. They may be very well compared with the analogous symmetrical ulceration of the tonsils which is so usually found in secondary syphilis.

BRITISH MEDICAL ASSOCIATION.

ON Tuesday evening last the President and Council of the Metropolitan Counties Branch of the Association gave a conversazione which by permission of the President and Council of the Royal College of Surgeons of England was held in the Museum and House of the College, Lincoln's Inn-fields. A very large gathering, including many ladies, assembled, the guests being received by Mr. Frederick Wallace and Dr. Robert Farquharson, M.P., respectively President and President-elect of the branch, in the Museum of the College. During the course of the evening the excellent band of the Royal Artillery played a selection of music in the Museum; the Folk-Song Quartet performed Folk and other music, received with much applause, in the Lecture Theatre; and Mr. Walter Churcher gave some humorous sketches which, to judge from the crowded state of the theatre, were greatly appreciated. Many well-known and distinguished members of the profession and guests were present, and the Metropolitan Counties Branch of the British Medical Association may be congratulated on the complete success of their pleasant entertainment.

PREVENTIVE HYGIENE IN FRANCE.

THE statement that in our own insulated country the opponents of sanitary notions are not as rare as Juvenal's black swans will probably not be gainsaid; but in the case of enlightened France, the land of Pasteur and progress, it is truly remarkable to find a man of education publicly disavowing all belief in the benefits of protective hygiene. When the Budget of the Agricultural Department was recently under consideration in the Chamber of Deputies the section devoted to epizootic diseases was discussed at great length, prominent among the speakers being M. Denis, member for the Landes, who demanded a supplementary credit of two millions (francs) in order to indemnify the owners of animals slaughtered *under the pretext* that they were tuberculous. According to M. Denis veterinary surgeons are inclined to see tuberculosis everywhere; but he confessed that the zeal of these honourable practitioners filled him with the gravest anxiety. "Doubtless," continued the honourable member, "statistics will be invoked to support them, but we protest against men of science who under the pretence of saving our lives render that life intolerable. I am aware that I am tilting against theories that are generally admitted; but in these latter days, as it seems to me, veterinary surgeons as well as medical men have become far too scientific. I should like to see the return of those good old times when, instead of

inventing diseases with jaw-breaking and barbarous names, doctors used simply to give their patients purgatives and gummy syrups. A great many highly scientific things have been said of *tuberculine* [*sic*]. Before this discovery our flocks and herds used to wander none the less joyously and actively o'er hill and vale, and I do not believe that tuberculosis ever caused the slightest uneasiness to our forefathers." "After an exhibition such as this," says a medical critic, "can anybody be surprised when deputies and even ministers call in quacks to treat themselves and their families? Poor humanity! Verily the opponents of progress are not always to be sought for in the ranks of ignorance." It is, of course, true that the apostles of sanitation have ever encountered depreciators. Just as Pasteur had his Pouchet, so Goiffon had his Pestalozzi, the amazing author of a scientific dissertation on Jonah in the whale's belly, who nevertheless wrote as follows to the Lyons physician: "You have gone quite far enough, sir; you have gone too far. Let us abstain from creating in our brilliant imaginations troops of flying insects which multiply themselves *ad infinitum*, whereof the generations never cease, which swarm in the air, in merchandise, even in the bodies of living creatures!" Goiffon's theory was correct, but as yet the world was not ready for it. In this connexion, however, it may be as well to recall the fact that the enemies of hygiene have not always been confined to the laity. The foolish utterances of Pestalozzi were well-nigh universally applauded by the various medical authorities of the day.

ADMISSION TO ISOLATION HOSPITALS.

A SOMEWHAT instructive discussion has taken place in the Urban District Council, Redditch, in reference to the mode of admitting patients into a temporary infectious hospital which a joint isolation hospital committee has determined to open. The question turned upon the right authority to decide on the admission of infectious cases. In such cases there are two questions to be decided. First, the diagnosis of the disease. This is obviously a question to be decided by the medical man in attendance on the case. With him rests the responsibility of notification which follows on diagnosis. The medical officer of health may be also the medical adviser of the patient. But in any case the act of diagnosis and the responsibility of notification rest with the medical attendant. In model districts there is such a friendly understanding between the medical profession and the medical officer of health that in any difficulty the medical officer is willing to help with his advice. But there is a second question not so easy as the first, how and by whom are patients to be admitted? This is a legal and social question. In some places they are admitted indiscriminately, the sole qualifications being that they are ratepayers or the children of ratepayers and are the subjects of notifiable infectious disease. But the Legislature, we think, originally in such legislation contemplated a certain preference of cases. It gave powers to the Local Government Board in regard to the Metropolitan Asylums Board Hospitals to make regulations on the subject, which it has been very slow, we admit, to make. According to the high view of some medical officers of health isolation is impossible in ordinary houses. But even in ordinary houses there is a difference. Some are more crowded, some more clean and well cared for, than others. There is a wonderful power in some families of carrying out the instructions of a medical man and managing and curtailing even infectious disease. Some families need isolation much, some scarcely at all. Some are numerous, others not so. We do not approve the notion that all have an equal claim on an infectious hospital supported by rates. It is erected for the public safety and those have a claim to it who cannot isolate at home. Where there is any difference in need the best persons to judge are the medical officer of health and his staff, who are in touch with the medical attendant.

MEETING OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

IT will be remembered that in consequence of the absence of a quorum at the January meeting of Fellows the Council decided in future to call only one meeting of the Fellows, in each year. It is therefore important that any Fellow, who has a matter to bring before the meeting of Fellows, should give notice of it to the Secretary of the College on or before Thursday, June 16th, otherwise it cannot be discussed until July, 1899. The meeting itself will be held on Thursday, July 7th, 1898, at 5 P.M., after the election of three members of the Council.

THE EPIDEMIOLOGICAL SOCIETY.

AT the annual meeting of this society, which was held recently at 11, Chandos-street, Cavendish-square, Professor Lane Notter, who has occupied the Presidential chair with so much credit to the society for the last two years, retired from office and was unanimously elected one of the Vice-Presidents. It is customary in this society to appoint in turn as President representatives from the several branches of medical and sanitary sciences, and it was decided in keeping with this rule and having regard to the fact that no representative of the central health authority had occupied the chair since Sir Richard Thorne that an effort should be made to obtain the services of Dr. Franklin Parsons of the Medical Department of the Local Government Board. This choice is, it appears to us, a very happy one, as Dr. Parsons is possessed of such encyclopædic knowledge in matters scientific that his assistance at the debates of the society cannot fail to be of very great value and we shall look forward with interest to his presidential address. We note, too, that at the same meeting it was resolved to confer upon Sir William Jenner the honorary membership of the society, the highest honour which the society has in its power to bestow. Sir William Jenner's historical researches in connexion with the differentiation of the continued fevers as well as in numerous other directions render him especially entitled to such honorary membership. It was arranged to hold the annual dinner of the society at the Grand Hotel, Trafalgar-square, on June 24th, and we hear that Sir Douglas Galton, Sir Walter Foster, the Director-General of the Army Medical Department, Dr. Klein, and many others are to be present.

URTICARIA OF MUCOUS MEMBRANES.

THE eruption of urticaria does not affect the skin only, but may extend to the mucous membranes. On some patients it can be observed; on others its existence is to be inferred from the symptoms. Affection of the stomach usually shows itself by vomiting, but in a few rare instances hæmatemesis has occurred. In the *British Journal of Dermatology*, May, 1898, Dr. T. H. Chittenden has published the following case. An unmarried woman, aged thirty-eight years, became subject to attacks of urticaria. They increased in severity; the tongue and lips became very swollen, there was sore-throat with dysphagia and dyspnœa lasting three or four hours, and the mucous membrane of the nose was much swollen and congested. These attacks usually lasted about a week. Later they were accompanied by nausea and by vomiting of large quantities of blood which was followed by relief and the disappearance of the rash. There appeared to be some relation between the catamenia and the hæmatemesis; the latter came on about the first day of the former. Menstruation for the most part was

regular but very profuse. No cause for the disease could be traced; there was no family history of gout, asthma, or hæmophilia, and the strictest rules of diet had no effect. In the Transactions of the Clinical Society of London, 1885, Dr. Pringle recorded an exactly similar case in a man; he concluded that the hæmatemesis was the result of capillary hæmorrhage from an urticarial gastric mucous membrane. In urticaria of the skin analogous hæmorrhage may take place into the wheals (urticaria hæmorrhagica). The mucous membrane of the bronchi may be affected and a typical attack of asthma may accompany the skin disease. Of this a marked example was published in THE LANCET of May 22nd, 1886, by Mr. T. Davies Pryce. Indeed, apart from such cases of concurrence, urticaria and asthma show many analogies. Idiosyncrasy plays the same prominent part in their causation. These facts lend support to the theory of the late Sir Andrew Clark that asthma is a neuro-vascular affection of the bronchial mucous membrane.

LEAD POISONING IN THE POTTERIES.

A TIMELY contribution on this subject has reached us in the form of a paper-covered book of some fifty pages by Dr. Prendergast, who has worked professionally in the Potteries for fifteen years. The perusal of this interesting addition to the literature of the subject convinces us that our attitude in regard to the question is correct. In THE LANCET of May 14th, 1898, we pointed out that the conditions under which the operatives in potteries worked and the effects of the operations concerned had been gone into thoroughly by a competent committee the members of which were appointed by Mr. Asquith in 1893. We are quite at a loss to understand why it is now proposed to appoint experts again to go over precisely the same ground. The nature of the danger is fully understood and the means of prevention are known with certainty, the suggested remedies being, we venture to think, practicable and interfering little with the technical achievements of the potter's art at the present time. Manufacturers have pronounced the possibility and practicability of using harmless glazes which contain lead, but in an innocuous or practically soluble condition. We allude to "fritted" lead—that is, lead fused with borax or silica. Dr. Prendergast also refers to the results of this inquiry and his contention is "that it is not necessary to exclude lead altogether from the ceramic industry, but that a small quantity of this material is essential to the manufacture of pottery; and finally that it will in a boracic frit resist decomposition when brought into contact with a weak hydrochloric or other acid found in the human system." We earnestly commend the following suggestion to the Home Secretary. Let the pottery manufacturers be compelled to take one of two courses insisted upon by the laws of the country. Why not compel them to mete out compensation for injury under the Workmen's Compensation Act, which will come into force next July, or allow them exemption from the Act *provided that they employ only "fritted" glazes?*

THE WEST LONDON HOSPITAL DINNER.

THE first dinner of past and present staff, residents, and post-graduates of this hospital was held at the Trocadero Restaurant on May 31st, when over 90 were present. Mr. Alfred Cooper was in the chair and in proposing the toast of "The West London Hospital" described the work which had been done there with reference to teaching. The post-graduate course, which had been established five years ago, was now developing into a post-graduate school and over 80 gentlemen from all parts of the world had attended the hospital practice as post-graduates. He also referred to the improved school accommodation which was shortly to be provided for post-graduates. He announced the establishment of a pathological laboratory, not only for specimens from the hospital, but to which practitioners in West London could send specimens for examination and report. He next referred to the origin of the West London Medico-Chirurgical Society, which held its meetings at the hospital, and mentioned the great success which this society had achieved; it now had 500 members and a journal of its own. Finally he referred to the Masonic lodge, the Cavendish, which had been founded in connexion with the hospital and with the society. Dr. Thorowgood briefly replied for the hospital. "The Health of the Past Residents and Post-graduates" was proposed by Mr. Keetley, who mentioned that the past residents had given two beds to the new wards which were now being furnished. Dr. Schacht replied for the past residents and Dr. Darley Hart of South Africa replied for the post-graduates, pointing out the necessity of having a hospital for post-graduates where no students were admitted and speaking in high terms of the post-graduate teaching. "The Visitors" was proposed by Mr. Swinford Edwards and responded to by Dr. Campbell Pope. Mr. Butlin, a former surgeon of the hospital, proposed the health of the Chairman, who in his reply gave the toast of "The Honorary Secretary of the Dinner" (Mr. L. A. Bidwell, who was also the dean of the post-graduate school). Mr. Bidwell in his reply said that the committee were extremely gratified with the result of the dinner and stated that they hoped to hold another dinner next year. For the benefit of those who were unable to be present he had arranged that a full account should appear in the *West London Medical Journal*.

KRYPTON.

AN additional discovery in regard to the composition of the air has been made in a London laboratory, but for a reason which does not appear the announcement was made in Paris by M. Berthelot on June 6th before the Academy of Sciences. It was communicated in a letter from Professor Ramsay of University College. It is interesting to wonder whether such a course was dictated by personal or political motives, but surely the investigations of pure science should be beyond such influences. Still, the departure not unreasonably suggests something of the kind. It is well known that Professor Ramsay has expressed doubt as to the achievements of Professor Dewar in connexion with the liquefying of hydrogen being the first of the kind, and before the Royal Society when Professor Dewar announced the liquefaction of hydrogen in practical quantity Professor Ramsay said that Professor Olszewski of Cracow had done the same thing some years ago. There appears, however, strong reason for doubting whether Professor Olszewski succeeded in doing anything like that which Professor Dewar has accomplished lately at the Royal Institution, and we learn that Professor Ramsay has now admitted as much. Professor Dewar has produced liquid hydrogen in sufficient quantity to enable certain constants to be made and one of the important conclusions he has recently arrived at is that the reaching of absolute zero is practically a physical impossibility, since even when employing liquid hydrogen for the purpose the lowest possible temperature attained is 20 or 30 degrees higher. Professor Dewar was the first to show the method of preparing and preserving liquid air in large quantities, and to this achievement Professor Ramsay most probably owes his quite recent discovery of yet another constituent of the air. That being so, the present should serve as an excellent opportunity for sinking all questions of priority. We would refer all scientific controversialists to the excellent words contained in a lecture by Dr. W. J. Smith Jerome published in our issue to-day. He

says, alluding to the paradise of toil, that there may enter into it "one insidious sin—the lust of what is called priority. ..... This must be fought against and overcome or else, like a gathering cloud, it will, if left unchecked, roll onwards and darken all. And why should it not be fought against and overcome? Each fact discovered in the pursuit of knowledge, discovered it matters not by whom or when, and even when unimportant in itself may prove a stepping stone by which that knowledge mounts to other and far higher things. This is the worker's real recompense; it is this pregnant possibility which makes work, honest work, like virtue, its own great reward." The newly-discovered gas Professor Ramsay proposes to call "krypton," from the fact that it has been concealed from observation until now. It occurs with the argon after separation from oxygen and nitrogen of the air by now well-known methods. How krypton is separable from argon is not yet announced. Krypton belongs to the helion group, its density is somewhat greater than that of oxygen and it appears to be simple in constitution and mon-atomic. It gives a characteristic green line in the spectrum. This discovery may be of marked importance in clearing up the apparently anomalous behaviour of argon and helion and the difficulty of finding a place for them in Mendelèeff's wonderful classification of the elements.

PLAGUE IN HONG-KONG: THE DEATHS OF TWO NURSING SISTERS.

THE deaths of two nursing sisters in Hong-Kong from plague contracted in the course of their hospital work are very sad events in themselves and are rendered additionally painful by the shortness of the interval between them. The first of these victims to duty was Miss Elizabeth Frances Higgin (Sister Frances). One of the plague patients in his delirium coughed in her face on April 20th, she became ill on April 25th, and it was soon found that she was suffering from pneumonic plague, the worst form of the disease. In spite of devoted care and attention on the part of the sisters and the principal medical officer she succumbed early on the morning of April 29th and was laid to rest in the Happy Valley Cemetery in a spot chosen by herself some months ago, the funeral being attended by a large concourse of friends and mourners of every grade of society. Sister Frances was a native of Carrick-on-Fergus and received her training at Guy's Hospital. Miss Emma Gertrude Ireland (Sister Gertrude), one of those who attended Sister Frances in her illness, complained of feeling unwell on the evening of May 2nd and was admitted to hospital early next morning, when the typical bacilli were found in her sputum. She died on May 5th and was buried the same day next to Sister Frances. Sister Gertrude was the daughter of Mr. Ireland of Salle Repham, Norfolk, and was trained at the London Hospital, where she held the posts of "night sister" and "Sister Blizard." Both of the late sisters went to Hong-Kong in 1890 and served all through the plague epidemic of 1894. Miss Macintosh (Sister Catherine) became ill on the same day as that on which Sister Gertrude was attacked and was found to have plague bacilli in her sputum, but the most recent information as to her condition is favourable. She suffered from plague in 1896 and was saved as if by a miracle.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

H.R.H. THE PRINCE OF WALES presided over the annual dinner of the supporters of the National Society for the Prevention of Cruelty to Children on June 8th and was able to repeat in an excellent little speech the satisfactory information conveyed by the report for the past year. The society has every reason to feel satisfied with its position. A doubt as to the wisdom of the methods employed by the society which had been suggested by certain members was, it will be remembered, effectually settled in the society's favour by Lord Herschell's Commission. This year's report affords unimpeachable evidence that the society enjoys the confidence of the public. The annual subscription list has so far recovered from the temporary check which it had sustained that it shows a total income of £27,560, as against £28,980 for 1896–97, and this, moreover, in spite of the expensive diversion caused by the Diamond Jubilee. There are certain points of interest in the report which ought not to be overlooked. One relates to the fact that the public already show a greater readiness in giving evidence where it is found necessary to prosecute in cases of cruelty. Another and most important feature in connexion with the society's work is its beneficial influence over many of the defaulting parents themselves. Cases have repeatedly been reported in which a parent actually imprisoned for cruelty has thus been enabled to learn the lesson of self-restraint and has returned home a welcome inmate because altered in conduct and character. It must, of course, happen sometimes that the interference of the society is resented. In this connexion it is only fair to recognise the fact that every means is used to avoid all practice which savours of officious meddling and to have recourse to a court of law only in the last extremity. Mr. Justice Hawkins recently had occasion, in an action for libel brought against the society, to commend an inquiry conducted by its managing director as "the humane, right, proper, most feeling, and most prudent course to adopt." At the same time he warmly commended the society's work and the manner in which it was carried on. Lord Herschell has expressed a similar opinion with equal confidence. It was announced at the close of the dinner that over £5000 had been subscribed, a donation of 100 guineas having been made by the Prince of Wales.

THE CONVERSAZIONE OF THE ROYAL SOCIETY.

THE rooms of the Royal Society at Burlington House are no longer equal to the demands of the interesting yearly exhibition of the results of scientific work. This is especially felt on the occasion of the second conversazione to which ladies are admitted. On Wednesday evening last it was difficult to move comfortably and get anything more than a cursory view of the experiments shown. Still more difficult was it to get a satisfactory explanation of the phenomena concerned. We should like to suggest that the exhibition should be continued for at least another evening. Quite nine-tenths of the exhibits shown at the previous conversazione, which were described in some detail in THE LANCET of May 14th, were shown again. We noticed, however, the following interesting additions. Professor Ramsay occupied a darkened corner with blackened apparatus in which it was evident something mysterious was going on. It was a demonstration of the spectrum of krypton, the properties of which are described in another column. Not far off was a new form of induction-coil devised by M. Wydts and M. Rochefort of Paris and shown by Messrs. W. Watson and Sons. The length of the spark was 8 in., although the secondary wire weighs less than 2 lb., the insulation being effected by means of a thickened oil. The Linden wave-motor boat in action attracted very general interest. In this device the propelling power of waves alone is utilised, the mechanism consisting simply of two elastic horizontal fins directed backwards and suspended below water line at both ends of the boat. An escape from the enemy, supposing this was its only means of propulsion, may be made by means of this boat by destroying the waves in its rear by allowing a stream of oil to escape. By the utilisation of wave motion alone the boats will attain a velocity of five kilometres an hour against both wind and

waves. The invention had its origin in observing the action of dolphins in swimming. Another striking [demonstation was the new automatic telephone exchange system which dispenses with the employment of operatives at the exchange to connect the wires from the transmitter to the receiver. In a word, by this most ingenious apparatus it is possible to "switch on" the person with whom communication is desired without ringing up the exchange. Needless to add there was a very large and distinguished company present, the exhibits in general being, in regard to number, variety, and interest, distinctly in advance of previous occasions.

THE British Balneological and Climatological Society held a conversazione on June 8th, at Limmer's Hotel, when Dr. G. Vivian Poore delivered an address on Circumstances which Influence the Effectiveness of Climatic Treatment. The President, Dr. W. V. Snow, presided. Dr. W. S. Hedley showed a new form of stereoscope for exhibiting x ray pictures in relief.

H.R.H. THE DUCHESS OF CONNAUGHT will open a bazaar in aid of the Hospital for Incurable and other Sick Children of the Poor, St. Leonard's-square, Shoreditch, on Tuesday, June 21st, at 12, Hyde Park-gardens.

THE RIGHT HON. A. J. BALFOUR will distribute the prizes to the successful students in the Medical School of Guy's Hospital on July 13th, at 3.30 P.M.

THE registered offices of the Medical Defence Union, Limited, have been removed from 20 and 21, King William-street, W.C., to 4, Trafalgar-square, Strand, W.C.

AN OBJECT-LESSON ON THE NECESSITY FOR THE EDUCATION, REGISTRATION, AND CONTROL OF MIDWIVES.

BY WILLIAM ALEXANDER, M.D. R.U.I., F.R.C.S. ENG.,
VISITING SURGEON, LIVERPOOL WORKHOUSE HOSPITAL, ETC.

ON Friday morning, May 20th, a poor woman was seen by me in the surgical wards of the Liverpool Workhouse Hospital who had been admitted during the previous night. She was very much collapsed; the pulse at the wrist was imperceptible; the heart-beat was rapid and feeble, with only one cardiac sound audible; and the abdomen was tender and somewhat tympanitic. She was vomiting and had the appearance of a patient with a fatal peritoneal inflammation. She said she "took ill" on Tuesday morning and had been actively delivered by a midwife on Wednesday morning, who told her she had had "a cross birth." The midwife had also given her "drugs three times to assist the labour." She died about an hour after my visit, being then too far gone even to stand the examination necessary to ascertain the condition of the pelvic organs. The case was reported to the city coroner, who made inquiries into the case but was very reluctant to hold an inquest on the ground that the midwife was a very respectable woman and had been very attentive to her patient. He, however, kindly allowed us a post-mortem examination provided an inquest were to be held or not according to the result of the necropsy. This offer we accepted and the necropsy was made by Dr. Moyles and Dr. Smith in my presence on Monday, May 23rd. We found a round, ragged opening through the upper part of the vagina on the right side, going down to the peritoneum, which was stripped off the uterus for some distance. The large cavity thus formed contained half a pint of broken-down blood-clot. The stripped-off peritoneum was black and gangrenous and the peritoneal cavity contained dark purulent fluid. The uterine cavity contained foul broken-down clots and pus. The other organs of the body were sound except some old-standing adhesions of the præcordium.

Dr. Moyles reported the results of our examination to the coroner, who even then was disinclined to hold an inquest on the ground that such ruptures were natural and might happen in the practice of any medical man. An inquest was, however, held and a verdict of "Accidental death" was returned, the midwife being not only exonerated from all blame but commended for "staying by" her patient to the end. She said the child had water on the brain, that this caused the tear, and that the drug she administered three times was opium, not ergot.

About fifteen years ago a woman was brought into my wards at the Liverpool Workhouse Hospital with a coil of intestine protruding from the vagina. She had miscarried a few days previously, but the placenta was retained. The midwife who was called in pulled upon the cord to detach the placenta; the cord broke, and she tried with her finger to enter the uterus and to remove the placenta, but entered Douglas's pouch instead, and made a hole in the upper zone of the vagina only a little nearer the median line than the aperture in the present case. I think this woman was cautioned by the coroner, but no punishment was awarded for exceeding her duty and no means were taken to prevent her from acting in the future as she had done in the past.

There is no doubt that the woman who died on May 20th last did not owe her death to accident, but to want of the most ordinary medical attention at birth. The woman who attended her lamentably failed in her duty as a midwife in going on with the case when she found the child had water on the brain. Any medical man could, and probably would, have saved the mother's life. The poor patient at last being somehow delivered, and bleeding internally from a ruptured vagina, is three times dosed with opium. Even then her life might have been saved had the condition been detected and the patient removed to a hospital at once. Some time on Wednesday afternoon an order for the district medical officer was obtained, and Dr. Maguire, who saw her, gave an urgent note for admission to hospital. She did not reach the hospital till late on Thursday night in a septic and dying state, too weak to be touched and beyond the power of stimulation to produce reaction. The four points in the case which strike a medical man as requiring elucidation and upon which no light was shed by the inquest are—(1) Why did the midwife persevere with the management of a case of hydrocephaloid fœtus? (2) the cause of the rupture of the vagina; (3) the principle of the administration of opium by the midwife; and (4) the cause of delay in removing this poor woman with a ruptured vagina to hospital so that the time had passed within which her life might have been saved before she arrived there.

These two clear cases and several other midwives' cases which have died at different times in the surgical wards of the workhouse hospital from "inflammation" have made me a strong advocate for the education, registration, and control of midwives. They require to be educated so that they can recognise an unnatural labour and can acutely perceive its difficulties and the dangers of delay and of unskilful interference either by force or by drugs. They must be registered somehow so that they may be known to be educated and trustworthy, and they must be controlled to prevent such unnecessary deaths as the two I have detailed and the others I have referred to. The coroner's court and jury are not fitted for such investigations. The verdict of manslaughter which looms up in such an inquiry makes coroners recoil from ascribing blame and the jurymen are more likely to be influenced by compassion for the living woman "who did her best to relieve" than to guard the interests of her whose life has ceased, no matter how prematurely. To control these women we require local authorities where experts and legal assessors would make an unbiased inquiry, often from the midwife's own story, whether she did what she ought to do as well as what she could. If any blame attached to the midwife after a careful and intelligent inquiry then let that blame be apportioned by advice, caution, reprimand, suspension, or other ways, so that a just and righteous punishment may be inflicted, or if she were cleared from blame she would be cleared in the eyes of all whose opinion is worth having. In the interests of the public as well as in their own interests medical men should endeavour to recommend to the State a method of registering and controlling and helping midwives. Examples in Liverpool in the workhouse lying-in wards and in the Ladies' Charity Maternity show how successfully poor women can be treated by midwives aided by medical men. Surely some arrangement could be come to by which

those who can pay for a midwife should be saved from the risks to which this poor woman succumbed. If midwives are registered without any such skilled control these two inquests show how powerless the ordinary courts of law are to sift the points of a midwifery case or to ascertain whether the midwife was skilful, careful, and wise, or the reverse.

THE MILITARY MEDICAL SERVICES OF CUBA.

(FROM A SPECIAL CORRESPONDENT.)

THE sanitary services of a field army have always been most difficult to organise. Those who remember the Crimean war will have a painful recollection of these difficulties, but will also realise that great progress in such organisation has been accomplished since those days. In Cuba the Spanish forces have had to face obstacles quite as great as those which partially overwhelmed the Allies in the Crimea. Dr. Angel de Larra Cerezo, chief of the clinic at the Cuban hospitals of Madera and Alfonso XIII., has ably explained this situation. Dr. de Larra Cerezo will be known to some English medical men as having presided over the military section of the International Congresses of Hygiene, held at London (1891) and at Budapest (1894). He is also a member of the British Sanitary Institute and of many other societies interested in the promotion of sanitary science. His opinion, therefore, on the condition of the military sanitary services in Cuba will be of interest especially at this moment. The plans, diagrams, explanations, and reports presented to me by Dr. de Larra Cerezo are carefully drawn up and I will attempt to summarise the information which was thus courteously placed at my disposal. Even in times of peace it was not found an easy matter to provide for the needs of an army which numbered only about 14,000 men, for a great number of the troops were soon invalided by the effects of the climate. Those, on the contrary—and they constituted the majority—who became acclimatised were placed in garrisons where they had but little fatigue to incur. Then suddenly, within the brief period of one year, 200,000 soldiers were sent to Cuba and within from one to two months of their arrival half these soldiers were invalided. Thus in the course of some twelve months need arose for hospital accommodation for about 100,000 men. Now before the outbreak of the insurrection, that is to say, at the commencement of the year 1895, there were hospitals only in the towns of Havana, Santiago de Cuba, Santa Clara, and Puerto Principe, and nine local regimental infirmaries established in distant places where the difficulties of communication were such that the sick could not be sent to the above-mentioned towns. The necessity of creating new hospitals soon became evident and this work was begun in March and April, 1895. At the commencement of the insurrection the military sanitary corps had throughout the island of Cuba only 2500 beds at its disposal. On Jan. 1st of the present year there were 45,685 beds ready to receive the sick and wounded. The largest hospitals are first that of Regla, which had 3600 beds in November, 1896, and now possesses 5000 beds. Then there are the hospitals of Alfonso XIII. and of Manzanillo, each with 3000 beds; those of Beneficencia, with 2100 beds; Santiago de Cuba and Sancti Spiritus, with 2000 beds each; Ciego de Avila, with 1700 beds; Cienfuegos and Sagua la Grande, with 1450 beds; Remedios, with 1400; Holguin, with 1300; Madera, with 1100; and Pinar del Rio, Matanzas, Santa Clara, Casild-Trinidad, Isabela de Sagua, Puerto Principe and Bayamo, each with 1000 beds. The other hospitals have less than 1000 beds.

During the last ten months of the year 1895, the whole of the ensuing year, and during the first three months of the year 1897, nearly half a million patients have been treated in these hospitals. The precise numbers were—from March to December, 1895, 49,485; from January to December, 1896, 232,714; and from January to June, 1897, 201,247. The number of deaths was 3200 in 1895. In 1896 there were 10,610 deaths and 3691 during the first quarter of 1897, making a total of 17,501. During the three periods mentioned, of the patients admitted 35,250 were suffering from yellow fever and of this number 11,347 died. These figures relate only to the military hospitals. Many more patients were treated in the civil hospitals, in camps, in towns and villages where there are no hospitals, in forts, in private houses, and sometimes in sugar refineries. Statistics have also been drawn up extending over eighteen years giving the number of soldiers who have been treated in the hospitals and infirmaries for yellow fever. The proportion of deaths varies considerably and is sometimes highest when there were but few cases. Thus in 1880 there were 1470 cases of yellow fever with a mortality equal to 37·85 per cent. In 1883 there were 1235 cases and a mortality of 45·34 per cent., and in 1885 only 120 cases with a mortality of 55 per cent. The next year, however, the mortality fell to 26·92 per cent. and yet there were only 130 cases. Indeed, since that date the proportionate mortality has never reached 40 per cent. The highest on record is that of 1895, with 7085 cases, of which 39·46 per cent. died. The previous year there had been only 859 cases (mortality 32·82 per cent.). The following year (1896), in spite of the tremendous strain on the hospital services, the mortality fell to 30·99 per cent., and this out of no less than 23,580 cases of yellow fever. During the first five months of 1897 there was a still greater improvement for out of 4636 cases only 27·20 per cent. died. As might well be expected yellow fever and other diseases have proved far more fatal than the bullets of the insurgents. The number of wounded nursed in the hospitals amounted to 11,902—1989 in 1895, 7270 in 1896, and 2643 in 1897. From March, 1895, when the insurrection began, to May, 1897, there died in the hospitals, from the effects of wounds and from all diseases, 22,497 soldiers.

What with the stress occasioned by the war and the enormous number of patients presenting themselves at the hospitals it has not been possible to keep very precise statistics as to the number of cases treated for malarial fever, dysentery, typhoid fever, tuberculosis, &c. It is known, however, that in the years 1896 and 1897 there were 79,552 cases of malarial fever of sufficiently severe a character to compel the sufferers to enter the hospitals. Many thousand other cases occurred among the troops who were too far away to be conveyed to a hospital. There is also a record showing that in the second quarter of 1896 there were 3193 cases of dysentery, of which 351 proved fatal, and 2903 cases of typhoid fever, resulting in 576 deaths, treated in the hospitals. In the first quarter of 1897 the cases of dysentery amounted to 4200 with 461 deaths, and of typhoid fever to 1374, resulting in 210 deaths. From July to December, 1896, and from January to June, 1897, there were 2281 cases of tuberculosis, followed by 299 deaths. These figures, though incomplete, give an approximate idea of the extent of the strain placed upon the hospitals and medical services of the island. The expense thus entailed, though estimated at a very low figure, represents for a poor country like Spain a ruinous outlay. Fortunately, a great part of the requirements for the Cuban hospitals were sent from the Government pharmaceutical laboratories and military sanitary service of Madrid and were thus supplied at a much cheaper rate than if they had been bought in the open market. 17 ambulance carriages were brought over the Atlantic from Madrid, 13 being of the Lohner type, which with some slight modifications was adopted for the Spanish army. Cases of surgical instruments were also sent over containing many of the newest and best models. The most serious operations were thus rendered possible and everything was provided for elaborate aseptic precautions. No less than 189,000 complete packages of dressings for wounds reached Cuba from Madrid; then over and above this supply each battalion brought with it the usual regimental medical supplies. From Spain 600 Pravaz syringes, 500 lancets, 850 forceps of the Fergusson, Péant, and Gollin models, 4500 sounds and bougies, 800 ordinary syringes, and 500 Davidson irrigators were sent over to Cuba. Then there were 1850 splints for fractures; 1410 elastic ferrules; 2500 bistouries, saws, &c.; a number of portable electric batteries, pulverisers, and amputation cases; all the instruments necessary for operations on the eye, ear, nose, mouth, and for lithotomy and tracheotomy; laryngoscopes, speculums, 1525 clinical thermometers, and many other objects—all sent over to Cuba by the central Government at Madrid.

The exports of pharmaceutical products were equally important. In this the pharmaceutical laboratory of the Spanish military sanitary services realised a great saving for the State. In respect to medicaments of course quinine holds the first place. No less than 11,887 kilogrammes of various

salts were sent out to Cuba, comprising 6400 kilogrammes of basic sulphate, 312 kilogrammes of bromide, 280 kilogrammes of valerianate, &c. Then there were 6950 kilogrammes of cinchona bark and 950 kilogrammes of extract. Salts of soda, potash and magnesia were also dispatched in great quantities—i.e., 63,200 kilogrammes of sulphate of soda, 85,100 kilogrammes of hypochlorite of lime, 15,000 kilogrammes of sulphate of magnesia, &c. The salts of bismuth were likewise in great demand; 4500 kilogrammes of sub-nitrate, &c. The need of sedatives was equally felt and 400 kilogrammes of opium together with 51 kilogrammes of salts of morphia were forwarded to Cuba. Among the antiseptics may be mentioned 28,900 kilogrammes of carbolic acid, 4450 kilogrammes of boric acid, 1400 kilogrammes of chloride of mercury, 560 kilogrammes of calomel, 300 kilogrammes of white precipitate, 200 kilogrammes of chloride of zinc, 2370 kilogrammes of iodoform, 680 kilogrammes of naphthol and naphthaline, 950 kilogrammes of salol, &c. Among miscellaneous articles there were 6300 kilogrammes of cod-liver oil, 2530 kilogrammes of castor oil, 1730 kilogrammes of camphor, 6220 kilogrammes of citric acid and 1950 kilogrammes of tartaric acid, 1126 kilogrammes of iodine and iodide of potassium, 800 kilogrammes of Fioraventi's balsam, 700 kilogrammes of antipyrin, 120 kilogrammes of caffeine, 1030 kilogrammes of chloroform, 270 kilogrammes of chloral hydrate, 110 kilogrammes of ergotin, 239 kilogrammes of pepsin and pancreatin, 720 kilogrammes of ipecacuanha, 350 kilogrammes of rhubarb, 910 kilogrammes of sulphuric ether, 225 kilogrammes of collodion, &c. No less than 571 kilogrammes of pills or granules were prepared and sent out. Judging from the weight this would mean about 25,000,000 granules, each being accurately prepared according to the prescription. Then 66 070 kilogrammes of carbolic absorbing cotton wool and 545,000 metres of sterilised gauze were also prepared for the use of the Cuban hospitals.

Apart from what was sent over from Spain and what was prepared by the military medical services in Cuba some purchases were made from druggists, &c., established in Cuba. These were not very extensive, as at war prices such objects were far too dear. The value of what was imported into Cuba from Spain for the use of the military hospitals from the commencement of the insurrection to the end of January, 1898, is estimated at 3,059,456 pesetas, and it has been calculated that if the same medicaments, &c., had been bought from the druggists and others of Cuba at the war prices the cost would have been 8,826,248 pesetas. Thus what is known as the Central Park of the Military Sanitary Service at Madrid, and the State institutions generally, have saved the Spanish nation, in the period mentioned, the sum of 5,766,792 pesetas. In this manner vast supplies were forthcoming at small cost and the quality and purity of the goods provided are stated to have been very strictly controlled.

The field and railway ambulances are described as having rendered valuable service. But the bad condition of the ground was a great obstacle. There are but few roads, and even roads which have been but recently made are soon overrun and obstructed by the exuberant vegetation of the country. The greatest efforts, therefore, were made to bring the sick and wounded to the railway lines, where the railway ambulance waggons greatly facilitated their conveyance to town hospitals. There were 30 such hospital railway waggons running at Havana, Santiago de Cuba, Matanzas, Santa Clara, Manzanillo, Sagua la Grande, Trinidad, and Cienfuegos. Some fine steamships of the Spanish Transatlantic Company were also converted into hospital ships so as to bring back the wounded and the sick to Spain. These ships generally contained four hospital wards of 96 berths each, with free space or air passage at the head and foot and on one side of every berth. These ships are painted white, so that any lack of cleanliness may be more readily seen and remedied. The furniture, folding tables, basins, &c., are of metal so as to be more readily cleaned. Apart from the four large wards or cabins these ships also contain four smaller compartments with in all 78 berths, which are reserved for purposes of isolation or for the more serious cases. The floors are kept as smooth and as free from obstacles as possible and fans worked by steam or electricity help to assure a good ventilation. A Geneste and Herscher disinfecting stove is placed on each hospital ship and porcelain and asbestos filters are employed for the drinking water. The pharmacy is situated in the middle of the ship so as to be of easy access and all that is necessary for operations, post-mortem examinations, &c., is provided. These hospital ships can accommodate some 500 patients.

The military hospital at Havana, named after Alphonso XIII., is one of the best in Cuba. It occupies nearly an entire kilometre of ground and is situated on an elevation rather more that a mile outside the town. It was opened at the end of the year 1895, when Marshal Martinez Campos was Governor-General of Cuba. There are fifty different clinics; these include twelve separate pavilions for infectious diseases, with kitchens, residence for staff, &c., attached and apart from the services of the rest of the hospital. The operating room is also in a separate building and furnished on aseptic principles. There are four wards set aside for officers, one of these wards being reserved for cases of yellow fever and another for the wounded. Then there is a separate building devoted to hydro-therapeutics, and there is a special building for the pharmaceutical department. A disinfecting stove is in constant work and a steam laundry close at hand, which enable the authorities to wash and disinfect all the clothing of the patients when they enter the hospital. Another large building contains a model steam kitchen, where the meals for some 3000 patients can be prepared and cooked daily. Many more separate buildings are occupied by the resident surgeons, the nursing staff, &c. Finally, there are six pavilions near at hand but separate from the hospital which serve as a sort of convalescent home or residence for invalids. All these buildings, which number close upon a hundred, drain into a system of sewers constructed especially for the hospital and there is an ample water-supply. This water is pumped into two metallic reservoirs situated on a hill behind the hospital. The steam power is used for this purpose and is also employed to provide the electric lighting of the buildings. Though the statistics of the number of patients in all the hospitals of Cuba have not been kept in full, the cases treated at the Alphonso XIII. hospital are carefully recorded. Thus in 1896 there were 36,202 patients. The greatest number of patients (4611) were entered in the month of October. The month of August with 4576 new patients, November with 3943, and July with 3740 patients were, with October, the four worst months of the year. The best months were February with 1343 new patients, January with 1525, and April with 1916 new patients. There were in the course of the year 1494 deaths and 32,420 patients were discharged as cured, the total number of patients being, as mentioned above, 36,202. The greatest number of deaths occurred in the months of August, October and November. Of the patients treated 21,731 were medical cases and 4154 were surgical cases. There were 2201 cases of venereal disease, 2381 wounded in war, 2202 cases of yellow fever, 1290 cases of cutaneous disease and 600 of infectious fevers other than yellow fever. The mortality is subdivided as follows: 710 deaths from yellow fever and 86 deaths from other fevers, 618 deaths among the general medical cases, 72 deaths from wounds and 8 resulting after surgical operations.

Though in 1897 there was a greater number of patients there was a reduction in the mortality. At the commencement of the year 2288 cases remained in the hospital. During the year 42,540 entries were made, giving a total of 44,828 patients treated in 1897. The worst months were: July, 4930; August, 4759; June, 4755; September, 4529; and October, 4239 entries. It was only during the months of February and March that the entries (1864 and 1831) were below 2000. In these same months there was the smallest number of deaths. The greatest number of deaths were in the months of December, November, October, and August respectively. In all, there were only 13 more deaths than during the previous year, though the hospital had received 8500 more patients, a fact due principally to a diminution of yellow fever. The 44,828 patients are grouped pathologically in the following manner: 34,002 internal diseases, 1480 cases of yellow fever, 1347 other infectious diseases, 3585 surgical cases, 952 wounded, 1846 skin diseases, 1074 venereal diseases, and 522 ophthalmic cases. Among these patients 1056 died from internal diseases, 327 from yellow fever, 68 from other infectious diseases, 37 from wounds, and 17 from surgical and syphilitic affections. Thus it will be seen that though there was a great reduction in the death-rate from yellow fever that of the general medical department had greatly increased. This is attributed to the lowered health of the army resulting from the bad climate and the hardships of the campaign. The deaths due to wounds were also

comparatively less; the great evil results from the anæmic condition of the troops, and though these figures relate to but one hospital still they may be accepted as typical of all the military medical services of the island. The staff of the Alphonso XIII. hospital consisted of 170 persons, including 27 surgeons. Nevertheless, on many occasions this staff proved insufficient for the work which had to be done and it was only accomplished by extra zeal and by trespassing on the hours set aside for rest. Altogether, and for the entire medical military services of Cuba from the commencement of the insurrection to the middle of the year 1897, no less than 600 surgeons have been engaged in attending to the sick and wounded. Of these 50 have died in the accomplishment of their duty, the greater number being victims of yellow fever. 6 dispensing chemists have likewise met with the same honourable fate. 25 surgeons were wounded on the field of battle and 4 were killed. There can be no doubt that the military medical staff showed under the most trying and dangerous circumstances all the courage and heroism which have so often distinguished the Spanish people in general and the medical profession in particular.

Madrid, May 31st.

THE IRISH LOCAL GOVERNMENT BILL.

IV.[1]

IN the last article those provisions of the Bill which bear specially on matters directly affecting the medical profession were examined. A few words will conclude the consideration of this department of the subject. Clause 120 runs as follows: "Every existing officer declared by this Act to be entitled to compensation, and every other existing officer, whether before mentioned in this Act or not, who by virtue of this Act, or anything done in pursuance of or in consequence of this Act, suffers any direct pecuniary loss by abolition of office or by diminution or loss of fees or salary, shall be entitled to have compensation paid him for such pecuniary loss by the county council, to whom the powers of the authority whose officer he was, are transferred under this Act, regard being had to the conditions on which his appointment was made, to the nature of his office or employment, to the duration of his service, to any additional emoluments which he acquires by virtue of this Act or of anything done in pursuance of or in consequence of this Act, and to the emoluments which he might have acquired if he had not refused to accept any office offered by any council or other body acting under this Act, and to all the circumstances of the case, and the compensation shall not exceed the amount which, under the Acts and rules relating to Her Majesty's Civil Service, is paid to a person on abolition of office." It is further enacted in Sub-section 4 of the same clause that: "If a claimant is aggrieved by the refusal of the county council to grant any compensation, or by the amount of compensation assessed, or if not less than one-third of the members of such council subscribe a protest against the amount of the compensation as being excessive, the claimant or any subscriber to such protest (as the case may be) may, within three months after the decision of the council, appeal to the Treasury, who shall consider the case and determine whether any compensation, and if so, what amount ought to be granted to the claimant, and such determination shall be final." Sub-section 7 of the same clause enacts that: "If a person receiving compensation in pursuance of this section is appointed to any office under the same or any other county council, or by virtue of this Act, or anything done in pursuance or in consequence of this Act, receives any increase of emoluments of the office held by him, he shall not, while receiving the emoluments of that office, receive any greater amount of his compensation, if any, than, with the emoluments of the said office, is equal to the emoluments for which compensation was granted to him, and if the emoluments of the office he holds are equal to or greater than the emoluments for which compensation was granted, his compensation shall be suspended while he holds such office." These provisions are evidently equitably designed, though it may be a question whether it is perfectly just to mulct an existing officer of a portion of his compensation in case he should refuse to act under the new county councils. The case of Ireland is peculiar in this respect, and those who know the country would not be surprised to find instances of officers at present in the employ of the grand juries who for various reasons, might decline to accept office under the new *régime*.

The Bill has now passed through Committee in the House of Commons and no amendments of substantial importance have been carried. The discussions have largely centred upon the financial arrangements, which have been sharply but unsuccessfully attacked by the English Radical party as involving improper concessions to the Irish landlords. It is significant that the official Opposition has not to any extent joined in these attacks and that the conduct of the Bill by Mr. Gerald Balfour and the Attorney-General for Ireland has received high encomiums from every quarter of the House. Mr. G. Balfour, though invariably courteous and patient, has not made any important concession, and it is evident that every detail of the Bill had been carefully thought out beforehand and that he has expressed his fully matured views. It is interesting to observe that while the proposal of Sir Thomas Lea to provide out of the local taxation account the salary of more than one trained nurse in every union was rejected the majority supporting the Chief Secretary in opposing the proposition was one of the smallest recorded for the Government in the course of these discussions. An effort was made to reject that sub-section of the Act which provides that where any part of the salary of an officer of a county council was paid out of money provided by Parliament or from the local taxation account, he should not be appointed or removed without the concurrence of the Local Government Board. This effort was unsuccessful, the general sense of the House being evidently in accord with the view of Mr. G. Balfour that this provision would tend to induce a better class of men to become candidates. An amendment moved by Sir Walter Foster to the effect that every resident medical superintendent of lunatic asylums should have served for not less than five years as a medical officer in an institution for the treatment of the insane was accepted by the Chief Secretary. This proposal is not only an important and reasonable one upon its merits, but it will tend in some measure to safeguard the interests of the present assistant medical officers in asylums, whose position under the Act will be somewhat insecure. A proposal that officers and servants after twenty years' work in an asylum should, if not less than fifty years of age, be entitled to an annuity amounting to two-thirds of their salaries was rejected. An important discussion of much interest to the members of the medical profession arose in connexion with a new clause dealing with county infirmaries and fever hospitals which was moved by the Chief Secretary. In moving the clause Mr. G. Balfour said that "it was feared by many that with the transference of the powers of grand juries to county councils county infirmaries would be left out in the cold, and that the subscriptions hitherto made to them by the grand juries would no longer be paid by the new bodies, and that consequently these institutions would come to grief. They provided against that by what was itself a somewhat strong provision—namely, that county councils should be compelled to subscribe to these county infirmaries as much as the grand juries had done in the past." In resisting an amendment which proposed to compel county councils to provide funds for the completion of any county infirmary which might be in course of erection at the time of the passing of the Act and for which adequate funds from private sources were not available, Mr. G. Balfour said that if this proposition were adopted private subscribers would not subscribe anything further and that he felt bound to resist this proposal, but that if he had an assurance that it would be acceptable to all sections of Irish representatives he would undertake to insert a sub-section providing that county infirmaries might, if they pleased, contribute money towards the erection or maintenance of private infirmaries. It is impossible not to recognise in these proposals a generous recognition on the part of the Government of the importance of the county infirmaries and the necessity of securing them against possible vicissitudes in the future. In further discussion of this subject Sir Walter Foster moved an amendment to the effect that "nothing in the Act should deprive any existing officer of any infirmary or hospital to which the section applied of any privileges, salaries, and allowances

[1] Nos. I., II., and III. were published in THE LANCET of May 14th and 21st and June 4th, 1898, respectively.

enjoyed by him under any Act. He pointed out that it was usual to pay surgeons a salary and then at stated periods to vote them an additional sum from the voluntary contributions which were received. He did not anticipate that there would be in the future any falling off in such receipts, but if there should be it would be an injustice to a most useful class of public officials if they were to be deprived of any part of their emoluments." Mr. Gerald Balfour resisted this proposal, remarking that the object of this amendment seemed to be to secure to the medical officers of infirmaries an absolute guarantee that their present salaries and allowances should be continued out of the rates in the event of what had hitherto been provided from charitable sources falling short of the requirements. Sir W. Foster's proposal was rejected and the clause ultimately passed in the form suggested by the Chief Secretary.

The Meath Hospital (Dublin) and the mode of electing officers which prevails at that institution came in for adverse comment in the discussion upon the new clause above referred to. Mr. Plunket moved an amendment providing that nothing in the Act should affect the mode of election of the physicians and surgeons of the Meath Hospital and County Dublin Infirmary. Sir Walter Foster condemned the system of coöption which prevails at this hospital, while Mr. J. H. Campbell defended it on the ground that the present arrangements arose out of an agreement made 100 years ago whereby the then staff surrendered a Government grant of £100 a year on condition that they should enjoy the privilege of coöption. This is surely a very extraordinary contention. Of all the modes of electing honorary medical officers to a hospital that by coöption seems absolutely the worst and most indefensible. Mr. Plunket's amendment was very properly rejected. A new clause moved by Mr. G. Balfour transferring to the council of every urban district excepted from Section 160 of the Public Health, 1878, the business of the board of guardians as burial board was added to the Bill. The Chief Secretary also moved a new clause for preserving the right to superannuation allowances of officers transferred to the new councils, and after some debate it was added to the Bill. A number of suggested new clauses were postponed to the report stage and the Bill finally passed through Committee without substantial modification. The changes which have been effected in the Committee stage are, on the whole, improvements, and some of the amendments, though apparently of minor importance, touch the medical profession somewhat closely. Mr. Gerald Balfour deserves much credit for intervening on behalf of the county infirmaries in Ireland and taking steps to secure them against loss of income in the future. These institutions are of great practical value and are, on the whole, ably and impartially administered. Whether the new elective bodies will be any less disposed to maintain these infirmaries in a state of efficiency than are the present grand juries remains to be seen, but apprehensions on this score were not unnatural, and the Chief Secretary has acted wisely in introducing the new clause which has been explained in the present article. It need not be resented by anyone, inasmuch as the present Bill in many other instances limits and defines the financial powers of the new county councils, and the clause will quiet fears which, whether justly or not, had been generally excited. Few things would be more regrettable than any impairment of the efficiency or limitation of the usefulness of the county infirmaries of Ireland. But, as alluded to in a previous article, their present constitution and government are anomalous and can hardly be permanent. Some better system must be devised and it should aim at attracting more voluntary financial support to these institutions.

Unless further changes are effected on the report stage of the Bill, it is not evident that the position of dispensary medical officers in Ireland will be improved under the new *régime*. That some improvement is desirable, even indispensable, may be freely admitted, but it is a question whether the remedy for existing evils is to be sought by Act of Parliament, or by influencing the new elective bodies or by better organisation among the members of the medical profession. Mr. Robert Gray of Armagh, President of the North of Ireland Branch of the British Medical Association, in his presidential address recently delivered before that body remarked:— "Let us consider what has been accomplished for the Poor-law medical service during the past fifty years. Are the men in it better or worse than those holding office then? No doubt some slight improvements have been effected and benefits have been obtained by the energy of the Irish Medical Association. This association has been in existence for about sixty years. It was established to protect and advance the interests of the medical profession in Ireland. ..... Permit me to enumerate some of the results of its work. The association, by a Bill drawn by itself, doubled the vaccination fees; by its agitation it caused the certification of lunatics, which had been previously gratuitous, to be paid for at the rate of £2 per examination; by pressure it secured that the Poor-law medical officers of Ireland should be the agency for working the public health system and should be paid for the work, and by further agitation secured payment for the additional work of attending at sanitary prosecutions; by its efforts it induced the authorities to double the fee for attending the constabulary and it secured for Poor-law medical officers the pensions which they enjoy and which were denied them by earlier legislation; and it is still most earnestly and untiringly engaged in the effort to overcome the objections of a section of Parliament to make these pensions a matter of right, upon which object it has lavished time, thought, and money. ..... Look at the salary paid to a medical officer of a dispensary. He is somewhat like his *confrère* the physician to a hospital—i.e., he practically works for nothing. The salary of the dispensary officer over Ireland averages about £120 a year. For that sum he attends all the sick poor in his district. You are aware that his work is spread over a district perhaps of thirty miles, some districts larger, very few smaller. He requires two horses and a man to attend them (a calculation is given showing that the expense of maintaining these will practically eat up the entire salary). ..... In the intervals between his attendance at the dispensary and visiting the sick poor at their own homes, the medical officer may be content if he can earn enough to feed and clothe himself. I need not tell you that in numbers of districts there are not enough wealthy or paying patients to afford this. In many cases life is not worth living in such places. Why should such a state of things exist? It is simply because if one of these dispensaries becomes vacant dozens are fighting and canvassing and bringing every particle of influence to get pushed into it." This is a somewhat gloomy picture, but there is no reason to think that it is exaggerated. Mr. Gray evidently puts his finger upon the weak spot when he shows that the evils of the present system are chiefly due to the willingness of medical men to accept onerous and ill-paid posts. The remedy lies with the medical profession itself and the complete success which has attended recent efforts to improve the status of medical men in the army should be laid to heart by the Poor-law medical officers in Ireland. They should warn off intending candidates until the conditions of the service are made more tolerable. Many changes will be required, but at present the most urgent question is to secure adequate pensions on completion of a certain period of service and to provide that these pensions shall not, as at present, depend upon the caprice or goodwill of any elective body, but shall be granted strictly according to rule, as in the civil service.

The Irish Local Government Bill will no doubt easily pass through the House of Lords and become law. In less than a year Ireland will in all probability be trying this new and great experiment in the matter of local self-government. That some temporary confusion and disappointment may arise is not improbable, but the ultimate result can hardly fail to be salutary. Much will depend upon the spirit in which the new legislation is received. It is earnestly to be hoped that the Irish gentry will not stand aloof, but that they will accept their altered position and endeavour to exert under new conditions that influence in the country to which their wealth, talents, and experience fully entitle them. They have in the past produced some of the greatest administrators of many of the most important portions of the British Empire. India, Canada, Australia, and the Cape have repeatedly benefited by the energy and capacity of governors and administrators drawn from the ranks of the Irish gentry. Their fortunes in their own country have been much less brilliant and the causes of their failure there might be enumerated if this were the place to do so. But why should not a new day dawn for Ireland and the Irish gentry? Democratic conditions of Government must now be accepted as a matter of course, but rank, energy, wealth and experience must always

command their due meed of influence and authority. At present the omens are favourable. Everything will depend upon the spirit in which the present legislation is accepted and carried into effect. When Pope wrote the well known lines:

> For forms of government let fools contest;
> Whate'er is best administered is best,

he expressed only a half truth, but it is a half truth which finds a special application in the circumstances of the present legislation affecting local government in Ireland.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

As we announced last week it has been decided to hold an exhibition of medical, surgical, and hygienic appliances in London every year which should afford the busy practitioner in the metropolis and its environments a convenient opportunity of inspecting new appliances, new foods, new drugs, and other novelties and improvements of interest to the profession. The exhibition, of course, has its commercial side, but discretion is evidently exercised in this important particular, and the exhibits which are allotted a space are in general of a selected character having a direct bearing on the progress of medical science in some way or other. The visitors to the exhibition which was held in the Queen's Hall, Langham-place, May 31st to June 3rd, comprising chiefly medical men, hospital nurses and ambulance officers, could not have failed to have had their interest aroused and their inquiry rewarded by even a cursory glance of the many and varied exhibits exposed to view. We may therefore, as briefly as possible, give an outline of those exhibits which we consider are well worth bringing before the notice of our readers. For this purpose the exhibition may be conveniently divided into six sections—namely, drugs, foods and food products, surgical appliances, sanitary appliances, mineral and medicinal waters and beverages, and miscellaneous objects.

In regard to drugs, Messrs. Parke, Davis, and Co., of 21, North Audley-street, W., displayed a great variety, a feature of their exhibit being their standardised fluid extracts which represent therapeutically in the proportion of cubic centimetre for gramme the drugs from which they are prepared. The preparations are also carefully assayed chemically, and, where this is not possible, physiologically. The preparations shown included the digestive ferments, amongst the most remarkable of which is taka-diastase, which will convert at least, as we ourselves have shown, 100 times its weight of starch. Then there was a list of articles described as chemists' specialities and physicians' requisites, amongst which may be noticed euthymol, an agreeable liquid antiseptic which is described as not being poisonous, irritant, or escharotic; ferratin, a chemical combination of iron and albumin and identical with the form of iron occurring naturally in many foods; and, lastly, lactophenin, an antipyretic, antineuralgic, and analgesic, upon which we have already reported. Messrs. Oppenheimer, Son, and Co. (Victoria House, Thames Embankment) again brought their palatinoids forward, the latest application of this ingenious and satisfactory form of administration being devoted to the animal substances. The exhibit also included palatinoids of liquids such as amyl nitrite, chlorodyne, beechwood creasote, and British Pharmacopœia tinctures. Illustrations of the value of the administration of unstable mixtures by means of the bi-palatinoid occurred in the compound syrups and in the combination of ferrous carbonate with red marrow. The feature of Messrs. Cooper and Co.'s (80, Gloucester-road, South Kensington) exhibit was the flexible, tasteless, and readily soluble wafer capsules known as "cachoids." This satisfactory means of administering nauseous and insoluble powders may be applied to almost any drug. Among the preparations which we noticed were those containing quinine, antipyrin, sulphonal, phenacetin, and bismuth. A combination of interest and value was the liquor quininæ salicylatis, which is more readily absorbed in this form than in powder or pill. Mr. B. Kühn, 36, St. Mary-at-Hill, E.C., exhibited some new preparations of interest. Of these we may select the colchi-sal capsules, containing a compound of chemically pure colchicine dissolved in natural methyl salicylate. For external application betul-ol (methyl oleo-salicylate) is recommended. The excellent antiseptic chinosol in several forms was shown and there is little doubt of the powerful nature of this remarkable disinfectant, which so long as it is used in the form of a solution of prescribed strength presents no drawbacks. The exhibit included also ethyl-chloride and tannalbin, an intestinal astringent, diuretin, and ferropyrin, a combination of antipyrin with perchloride of iron which is a useful hæmostatic and styptic. Chloroform was, of course, the chief subject of Messrs. Macfarlan and Co.'s (9 and 11, Moor-lane, E.C.) exhibit. Their chloroform was introduced in 1892 and was amongst the first having any claim to purity for medicinal purposes. In the same exhibit were shown sulphur cones, which are convenient for use as a means of disinfection. Messrs. Lewis and Burrows, of 67, Piccadilly, occupied a stall upon which could be seen distinct evidence of the advance of pharmaceutical art. Their exhibit included "cremol," an emulsion of cod-liver oil with the hypophosphites of lime and soda; the preparation is stable and as free as can be from the taste of cod-liver oil. Quite up to date were the pharmaceutical novelties shown by Messrs. Southall Brothers and Barclay of Birmingham. These included the preparations of the new British Parmacopœia and some well-arranged collections of materia medica for colleges and students. The somewhat complex compounds as exemplified in the liquor auri brom-arsenatis and the liquor auri brom-hydrarg. arsenatis were again exhibited by Messrs. Arthur and Co., of 69, Berners-street, W. These preparations have been used with encouraging results in the treatment of nervous diseases and especially in epilepsy and in the morphia habit. The preparations shown included also a neutral combination of lime and iron, which is non-astringent and practically tasteless, and tannopumilio, a combination of digallic acid with the essential oil of pinus pumilionis, and is said to be a good external remedy for irritation of the skin set up by friction or sunburn. Not far away were the specialities of Messrs. S. Kutnow and Co., of 41, Farringdon-road, E.C. Amongst these were the improved effervescent Carlsbad powder, an anti-asthmatic powder, and cigarettes with the same purpose in view as the last.

Unquestionably the major portion of the exhibition was devoted to foods and food products, humanised milk and sterilised milk being particularly in evidence. The exhibit of Messrs. Welford and Sons, of Elgin-avenue, Maida-vale, W., showed considerable enterprise. The preparations included asses' milk, facsimile human milk, peptonised milk, sterilised milk, koumiss, and milk specially prepared in accordance with medical prescription. In the same way the Aylesbury Dairy Company exhibit afforded similar evidence of the care and precision now devoted to the preparation of milk products. The exhibit, also, of the Milk Preparations Company of Brentwood conveyed an assurance to the medical visitors of the excellence of their several preparations, including humanised, peptonised, and sterilised milk, butter, malted food, and milk-sugar. They are all known as the "Sap" brand. Close by was an exhibit devoted to the products of the Excel British and Colonial Milk Sterilising Co., of 23, Queen Victoria-street. Human milk prepared by Gaertner's process, which was fully described in THE LANCET of July 3rd, 1897, formed the subject of exhibition by the Friern Manor Dairy Farm Co. of 20, Farringdon-street, E.C. As still illustrating the remarkable advances now made in the preparation of milk products we should mention also the Milkmaid brand condensed milk of the Anglo-Swiss Milk Co., of 10, Mark-lane, who have been very energetic in laying stress upon the full amount of cream being retained. Then there were the samples of unsweetened condensed milk shown by the First Swiss Alpine Milk Exporting Co. of 3, Laurence Pountney-hill, E.C. An excellent example of a milk-derived food was shown in the food prepared by Mr. Henri Nestlé, 48, Cannon-street, E.C., which presents a composition which is completely in accordance with infantile requirements. At the same stall were shown condensed Swiss milk, containing a maximum proportion of cream, and Viking milk, also a condensed milk but without sugar. Next we noticed a preparation which has deservedly been held in good favour—namely, Horlick's malted milk, which consists of a dry powder containing all the elements of milk in a malted form. Its excellent flavour is not the least satisfactory feature. Malt preparations

were well represented; thus there was the original malt extract of Messrs. Leopold Hoff of 29, New Bridge-street, E.C., and the many excellent maltine preparations of the Maltine Manufacturing Company, Ltd. These latter include maltine with pepsin and pancreatin, maltine with the hypophosphites, maltine with Easton's syrup, maltine with the phosphates, and maltine with coca wine. There were many carbohydrate foods exhibited which had been partially converted by the digestive action of diastase. Amongst these may be mentioned the food for infants and invalids prepared by Mellin's Food Company, Ltd., Stafford-street, Peckham, S.E. This firm also prepare "lactoglycose," a combination of the above food with fresh cow's milk, thus comprising a highly nutritious preparation. Again, Beane's Food is described as "diastased farina" and contains a large proportion of dextrine and maltose. It possesses a rich malty flavour, and is unquestionably a readily assimilated preparation. Under the carbohydrate category must be included also the Hovis flour and bread of the Hovis Bread Flour Company, Ltd., 27, Millbank-street, Westminster, S.W. As is well known, Hovis flour contains the germ of wheat and is very nutritive, pleasantly malty to the taste, and the bread made with it keeps agreeably moist. On the other hand, starchless foods were represented in the exhibits of Messrs. Callard and Company, of 65, Regent-street, the specialities shown being food for the diabetic, food for reducing weight, food for the rheumatic and gouty, and food for indigestion. A large assortment of diabetic foods was also shown by Messrs. G. Van Abbot and Sons, of 6, Duke-street Mansions, Grosvenor-square, W. In addition to these there were also submitted specimens of mock and real turtle soups, beef tea, meat lozenges, hypophosphite of lime biscuits, digestive biscuits and their well-known nutritive biscuits containing 20 per cent. Mosquera beef meal. The food products connected with the name of Mosquera were represented by Messrs. Parke, Davis, and Co., the preparations including beef jelly, beef cacao, nutrient suppositories and beef meal. The latter is a predigested meat powder containing in entirety the nourishing and stimulating constituents of beef in a concentrated form. There were several preparations of beef shown, and the exhibit of the Bovril Co., of 30, Farringdon-street, E.C., contained a very large assortment. Besides bovril itself a special invalid bovril was offered for inspection and trial. Then there were the emergency cartridges for military and naval purposes, for expeditions, &c., and bovril "stamnoids," consisting of a specially concentrated meat lozenge, very serviceable for travellers, cyclists, and others. On this stall also were the Liquor Carnis preparations now in the hands of the Bovril company. Another fluid beef which has found favour of late is the Vimbos fluid beef, the feature in which is said to be a high percentage of albuminous matter. This company (130, Queen Victoria-street, E.C.) also prepare some excellent lozenges which are free from gelatin and contain muscular fibre. Portable meat preparations were also represented on the stall of Messrs. Cosenza and Co., of 94, Wigmore-street, W., who devoted the exhibit exclusively to Maggi's Consommé, which is a cartridge containing all the materials for the preparation of an excellent soup. A very convenient method of preparing beef-tea for soup was shown by the Valentine Extract Company of St. George's House, Eastcheap, E.C. The preparations shown consisted of "valtine" meat globules, beef-tea or soup globules known as "peloids," and globules for swallowing whole. A novelty in the preparation of meat lozenges was shown by the Marvine Syndicate, Ltd., of 45, Wilson-street, E.C., in their "geloids," which by their fruit contents serve as thirst-quenchers in addition to being nutritive. The largest known beef extract, Liebig's Extract of Beef, of 9, Fenchurch-avenue, was adequately represented at the stall of the company. In addition to the ordinary extract peptarnis was shown, which, as our own analyses have demonstrated, is a powerful nutrient and stimulant containing the peptones of beef in addition to extractives. The visitors were interested in making practical trials of "Vejos" (Vejos, Ltd, 143, West Hamlane, E), which, though a pure vegetable extract, presents an appearance and taste very closely resembling meat extract, while it possesses similar dietetic properties. Both digestive and digested products were well illustrated in the exhibit of Fairchild Brothers and Foster of Snow-hill, E.C. Besides the "zymines" there were shown the interesting preparation "panopepton," a liquid preparation containing the digested products of beef and wheat flour; "pepsencia," a liquid containing the organic ingredients of the gastric juice extracted directly from the peptic glands of the stomach; and lastly, peptogenic milk powder, which affords one of the best methods for extemporising milk as closely as possible on the lines of composition of human milk. Messrs. Broomfield and Co., of 83, Upper Thames-street, employ an excellent method for especially refining vegetable fat, the product termed "albene" being well adapted for cooking purposes. It does not become rancid and offers many advantages as an adjunct in cooking over butter or other animal fats. A well-designed exhibit was that of Messrs. Scott and Bowne, of 95 and 98, Great Saffron-hill, E.C. Their cod-liver oil emulsion has been so recently reported upon in our analytical columns as to need no further comment.

Apparatus, instruments, and appliances formed not the least interesting part of the exhibition, particularly to medical men. Practically all the leading makers of surgical appliances were represented. Amongst these should be mentioned the comprehensive displays by Messrs. Mayer and Meltzer, of 71, Great Portland-street, W.; Messrs. John Weiss and Son, of 287, Oxford-street, W.; Messrs. Evans and Wormull, of 31, Stamford-street, E.C.; Messrs. Maw, Son, and Thompson, of 7 to 12, Aldersgate-street, E.C.; and Messrs. Down Brothers, of St. Thomas's-street, Borough, S.E. Manifold hospital and other appliances were shown by Mr. Blass, of 155, Camden-road, N.W., who showed an improved machine for moving sick beds; the Domen Belt Co., of 456, Strand, had on view their excellent series of abdominal supports, belts and corsets; Messrs. Anderson, Anderson and Anderson, of 37, Queen Victoria-street, E.C., had a wide assortment of rubber appliances, including water-beds, cushions, pillows, waterproof mattresses, and elastic hosiery; Mr. Stacey, of 4, Newgate-street, E.C., showed some serviceable apparatus for the use of nurses; Messrs. Salmon Ody and Co., of 292, Strand, W.C., devoted their space to the exhibition of trusses, artificial limbs, &c.; Messrs. Bailey and Son, of 38, Oxford-street, W., also exhibited some admirable nursing appliances as well as aseptic instruments, ward tables, water beds, &c.; Mr. Frank A. Rogers, of 327, Oxford-street, W., exhibited medical sprays, inhalers and douches, the exhibit including also the "hypodermules," consisting of small sealed glass flasks containing accurately measured doses of sterilised solutions for instant hypodermic injection; Messrs. Macfarlane showed Listerian surgical dressings and catgut ligatures and silk sutures. The jacketed vessels shown by Messrs. W. A. S. Benson and Co. are worthy of more than passing notice. These vessels are made of copper with an inner body or liner, separated from the outer body or jacket by insulating material, so that heat passes very slowly from or to the contents. Thus, boiling water in the No. 1 size took one hour to cool to 185° F.; that is, it was still hot enough to cook eggs or to make tea. After five hours the water was still as hot as is comfortable to the hand, while the outer case never becomes more than gently warm. The two-gallon size maintains its contents warm for some twelve hours, so that a supply of hot water can be kept in the bedroom from morning till evening or through the night. Mr. Louis P. Casélla, of 147, Holborn-bars, E.C., presented an admirable display of clinical instruments, and the exhibit included a specially devised portable anemometer and his well-known standard meteorological set of instruments. Lastly, Messrs. Watson and Sons of 313, High Holborn showed all the apparatus with their own improvements now requisite in the application of the x rays to medicine and surgery.

The sanitary section of the exhibition consisted mainly of various disinfectant preparations. Amongst these should be mentioned the sulphur dioxide preparations of Messrs. A. Boake Roberts and Co., of Stratford, E. In addition was a new fluid preparation called "lozar," which is remarkable (carbolic acid being the basis) in being miscible with water in any proportion. The Sanitas Co.'s exhibit was very extensive, and included the great number of useful and pleasant sanitary preparations now contained in their list. The merits of izal have already been described in our columns, since which time the number of preparations has been largely extended, as in izal lint, wool, gauze, lozenges, and ointment. The exhibit was undertaken by Messrs. Newton, Chambers, and Co., of 331, Gray's-inn-road. Ventilation was represented in the Blackman Fan combined with an electric motor shown by the Blackman

Ventilating Co., 63, Fore-street, E.C. Ronuk was exhibited by Ronuk, Ltd., of 83, Upper Thames-street, E.C., as an example of a sanitary polish for the floors of hospital wards. Messrs. D. Blair and Co. demonstrated the usefulness of the "Instra" warmers, which may be used in the pocket or as chest-warmers or foot-warmers. The only novelty shown in soap was the ovaline soap of the Ovaline Soap Company, Ltd., of 203, High Holborn. It is said to be advantageous to the hair on account of being prepared with yelk of egg, while it is free from irritating properties. The Fleming Oil and Chemical Co., Ltd., of 101, Leadenhall-street, E.C., exhibited a useful list of moth preventive substances besides several disinfectants and toilet soaps. The Jeyes Sanitary Compounds Co., of 64, Cannon-street, found an excellent assortment of their well-known disinfectant preparations to form an attractive exhibit. Lastly, the application of asbestos to garments for protection against fire was illustrated by Messrs. Zimmer and Co., of 82, Mark-lane. The exhibit included also admirably designed workmen's health-protecting and safety appliances, such as safety spectacles and various patterns of respirators of use in dangerous trades. Some toilet preparations, generally of a pleasant character, like rose-water, hair-wash, and emollient skin applications, were placed on view by the Anti-Fermentine Co., Ltd., of 16, Bedford-street, Covent-garden, W.C.

Natural and artificial mineral waters were represented by most of the well-known aerated water makers and several natural purgative waters (Condal, Hunyadi Janos, &c.) decorated the stalls of well-known agents. Suffice it to describe two exhibits which attracted considerable interest. The first (shown by Aerators, Ltd., of Broad-street-avenue, E.C.) consisted of a method by which soda-water or any liquid aerated with carbonic acid gas can be easily prepared. A specially constructed bottle protected with gauze is fitted with a hollow stopper which serves as a container for a little bomb, or "sparklet," as it is called, containing carbonic acid gas. On screwing the stopper into position the sparklet is pierced by a hard steel point, the bottle is reversed and the liquid within thus aerated. The apparatus may be used for the aeration of milk without diluting it. It should prove useful also for travellers or on any occasion where the extemporaneous preparation of an aerated beverage is desired. The bottle costs 3s. and the sparklets 1s. 6d. per dozen. Tablets are also prepared containing definite amounts of various ingredients, such as carbonate of soda, lithia, &c., to imitate mineral waters. The other distinctly novel exhibit was that shown by Messrs. Cooper and Co., of 80, Gloucester-road, S.W. We refer to the oxycarbonated mineral waters—i.e., waters charged with oxygen as well as carbonic acid gas. The water used is distilled, and on examination both bacteriologically and chemically by Sir E. Frankland proved trustworthy.

Several spaces were fitted up as bookstalls, the publishers so represented being the Rebman Publishing Co., of 11, Adam-street, Strand; Messrs. John Bale, Sons, and Danielson, of 85, 87, and 89, Great Tichfield-street, Oxford-street, W. (this exhibit including medical diagrams and charts); and The Scientific Press, Ltd., of 28 and 29, Southampton-street, Strand.

The preparation of pure yeasts in the treatment of disease was illustrated in the "Backèrine" Laboratory under the direction of Mr. Horace Manders and M. E. Lachenaud. The fact that yeast cells have the property of assimilating microbes or "inglobing" them has suggested the injection of yeast in lupus and pulmonary phthisis. It is said that these pathological conditions have improved remarkably under injections of yeast. It is even suggested to use yeasts as a source of antitoxin by nourishing them with the specific pathogenic micro-organisms. It may thus be that the ferments may be substituted for animals as a source of immunising material.

At the conclusion of the exhibition the Executive Committee of the Medical, Surgical, and Hygienic Exhibitors Association presented Mr. Fred. Weiss, the President, with a beautiful silver bowl; Mr. F. J. Rebman, the honorary treasurer, with a solid silver tea-set and a case containing solid silver salt-cellars, pepper-boxes, and mustard-pot; and Mr. H. Blau, the honorary secretary, with a handsome cheque for the arduous services which each and all had rendered in the formation of the exhibition, which proved most successful from every point of view.

THE ROYAL MILITARY TOURNAMENT.

THE Royal Military Tournament closed on June 4th, after what we think will have been one of the most successful seasons since the inception of the tournament nineteen years ago. Year by year this annual military display has increased until it has outgrown the limits of its cradle. On several occasions we have pointed this out, but for some reason, probably a sentimental one, the committee still cling to the original home of the tournament in Upper-street, Islington. That there should be a reluctance to remove the tournament from the scene of its past successes we can quite understand, but is there not a debt owing to the public who, after all, have made the tournament a success? Besides, a larger building might be made to render larger profits, and the military charities which receive the proceeds of the tournament would be the gainers. We have no doubt that the authorities in charge of the tournament have done all that lies in their power to render the building as sanitary and as convenient for the public and the troops as they can, but without entirely reconstructing the building it would be absolutely impossible to make it both sanitary and safe for the public and for the troops. For a detailed account of many of the imperfections of the building from this point of view we must refer our readers to the articles which we have published in past years, but there is one point to which we should like to call attention and which if not remedied will sooner or later be the cause of a serious catastrophe. As those of our readers who have visited the tournament know, the arena in which the performances and contests take place is surrounded by tiers of seats beneath which is the space allotted to those of the general public who can only afford the popular shilling. Around the arena outside these seats and the space allotted to the "shilling" portion of the public stalls are fitted up for horses and only a narrow gangway is left for the performers to congregate with their heavy guns, horses, or both, immediately preceding their entrance to the arena. What if a panic should take place among the public from any cause? That such a thing might take place when least expected the history of panics in public buildings conclusively shows. We have suggested that Olympia could become the home of the tournament, but if there are objections to this place other sites in London might be rented for the purpose—for instance, the Alexandra Palace, the Crystal Palace, or Wembley Park. But whether or not any of these places are suitable one thing is certainly clear, and that is that the Royal Military Tournament has entirely outgrown the limits of the Royal Agricultural Hall at Islington.

Whoever is responsible for the stable arrangements at the Agricultural Hall we must congratulate on having done the best he could with limited possibilities to improve the sanitary arrangements in his own department, which are excellent. The hospital in case of accidents was in the charge of Surgeon-Major Alexander, who was assisted by Surgeon-Captain Tate.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-third meeting of the Royal Commissioners was held in the Council Chamber of the Westminster Town Hall on Monday, May 23rd. With the exception of Mr. Cripps, Q.C., all the Commissioners were present. Sir John Dorrington and Sir George Barclay Bruce were not present after the luncheon adjournment. The whole of the sitting was occupied by the cross-examination of Sir Alexander Binnie, engineer-in-chief to the London County Council. The witness laid before the Commissioners estimates giving the relative cost of obtaining an increased supply of water from the Thames and from Wales. The information has been

condensed by Sir Alexander Binnie into the smallest possible space and is as follows:—

Cost of obtaining from the Thames by the Staines scheme the 114½ million gallons, being the difference between the total 300 million gallons of the Staines scheme and the 185½ million gallons sanctioned taking of water from the Thames by the companies up to date.

	£
Cost of obtaining 300 million gallons from the Thames with a minimum flow of 250 million gallons at Teddington	18,039,945
Cost of obtaining 185½ million gallons from the Thames with a minimum flow of 250 million gallons at Teddington	7,336,375
Difference between the above estimates, being the cost of obtaining 114½ million gallons from the Thames when the minimum is taken at 250 million gallons at Teddington	10,703,570
Cost of obtaining 300 million gallons from the Thames with a minimum flow of 200 million gallons at Teddington	15,589,990
Cost of obtaining 185½ million gallons from the Thames with a minimum flow of 200 million gallons at Teddington	4,705,185
Difference between the above estimates, being the cost of obtaining 114½ million gallons, from the Thames when the minimum is taken at 200 million gallons at Teddington	10,884,806

For the purpose of forming a comparison between the Staines scheme and the Welsh gravitation project nothing is included in the above estimates for distribution mains and pipes or filters, which it is assumed are common to any scheme of extension, nor is anything included for law, parliamentary, or engineering charges.

Cost of obtaining by the Welsh gravitation scheme the 114½ million gallons, being the difference between the total 300 million gallons of the Staines scheme and the 185½ million gallons sanctioned taking of water from the Thames by the companies up to date.

	£
Yrfon yield, 121 million gallons per day.	
Yrfon reservoir and head-works	1,850,000
Aqueduct, 162 miles in length, composed of 117 miles of covered conduit and tunnel to carry 200 million gallons a day and 45 miles of pipe to carry 114 million gallons a day	6,867,500
Terminal works at Elstree for 114 million gallons per day exclusive of filters...	1,314,750
Total	10,032,250

Estimate for bringing from Wales 147 million gallons a day.

Yrfon yield	121	million gallons a day.
Towy yield	44	,, ,,
	165	,, ,,
		£
Yrfon and Towy reservoirs and head works		2,190,000
Aqueducts, 162 miles in length, composed of 117 miles of covered conduit and tunnel and 45 miles of pipes, the whole to convey 200 million gallons a day		7,760,000
Terminal works at Elstree, £1,911,000, + filters, £1,653,750...		3,564,750
Total for works		13,514,750
Law and Parliamentary charges		597,250
Total		14,112,000

Additional charges required to increase the supply from 147 million gallons to 200 million gallons a day.

Llangurig reservoir to yield 43 million gallons a day which, added to the 165 millions in the previous instalment, brings the total up to 208 million gallons.

	£
Llangurig reservoir and headworks	650,000
Conduit from Llangurig to Yrfon	277,000
Addition to headworks and filters to Elstree	1,286,000
	2,213,000
Additional law and Parliamentary charges	221,000
	2,434,000
Add former estimate for 147 million gallons a day ...	14,112,000
Total	16,546,000

In answer to Sir GEORGE BARCLAY BRUCE the witness said that in his opinion whether the water companies' undertakings remained in their present form or were transformed to a public body it would be necessary to go beyond the Thames Valley for an additional supply of water.

In answer to Mr. MELLOR the witness said that a point in favour of commencing the Welsh scheme soon was that if the water rights were not secured for London they might be taken by some other authority.

In answer to Major-General SCOTT the witness said that in dealing with the water of the Thames, which was liable to contamination in consequence of the large population which lived on its banks, it became a serious matter when the filters were infected with microbes. The presence of microbes indicated the decay and decomposition of organic matter.

Mr. PEMBER, Q.C., on behalf of the water companies, cross-examined the witness at some length with regard to the size of the reservoirs which he had said would be necessary at Staines. The counsel contended that on three points the estimate was too great: (1) That an unnecessary amount of storage capacity was allowed for reservoirs which were out of use for cleansing purposes; (2) that an excessive amount was allowed for "bottom water" impurities; and (3) that too much was allowed for evaporation. The amount allowed for "bottom water" was about 28 per cent., and the witness computed that two reservoirs out of fourteen would be out of use for cleansing purposes. Counsel questioned the witness with regard to the service reservoirs now in use by the companies, and contended that one-sixth of the water-supply, if the Welsh scheme were carried out, would have to be pumped into the high service reservoirs. Mr. Pember cross-examined the witness at some length with regard to the diagrams which he had put in to show how the Staines reservoir scheme would have worked out had it been already carried out and applied to the flow of the river during the year 1893. The witness complained that the questions asked were meant to confuse, but on this point counsel only succeeded in showing that if the tables had been made from different data the result would have been different.

Mr. RICKARDS, on behalf of the Chelsea Company, cross-examined the witness with a view to demonstrating that when the company did not draw their full authorised amount on some day it was not because the water was "bad," but because when they did not require their full authorised amount they took the water when it was clear, because the less turbid it was the less was the cost of filtration. Reference was made to Dr. Frankland's report that an excess of microbes was found in the water of the Chelsea Company in June, 1896, and the CHAIRMAN asked whether a representative of the Southwark and Vauxhall Company was present to explain why water containing 1600 microbes per cubic centimetre had been sent out by them.

At the end of the meeting Sir ALEXANDER BINNIE sketched the method in which he would divide the water between London and the county of Surrey in case the London County Council bought the water companies' undertakings and transferred part of them to the outlying authorities.

The twenty-fourth sitting of the Royal Commissioners was held on Monday last, June 6th, at the Guildhall, Westminster. The whole of the sitting was occupied by the cross-examination of Sir Alexander Binnie by Mr. Pember, Q.C., Mr. Pope, Q.C., and Mr. Lewis Coward on behalf of the Water Companies, and by Lord Robert Cecil on behalf of the Hertfordshire County Council, and by his re-examination by Mr. Freeman, Q.C., on behalf of the London County Council.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 5417 births and 3611 deaths were registered during the week ending June 4th. The annual rate of mortality in these towns, which had been 16·4 and 16·5 per 1000 in the two preceding weeks, further rose last week to 16·8. In London the rate was 16·1 per 1000, while it averaged 17·2 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in Derby, 10·6 in Bolton, 11·1 in Brighton, and 11·3 in Croydon; the highest rates were 22·7 in Liverpool, 23·1 in Gateshead, 24·3 in Newcastle-upon-Tyne, and 24·6 in Sunderland. The 3611 deaths in these towns included 389 which were referred to the principal zymotic diseases, against 380 and 400 in the two preceding weeks; of these, 136 resulted from measles, 110 from whooping-cough, 54 from diphtheria, 44 from diarrhœa, 32 from scarlet

fever, 13 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases occurred last week in Swansea, in Blackburn, or in Bolton; in the other towns they caused the lowest death-rates in Brighton, Preston, and Huddersfield, and the highest rates in Manchester, Halifax, Liverpool, Bradford, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Manchester, Halifax, Bradford, and Newcastle-upon-Tyne; and from whooping-cough in Bradford, Newcastle-upon-Tyne, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 54 deaths from diphtheria included 30 in London, 4 in Liverpool, and 2 each in West Ham, Portsmouth, Cardiff, Birkenhead, Burnley, Leeds, and Gateshead. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and only one case of small-pox was under treatment in the Metropolitan Asylums Hospitals on Saturday last, the 4th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2207, against 2247, 2241, and 2195 on the three preceding Saturdays; 220 new cases were admitted during the week, against 229, 223, and 256 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 177 and 216 in the two preceding weeks, further rose last week to 226, but were 49 below the corrected average. The causes of 47, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of deaths were duly certified in Bristol, Cardiff, Nottingham, Leeds, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 19·8 to 21·4 per 1000, further rose to 23·0 during the week ending June 4th, and was 3·2 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·7 in Perth and 18·9 in Aberdeen to 26·2 in Paisley and 27·2 in Greenock. The 694 deaths in these towns included 43 which were referred to whooping-cough, 34 to measles, 23 to diarrhœa, 6 to "fever," 4 to scarlet fever, and 2 to diphtheria. In all, 112 deaths resulted from these principal zymotic diseases, against 104 and 91 in the two preceding weeks. These 112 deaths were equal to an annual rate of 3·7 per 1000, which was 1·9 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 31 in each of the two preceding weeks, rose to 43 last week, of which 25 occurred in Glasgow, 5 in Paisley, 4 in Dundee, and 4 in Aberdeen. The 34 deaths from measles showed a slight further increase upon the numbers recorded in recent weeks, and included 19 in Glasgow, 10 in Aberdeen, and 5 in Edinburgh. The deaths referred to different forms of "fever," which had been 6, 4, and 13 in the three preceding weeks, declined again to 6 last week, of which 5 were recorded in Glasgow. The mortality from scarlet fever and from diphtheria showed a further decline from that recorded in recent weeks. The deaths from diseases of the respiratory organs in these towns, which had been 119 and 125 in the two preceding weeks, further rose to 133 last week, and were 13 above the number in the corresponding period of last year. The causes of 40, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·0 and 23·1 per 1000 in the two preceding weeks, further declined to 19·7 during the week ending June 4th. During the past four weeks the rate of mortality in the city has averaged 22·3 per 1000, the rate during the same period being 15·9 in London and 19·5 in Edinburgh. The 132 deaths registered in Dublin during the week under notice showed a decline of 23 from the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 10 and 14 in the two preceding weeks; of these, 5 resulted from whooping-cough, 2 from "fever," 2 from diarrhœa, 1 from scarlet fever, but not one from measles, diphtheria, or small-pox. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 2·1 in London and 3·0 in Edinburgh. The fatal cases of whooping-cough, which had been 1 and 3 in the two preceding weeks, further rose to 5 last week. The deaths referred to different forms of "fever," which had been 4 and 3 in the two preceding weeks, further declined to 2 last week. The mortality from scarlet fever corresponded with that recorded in the preceding week. The 132 deaths in Dublin last week included 22 of infants under one year of age and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the previous week. 8 inquest cases and 6 deaths from violence were registered; and 46, or more than a third, of the deaths occurred in public institutions. The causes of 9, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEON FRANCIS A. JEANS to be Fleet-Surgeon. The following qualified candidates for the Naval Medical Service have been appointed Surgeons:—Henry Cadman Whiteside, Robert Lumley Dickinson, Herbert Wells Bayly Shewell, John Martin, Christian Beverly Fairbank, Francis Frederick Lobb, Gerald Burton Brown, Strafford Dobrée Tollemache Halliday, John Gallagher Corry, Lancelot Bew Todd, Harold John Chater, Reginald St. George Smallridge Bond, Charles Clarke Macmillan, Fred Claude Bromley Gittings, Ramsey Martyn Richards, Henry Edward Raper, Alan Grant Eastment, George Ernest Duncan, James George Watt, and George Edward Glynn.

The following appointments are notified:—Staff-Surgeons: Samuel W. Vasey to the *Barfleur;* Harold G. T. Major and Anthony Kidd to the *Diadem;* and Charles W. Sharples to the *Furious*. Surgeons: Malcolm Cameron to the *Mars;* James W. O. Underhill and Robert V. Gilmour to the *Blenheim;* John E. H. Phillips to the *Tamar;* and James D. S. Milln to the *Cæsar*.

ARMY MEDICAL STAFF.

Surgeon-Major-General Thomas Walsh is placed on retired pay. Surgeon-Colonel John W. Maxham, M.D., to be Surgeon-Major-General, vice T. Walsh. Brigade-Surgeon-Lieutenant-Colonel James F. Supple to be Surgeon-Colonel, vice J. W. Maxham, M.D., Surgeon-Lieutenant-Colonel Henry Charlesworth to be Brigade-Surgeon-Lieutenant-Colonel, vice J. F. Supple.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain Gray (Bengal) are replaced at the disposal of the Chief Commissioner of the Central Provinces. The services of Surgeon-Major Narendra Prasanna Sinha (Bengal) are replaced at the disposal of the Government of Bengal. The services of the undermentioned officers are replaced at the disposal of the Government of the North-Western Provinces and Oudh: Surgeon-Major Baker (Bengal), Surgeon-Captain Moorwood (Bengal), Surgeon-Captain Fischer (Bengal), and Surgeon-Captain Crawford (Bengal). The services of the undermentioned officers are replaced at the disposal of the Government of the Punjab: Surgeon-Captain Clark (Bengal), Surgeon-Captain Coleman (Bengal), and Surgeon-Captain Buist Sparks (Bengal). The services of the under-mentioned officers are replaced at the disposal of the Government of Madras: Surgeon-Captain Donovan (Madras) and Surgeon-Captain Robert King Mitter (Madras). The services of the undermentioned officers are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh: Surgeon-Captain Austen Smith (Bengal), Surgeon-Captain Birdwood (Bengal), and Surgeon-Lieutenant Stevenson (Bengal).

VOLUNTEER CORPS.

Artillery: 6th Lancashire: David Franklin Williams to be Surgeon-Lieutenant. *Royal Engineers:* 1st Devonshire and Somersetshire: Surgeon-Captain G. B. Fraser to be Surgeon-Major. *Rifle:* 1st Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant J. W. Jessop to be Surgeon-Captain. 3rd (Cambridgeshire) Volunteer Battalion the

Suffolk Regiment: Arthur William Clark to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Welsh Regiment: John Richardson Armstrong to be Surgeon-Lieutenant. 1st London: Surgeon-Lieutenant-Colonel W. R. Smith, from the 3rd Volunteer Battalion Royal West Kent Regiment, to be Surgeon-Lieutenant-Colonel. 7th Volunteer Battalion the Royal Scots (Lothian Regiment): Second Lieutenant William Robert Martine resigns his commission and is appointed Surgeon-Lieutenant. 2nd Volunteer Battalion the Northumberland Fusiliers: Lieutenant Andrew William Messer resigns his commission, and is appointed Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADES.

East Yorkshire Brigade: Surgeon-Captain J. Porter, 2nd Volunteer Battalion the Princess of Wales's Own (Yorkshire Regiment), to be Brigade-Surgeon-Lieutenant-Colonel on being appointed Senior Medical Officer to the Brigade.

SICKNESS AND MORTALITY IN THE GERMAN NAVY.

IN Germany the statistical returns bearing on the health of the navy are calculated from April 1st in one year to March 31st in the next. The following figures, compiled by Dr. Globig, refer to the biennium 1893-95. Average strength: afloat, 10,886; ashore, 9172; total, 20,058. Admissions to hospital, 873·5; invalided from the service, 38·2; died, 4·4; number of men constantly sick, 36·1; all per 1000 of strength per annum. Average duration of each case in days, 13·6. Of the total deaths 48 per cent. were due to accidents and 6·2 per cent. to suicide. The principal causes of death from disease were as follows: tuberculosis, 21; inflammation of lungs and pleurisy, 15; typhoid fever, 7; cardiac affections, 6. 25 men were killed by a boiler bursting on board the *Brandenburg* and 10 by an explosion of gunpowder on board the *Baden*. 40 men lost their lives by drowning and 6 by falls from the rigging. In the first twelvemonth under report 55 cases of typhoid fever were treated, 43 on the American station, but in the second the number fell to 17. There were 7 deaths from this disease during the biennium, 2 of the men who died having been convalescent from yellow fever when they were attacked. Malarial fevers caused 723 admissions, 18·2 per 1000, and 2 deaths, the latter occurring on the African station. 4 cases of yellow fever occurred on board the *Alexandrine* at Rio de Janeiro, 1 proving fatal. A fifth case showed itself nineteen days after the departure of the vessel, the patient having formed one of the boat's crew which last communicated with the shore. This outbreak was the first manifestation of yellow fever in the German navy since 1870. Every man-of-war in the harbour at Rio was attacked with the exception of one Portuguese cruiser and it was noted that only men who had landed for night duty contracted the disease. 4 cases of cholera were treated in a vessel off Valparaiso with one death. Acute rheumatism seems to have been very prevalent, especially in the Mediterranean, where the admissions amounted to 38·5 per 1000 of strength; 817 cases in all—20·3 per 1000—were treated. There was also a considerable increase over previous years in disorders of the circulatory apparatus. Sunstroke is said to have occurred 29 times, but only 2 cases were fatal. Amongst the diseases of the nervous system there were 30 cases referable to cerebral causes, 52 of epilepsy with 2 deaths, and 17 of hysteria. Affections of the digestive system are steadily diminishing in frequency, but afloat 2 admissions per 1000 of strength were said to be referable to faulty provisions. On shore the proportion was about 0·4 per 1000 as usual. There was no scurvy. 24 cases of dysentery occurred in African waters; all were slight. Off the Chinese coast there were 3 very severe cases requiring exceptionally long treatment but eventually they recovered. Hepatic affections were apparently trivial, no cases of hepatic abscess are noted and the fleet was likewise entirely free from small-pox throughout the period. The peculiar affection known as "stokers' cramp" temporarily disabled a man on the *Bayern*. The cause was said to be indigestion provoked by too copious draughts of an acidulated beverage. The admissions on account of venereal disease amounted for the entire force to 113·5 per 1000 per annum, but on the China station they rose to 504 per 1000. Invaliding is no longer chiefly due to diseases of the eye, the first place being now occupied by cardiac affections and the second by affections of the locomotory system (flat feet, &c.). Eye diseases come third, and fourthly affections of the ear. In the report under notice the comparative merits from a hygienic point of view of the new type of ironclad, as represented by the *Brandenburg*, and the old, or *Baden* type, are for the first time considered, the conclusion being by no means favourable to the first-named. It is said that in the more modern war ships diseases which owe their origin to cold and draughts, such as rheumatism, bronchitis, tonsillitis, &c., are much commoner than in the older vessels and also that accidental injuries and heat stroke occur far more frequently.

WOUNDED BRITISH SOLDIERS IN EGYPT.

Two convoys have arrived at Cairo from the Soudan consisting of 64 wounded men, only one of whom was wounded by a spear. Most of the injuries were caused by Snider or Martini-Henry rifles, or by a few slugs from elephant guns, but, unfortunately, a few of the wounds were also caused by the Lee-Metford rifles of our own men. Large numbers of our wounded were shot in the legs and feet and this is said to have been due to Mahmoud's precaution of causing his men to fire below fixed beams, also a little to the fact that the enemy reserved his fire until the Anglo-Egyptian force was close to his entrenchment. Each man going into action carries his own antiseptic dressing with him and this was applied in most cases by the five surgeons who accompanied the troops on the day of battle or by the orderlies acting under them. Dry dressings were used and later the wounds were syringed out with carbolic or sublimate and then again dry dressed with iodoform and cyanide gauze. The dressings were generally left for three days, but were carefully watched daily to see if there were any signs of leakage. In passing it may be mentioned that in the Citadel Hospital, where these men are lodged, there is no adequate operating theatre, in spite of the many requests which have been made for one in the fifteen and a half years during which the hospital has been in British hands. The room at present used for operations has an old wooden floor, septic walls and ceilings, and very unsatisfactory windows, while the operating table, which was supplied from England last year, is an obsolete wooden one of which Her Majesty's Government ought to be thoroughly ashamed.

QUARANTINE MEASURES AGAINST THE PLAGUE IN MADAGASCAR.

The *Archives de Médecine Navale* for May contains a note by Dr. Duville, medical officer of the Naval Department in the Indian Ocean, on the measures to be adopted in order to safeguard Madagascar from the bubonic plague. Every year, he says, a large number of native *boutres* (buggalows) arrive from Bombay during the north-eastern monsoon, the passage lasting from thirty to forty days. These vessels, many of which are of 400 tons burden, ought all to be carefully inspected, but unfortunately they frequent a variety of anchorages and Majunga is the only port where there is a lazaret. To meet the difficulty Dr. Duville proposes to arm the ubiquitous custom-house officials with sanitary powers, and thus enable them to protect the public health as well as the revenue. The *boutres* with clean bills of health should be kept in quarantine for from twelve to twenty-one days according to the time occupied on the voyage from the infected area, but if any of them should be found to be contaminated it would be worse than useless to play at disinfection seeing that effective means of applying it do not as yet exist. Whenever there is reason to suspect the presence of plague germs the implicated *boutre* should be promptly isolated and the whole of its contents forthwith burnt (*brûler séance tenante tout ce qu'il contient*). The note concludes with the information that a decree, dated March 31st, 1897, has just been promulgated in Madagascar containing regulations for the maritime sanitary police of the colony.

THE SOUDAN CAMPAIGN.

The Khalifa's forces at Shabluka are stated to have withdrawn recently to El Boga, which is some forty miles distant from Khartoum and inland from the river, so that the Nile is practically left clear to Khartoum. Shabluka was a fortified, defensible position commanding the navigable channel of the Nile. According to present arrangements it is probable that some 20,000 British troops will take part in the Anglo-Egyptian advance on Khartoum in the autumn, probably late in August. Beyond Berber to the south there are often heavy falls of rain during parts of July and August. The troops have been operating hitherto in a nearly rainless country. We regret to learn that a certain amount of sickness—climatic and enteric fevers and dysentery chiefly—still continues to prevail among the soldiers of the Soudan force.

THE BATTLE OF THE ATBARA.

The *Times* of Wednesday last states in its usually well-informed "Political Notes" that "it is alleged that the medical department attached to the British brigade at the battle of the Atbara were entirely unprovided with chloroform or anæsthetics for the performance of operations on the battlefield, and, further, that owing to the lack of light ambulances the only way of carrying the wounded after the cavalry reconnaissance before the battle of the Atbara was by tying them on to gun-limbers. Amongst military members of the House of Commons the view prevails that the matter is of sufficient importance to warrant the appointment of a special court of inquiry."

THE TRANSPORT OF SICK AND WOUNDED TROOPS BY RAIL.

Our military readers may be glad to have their attention directed to an elaborate and interesting paper by Surgeon-Captain Melville, A.M.S., published in the May number of the *Journal of the Royal United Service Institution*, descriptive of the continental regulations for the transport of sick and wounded by rail.

Correspondence.

"Audi alteram partem."

HOSPITAL SUNDAY.

To the Editors of THE LANCET.

SIRS,—Though I have had occasion to make various demands upon your courtesy in the cause of charity during the last few weeks I again solicit your assistance to allow me to draw public attention to the fact that Sunday next is "Hospital Sunday," when, for the twenty-sixth year in succession, collections will be made in all the churches and chapels of the metropolis in behalf of the hospitals and dispensaries of this great city.

At this period of the history of the Hospital Sunday Fund it is fortunately unnecessary to refer in any detail to its aims and objects. These are now so well understood and so widely appreciated that it seems only requisite to mention that there are nearly 200 hospitals, convalescent homes, and dispensaries seeking to participate in this year's collections. It is estimated that quite £100,000 will be required to make up the difference between the receipts and expenditure of these most valuable institutions and to provide for that smaller but equally useful work—which the council themselves undertake—of issuing surgical appliances to the crippled and afflicted poor.

Many appeals have recently been made for the larger hospitals, and these, I rejoice to say, have been liberally responded to, but one merit of the distribution of the Hospital Sunday collection—which it shares with the Prince of Wales's Hospital Fund—is that it enables the public to contribute to those smaller and more modest institutions which are doing excellent and meritorious work in their respective localities. All the hospitals participate, according to their needs and difficulties, in the Hospital Sunday Fund, and many of the minor charities look to this annual help to compensate them for the reduction of income and legacies from which they suffer through the pressure of more urgent claims.

Of course, the great bulk of the money raised for the fund is, as it ought to be, collected at places of worship on "Hospital Sunday," but there are many contributors who, whether from absence from town on the Sunday or some other reason, always prefer to send their personal donations direct to the Mansion House. These contributions materially help to swell the fund, and are for that reason very acceptable. I shall cordially welcome any such donations.

I desire to thank in advance those who will preach for the fund on Sunday and those who respond to their appeal, and I sincerely trust that this year's collection may equal, if not exceed, the splendid results which have been recorded throughout the history of the fund, but especially in recent times.

I am, Sirs, your obedient servant,

H. D. DAVIES, Lord Mayor.

Mansion House, London, June 9th, 1898.

"A MEDICAL GRADUATES' COLLEGE AND HOSPITAL."

To the Editors of THE LANCET.

SIRS,—The prototype of the person who would find the money to establish a new general hospital in central London for post-graduate purposes is not, I think, the wise "Johns Hopkins," but rather someone whose guileless trust would only be equalled by his ignorance both of what is good for patients and what is needed by post-graduates. Why should such a hospital be central at all? If it is complete its students will not want to run away from it to all the other London hospitals, nor will they want to lodge at Claridge's or the Albemarle. As for evening amusements there already exist within twenty-five minutes' cab drive of the theatres general hospitals without undergraduates but as richly supplied with clinical material and as ably officered as any post-graduate hospitals in either Europe or America. It is to them, if to any, that a Johns Hopkins willing to build a post-graduate college could wisely turn his attention. The idea of a central post-graduate school is greatly based on the delusion that the most famous men in the profession would teach in it. Such men do not give post-graduate courses anywhere. The Jenners and Pagets of the day have rarely had time to continue their systematic lectures. Post-graduate courses of many demonstrations crowded into a few weeks can only be given by men with sufficient time to spare. Odd lectures are but little wanted.

As for the composite scheme of eight united hospitals with schools it is necessarily doomed to failure by the fact that qualified medical men are too polite to push before students and not tall enough to stand behind them; besides, they do not want elementary instruction. And it would be unfair to the patients to have them doubly exhausted by the examinations of the qualified men in the morning and those of the younger students in the afternoon.

Why should the schools wish to compete in post-graduate teaching with the institutions which are free to fulfil such a duty properly? The united hospitals scheme is scarcely more likely to have a long and useful life than a many-bodied human fœtus. Perhaps any independent London post-graduate school and hospital is expected to "peep about under its" eight "legs to find itself a dishonourable grave." Hospitals like the West London and the Great Northern, for example, must be used for study in some way or other. Do the present London schools for undergraduates consider their number, twelve, is not sufficient? If they think, as they must do, that it is more than enough, let them unite among themselves not to interfere with post-graduate tuition, but to do their undergraduate teaching a little better.

I am, Sirs, yours faithfully,

June 7th, 1898. C. B. KEETLEY.

To the Editors of THE LANCET.

SIRS,—Your leading article on a proposed post-graduate hospital and college in the last issue of THE LANCET is one of great interest, since the need of some post-graduate school in London is apparent. As you state post-graduate teaching is practically impossible at the large London schools, since not only is a different class of teaching required from that useful to students, but practitioners do not like to receive instruction at the same clinic with students for many reasons. The difficulties in the way of the proposed scheme for a post-graduate college connected with a hospital whose only object is clinical instruction and not treatment must be almost insuperable. Under these circumstances, might I suggest that the development of an existing institution would supply the need? For some years past the nucleus of a post-graduate college has existed at the West London Hospital, Hammersmith-road, W. Courses of lectures have been given and a considerable number of post-graduates from all parts of the world have attended the hospital practice. The practice of this hospital is well adapted to the needs of post-graduates, since it is reserved for them and senior students, and the staff have now had considerable experience in the class of teaching which these gentlemen require. At the same time, as the number of occupied beds in the hospital is being increased to 150, better accommodation for post-graduate students is being arranged. There will be a large class-room, a library, and a writing-room; a pathological and bacteriological laboratory in which the post-graduates may work has also been established. We therefore venture

to hope that these arrangements will meet the needs of post-graduates in London.

I am, Sirs, yours faithfully,
L. A. BIDWELL, Dean.

West London Hospital, W., June 6th, 1898.

"TWICKENHAM AS A HEALTH RESORT."

To the Editors of THE LANCET.

SIRS,—The attention of the council has been drawn to the article which appeared in THE LANCET of May 21st under the above heading, and in justice to a district which has for so long a time maintained its good reputation as regards its sanitary condition and which is verified by an extremely low zymotic death-rate and also a very low general death-rate (average of 13 per 1000 for the past ten years) we desire on behalf of the council to say that the complaint of your correspondent was to a small extent justifiable, but the hole in which the house refuse was thrown was at least 12 ft. deep, and the refuse has been gradually covered with good earth to a depth of several feet. No houses could have been built over this site, it being at the bottom of the garden. The council firmly believe that no possible nuisance can arise in the future from the deposit of the refuse referred to. The statement that houses have already been built upon sites upon which house refuse has been deposited is absolutely untrue.

We can assure you and the public at large that the council are quite as anxious for the continued good health of the district as your correspondent.

We are, Sirs, your obedient servants,
MARTINDALE C. WARD, M.D., J.P., Chairman.
W. MARSTON CLARK, D.P.H., Medical Officer of Health.
H. JASON SAUNDERS, Clerk.

Twickenham Urban District Council, June 1st, 1898.

*** We are satisfied as to the substantial accuracy of the statement upon which our annotation was founded, and think that the Twickenham Urban District Council will do well to ensure their dust contractor's obedience to the orders of their medical officer. Otherwise, however anxious they may be for "the continued good health of the district" they will find Twickenham involved in serious sanitary troubles.—ED. L.

THE NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—The rapid development of the colony established by the National Society for the Employment of Epileptics at Chalfont St. Peters has led to the existence of a widespread impression that the society is in a state of extreme prosperity, and this impression, though unfortunately erroneous, has been found most prejudicial to the movement. I am therefore desired by H.R.H. the Duke of York, the President of the society, to make known its claims to sympathy and support, its present position, and its immediate needs, which are very pressing and urgent.

Epileptics, though capable of work, are prevented by the nature of their disease from retaining employment under ordinary conditions. The object of the colony is to provide them with a home amidst healthy surroundings with suitable medical treatment, and above all with opportunities for the exercise of their industry. In a Report on the Care of Epileptics published by the Charity Organisation Society, in which the establishment of epileptic colonies is warmly advocated, it is estimated that there are in this country about 5000 persons in urgent need of such provisions as the Chalfont colony affords. But even when the additional homes now being built there are completed and opened the number of "colonists" actually provided for will be somewhat less than 200. It is evident, therefore, that the colony is, comparatively speaking, still in its infancy and that much help and effort will be needed before its ultimate growth will be attained. In the meantime, however, the necessity for increasing the accommodation has so weighed upon the minds of our principal supporters that they have from the first given their contributions specifically and inexorably for the building of new homes, every one of which has, however, necessarily involved considerable outlay over and above the cost of building. The result is that the furnishing of homes and other capital expenditure have thrown so severe a strain upon the general funds of the society that these are now quite exhausted, and works essential to the safety of the colony cannot be carried out. One home recently completed is standing empty for lack of furniture; other homes now being built will shortly be in the same position. Water is still being procured and the sewage of the colony disposed of by primitive methods quite unsuited to the increasing population. A water and a sewage scheme have been prepared and will be executed as soon as funds are forthcoming. Another urgent requirement, in order to ensure economy of management, is an administrative building with central kitchens and other offices for the whole of the colony. For these purposes about £7000 are required. This sum represents an immediate need, the importance of which is great in proportion to the amount, for it is a necessary complement to the very noble work already accomplished.

Of all the more serious forms of natural affliction epilepsy is probably the most prevalent; in the country and in the towns it is equally rife, and it spares no class of the community. It would seem therefore that it should appeal to almost universal sympathy; yet hitherto the supporters of the National Society have been distinguished rather by their individual generosity than by their numerical importance. For its permanent stability it is much to be desired that the society should stand as it were upon a broader basis, and members of all classes are therefore, according to their respective means and opportunities, cordially invited to participate in and support this very humane and necessary work.

Contributions will be most gratefully received and acknowledged by the Secretary, Mr. G. Penn Gaskell, at the society's offices, 12, Buckingham-street, Strand, W.C., or by the bankers, Messrs. Hoare & Co., 37, Fleet-street, E.C. Cheques and P.O O. should be made payable to the hon. treasurer, Mr. H. N. Hamilton Hoare.

I am, Sirs, yours faithfully,
E. MONTEFIORE MICHOLLS,
June 3rd, 1898. Chairman of the Executive Committee.

INTRATRACHEAL INJECTIONS IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—With reference to the misgivings expressed incidentally on p. 84 of my article on "Bronchiectasis" in Clifford Allbutt's "System of Medicine," vol. v., as to the value of this form of treatment in phthisis, Mr. Colin Campbell writes to remind me that in his paper in vol. lxxviii. of the Transactions of the Royal Medical and Chirurgical Society on the Treatment of Respiratory Affections by means of Large Medicinal Injections through the Larynx he sets forth the advantages of distilled glycerine instead of oil as a vehicle and relates a series of uniformly favourable cases. Inasmuch as a wider knowledge of his improvement in the method would modify any adverse impression which might be conveyed by my article I venture to beg your kind insertion of this letter.

I am, Sirs, yours faithfully,
Curzon-street, W., June 3rd, 1898. WM. EWART.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Through my inadvertence the words "10 per cent." appear on page 1536 of THE LANCET, June 4th, 1898, lines 7 and 40. In each case the words should be *1 per cent.*

I am, Sirs, yours faithfully,
Wimpole-street, W., June 7th, 1898. WILLIAM E. BURTON.

THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—It has been stated that any principal in a provincial town except Leeds can receive thirty or forty replies to advertisement from all sorts and conditions of men. Let me inform you that such is not the case in the Midlands. I have advertised for the last eight months and placed my

want in the hands of agents in London (three agents), Birmingham, Manchester, Liverpool, Edinburgh, and Glasgow, I have offered to pay whatever salary has been asked and find a comfortable home either indoors or out, and have not received one single application, but I have received a printed form from the Medical and Scholastic Agency, which reads thus:—

Clients of the association are naturally asking our advice. Holding as we do the opinion that the present tension is likely to *increase* rather than diminish, the only practical suggestions we are able to make are:

1. In some few cases it may be possible without serious inconvenience or loss to dispense with the services of an assistant altogether.
2. It may suffice to take an unqualified man to do merely dispensing and bookkeeping.
3. To raise substantially the salary offered to the qualified assistant.
4. To take in a junior partner.

The difficulties brought upon the profession by the abrupt action of the Council are so severe and far reaching and have been so unexpectedly sudden that only time will regulate the difficulties. Meanwhile, the struggling practitioner who under present circumstances is compelled to accept small fees to make a living must struggle on as best he can, and those who have arrived at a time of life when work becomes a burden when over-taxed, and yet who have struggled hard for many years to keep the wolf from the door must, now that qualified help is so dear, be pushed on one side to make way for the new order of things. If the majority of the members on our General Medical Council were elected from the rank and file of general practitioners more sympathy would have been shown to the profession at large, as they would have been able to judge from their own experience and not to look at general practice through such rose-coloured spectacles; or, again, they would have endeavoured to protect the members of the profession by trying to stop all such practices as are carried on by chemists, botanists, bone-setters, and patent medicine dealers. There is plenty of work in this line without harassing to the extent that has been done an already overburdened, worried, and, I would say, almost despised profession. (Read what the judges' remarks are on the profession and see how the clubs and dispensaries treat their medical officers and note the skits in the public papers.) More could be written, but I have already trespassed too long.—I am, Sirs, yours truly,

A GENERAL MEDICAL PRACTITIONER.

June 6th, 1898.

"A NEW OPERATION TABLE."

To the Editors of THE LANCET.

SIRS,—With reference to the letter of Messrs. Down Bros. which appeared in THE LANCET of May 7th, they state that several similar tables are in use at institutions in London and that these tables were on view at the Victorian Era Exhibition. We thereupon wrote asking them where such a table could be seen; not receiving an answer we wrote again. To neither of these communications have they had the courtesy to reply. We still maintain that we first introduced an operation table whereby heat by water is maintained all over the surface of the table; in whatever position the divided portion be placed water still remains in the sloping part as well as the horizontal. We saw the exhibit referred to at Earl's Court, but no table was then on view possessing the advantage we claim: "the hinged movement so arranged that the reservoir containing hot water is not interfered with in the least, and whatever the position of the divided table hot water is equally distributed over the whole surface: thus keeping the extremities warm as well as the body."

We remain, Sirs, your obedient servants,

May 26th, 1898. ARNOLD AND SON.

TYPHOID FEVER AT CAMBORNE.—The official report of Dr. R. Bruce Low, of the Local Government Board, on the recent outbreak of typhoid fever in the urban district of Camborne, Cornwall, and in portions of the adjoining rural districts of Redruth and Helston, has just been issued. This outbreak occurred in December and January last and there were 165 known and reported cases, the mortality being a little over 7 per cent. Dr. Bruce Low considers that the epidemic was caused by the specific pollution of the public water service; he severely condemns the sanitary condition of Camborne and Illogan, and points out the necessity for providing a satisfactory isolation hospital.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XVI.—BRIGHTON.

(*Concluded from p. 1566.*)

SECOND in the number of its patients comes the Sussex County Hospital. This hospital was opened in June, 1828, and there were 1710 in-patients and 7550 out-patients, giving a total attendance of 30,847. In addition there were 3215 casualties, aggregating 13,073 attendances. The total receipts, including legacies, amounted to £13,105. Further, in connexion with this hospital there is a convalescent home at Ditchling which received 143 patients during the year. Then there is also a nursing institution, which was founded eleven years ago, and has 23 nurses in constant employment and an income of more than £1200 a year. Subscribers of half a guinea may recommend two patients, the number of recommendations of course increasing with the amount of the subscriptions. Calling on the secretary of the Sussex County Hospital to inquire what measures were taken to prevent abuse I was informed that a sub-committee of the committee of management was appointed a few years ago to deal with the question. It was then decided that the medical men in charge of the out-patient department should report suspicious cases to the secretary. Such reports, however, are but rarely handed in. When the sub-committee was first formed they took haphazard 100 letters of recommendation and made inquiries into each case. Only 4 seemed doubtful and satisfactory explanations were ultimately obtained for 2 out of these 4. This led the sub-committee to conclude that there was not much abuse. On inquiring what would be considered as constituting abuse I was told that single men earning not more than £1 a week would be admitted. This limit might be extended for a serious operation or a severe case. The wage limit for married couples was 22*s.* 6*d.* per week, which was raised to 25*s.* if they had one child, and 2*s.* 6*d.* for each additional child. The secretary thought that medical men who had very poor practices had often only themselves to blame for what might be qualified as hospital abuse. The fact was that persons with but small means did go to cheap practitioners. But poor medical men give poor drugs. What was the good, for instance, of digitalis a month old? After paying small fees for a certain time the patients came to the hospital and complained that they had derived no benefit from their treatment. As at the hospital they were given medicine of the very best quality the results were more favourable. Thus people who could afford to pay but who could pay only very small fees naturally gravitated towards the hospital. The impression did exist that at the hospital more skilful attendance and better medicine were obtained than could be expected at the hands of the cheap medical man. The sub-committee, I was told, has little or nothing to do. One of its members is a clergyman working in a very poor district and the Charity Organisation Society is willing to render any assistance required to prevent abuse, but this is rarely needed.

In spite of this optimistic view of the situation several medical men expressed their conviction that abuse did prevail at the Sussex County Hospital. For instance, a case was mentioned to me relating to a town councillor whose child, suffering from joint disease, was treated for a long time at this hospital. Another case was mentioned of a man who is in trade and who was treated for a week at the hospital. The enormous number of casualties shows that very trivial cases go to the hospital and these might well be left to the local practitioners.

Third in number of patients is the Hospital for Sick Children, which was founded twenty-nine years ago. In 1896 there were 504 in-patients and 2909 out-patients, and the total number of attendances amounted to 9589. At this hospital I was told that inquiries were made from the parents as to their income and if this exceeded from 25*s.* to 30*s.* per week they were asked to pay. The payment varied according to circumstances. There was no fixed charge and the patients were always treated no matter what payment the parents might consent to make. From what I was able to ascertain it did not seem that any effective means were employed to prevent abuse.

With regard to the Sussex Eye Hospital there are more

than 3000 out-patients and more than 120 in-patients and here the cases of abuse are even more flagrant. Some two years ago a Brighton practitioner was sent for to attend a man who had been shot in the head at Bexhill. After two days' attendance it became apparent that it was necessary to remove one of the eyes. The patient then discharged his medical attendant and was conveyed to the Brighton Eye Hospital, where the operation was performed.

While admitting that the eye does require special operative skill several practitioners urged that this was not so much the case with regard to diseases of the throat and ear. They consequently protested that there was no need for a special Throat and Ear Hospital. Yet such an institution was established at Brighton in 1878, and in 1896 there were 115 in-patients and 1195 out-patients with total attendances of 6526. At this hospital some of the patients are made to pay at the rate of 5*s*. per month as out-patients and 7*s*. per week as in-patients. The matron informed me that she always asked the patients if they were not able to pay a medical man. Some of the patients answered that they could not do so because their social position compelled them to dress well. In spite of such replies only about five or six patients were refused during the year and advised to consult as paying patients an ophthalmic surgeon.

By a careful study of the reports of the various medical charities Dr. Waring finds that whereas in 1894 no less than 38,113 recommendation tickets for the hospitals were given out, this figure had increased to 43,374 in 1896, and the population of Brighton and Hove then amounted to 152,000. But at the same time there were 14,333 persons belonging to the Provident Dispensary, the benefit clubs, and medical aid associations. Some of these organisations receive hospital tickets but most of the members are attended by their club medical officers. If to this we add also the asylum, the fever hospital, and the Poor-law infirmary it may be said that a third of the population of this prosperous town do not pay medical fees.

To cope with this grievance a public meeting was held at the Athenæum Hall on Nov. 5th last, and it was decided that a committee should be appointed to investigate the manner in which the charities of the town were managed. A provisional committee met for the first time on the 11th of that month. A letter was then addressed to all the medical charities, including the dental and homœopathic hospitals, the Brighton Medical Society, and the Charity Organisation Society, asking them each to send two delegates so as to form a general committee which would deal with the question of hospital abuse. The result was most discouraging, nearly all the hospitals refusing to send delegates. Nevertheless, the provisional committee has continued its work, though its action is greatly impeded through want of support from the hospitals. The committee at present consists for the most part of private practitioners and delegates from the Charity Organisation Society and the Poor-law guardians. In any case it forms a nucleus where information can be gathered and agitation organised. Discussing this matter with a medical man who has a large general practice he thought it was not possible to establish a hard-and-fast rule to prevent hospital abuse, but that a periodical agitation did a great deal of good, for it awakened a moral sense and prevented people transgressing out of ignorance or carelessness. He seemed to think that the means actually employed to prevent abuse were so ineffective that anyone who chose could go to the hospital. If, however, the fact that this was wrong was constantly brought before the public by means of an agitation a larger number of persons would hesitate to do so. Therefore Dr. Waring and the committee in question were rendering a great service. Among the various complications connected with the question of hospital abuse there was the difficulty of dealing with domestic servants. He knew a family in the enjoyment of an income of £2000 a year who had sent one of their servants to the hospital because she was suffering from pleurisy. This seemed quite unjustifiable. On the other hand, a family with about £300 a year would not easily be able to nurse a servant through a serious illness. He had several times been called to attend the servants of families in similar positions and then found that they refused to pay him. The servant on her side had not the means to pay and it often happened that by the time his bill was sent in the servant had left. Nor for ordinary patients was it possible in such a town as Brighton to apply a wage limit, for it often happened that though the wages earned were small a considerable income was derived from the letting of apartments.

The fact that paying patients are admitted at some of the hospitals is also a serious grievance. A case was mentioned of a lady who was asked to pay a hospital ten guineas for her child. Medical men who are in a good position and make large incomes can afford to attend gratuitously these paying hospital patients. They do not lose anything by it because though these patients pay they are not their patients. But if such patients were refused admission to the hospital they would go to some general practitioner and pay him. Thus the gratuitous work done by the visiting staff of the hospitals often takes money out of the pockets of other practitioners. Then there are a great number of wealthy people in Brighton who very readily subscribe to hospitals but will not take the trouble to go into the details. They write out a cheque and quickly dismiss the whole subject from their minds. With similar carelessness they distribute the tickets of recommendation for admission to the hospitals. Thus while the boards of guardians and the Charity Organisation Society are doing their best to propagate the principles of thrift and to teach the poor how to help themselves the medical charities are, on the contrary, encouraging improvidence. It is really wonderful under these circumstances that there are still some poor people who pay a penny a week for medical aid when it is so easy for them to obtain this aid for nothing. As an example of the carelessness with which wealthy persons recommend people to go to the hospital a medical practitioner told me that the sister of one of his paying patients went to a hospital because a wealthy gentleman who lives in London had especially recommended her to consult one of the physicians of the hospital in question. For this purpose he had sent her a hospital admission ticket. The banks who subscribe to the hospitals sometimes place the tickets of recommendation in the hands of one of their clerks who as often as not knows nothing about the question and to save trouble lets the applicants fill up the forms themselves. The latter, therefore, can make any declaration they choose about their incomes. Many patients having thus easily obtained a ticket come to the hospital and then, as they do not like the look of the place or the appearance of the poor people waiting their turn, go away, thus proving that they did not come out of sheer necessity. Such intending patients sometimes calmly drive up to the hospital in cabs. Other persons from surrounding towns when they visit Brighton for shopping purposes seize the opportunity to obtain a little gratuitous advice at one of the hospitals. Yet there are hospitals in the neighbouring towns and therefore there is no need for these outsiders to crowd the Brighton hospitals. It is urged that letters of recommendation should not be given indiscriminately to all subscribers. Above all, they should not be placed in the hands of impressionable ladies and of ministers and clergymen, who are more anxious to please members of their congregation than to check hospital abuse. It would be best, perhaps, to give the letters of recommendation only to medical men. In any case they would then have solely themselves to blame if cases of abuse arose. Of course some persons in Brighton resort to the London hospitals so as to avoid paying medical fees. A general practitioner described to me a case in point. The patient always paid him 5*s*. a visit and was suffering from stone in the kidney. He made arrangements to have the stone removed, but the patient suddenly disappeared: she had gone up to London, where the operation was performed at St. Bartholomew's Hospital.

From all these facts it is easy to see that there is much room in Brighton for improvement. The hospitals ought evidently to agree on a wage limit to be applied with equal severity by each institution and instead of refusing to participate in the proposed inquiry should on the contrary give it the most active support.

DRAINAGE OF PLYMOUTH.—A Local Government inquiry was held at Plymouth on May 27th into an application by the town council for sanction to borrow £7275 for works of sewerage. Mr. F. M. Williams, the medical officer of health, said that from a sanitary standpoint the improvements were absolutely needed, as owing to defective sewers the subsoil was seriously polluted.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Protection of Sind.—The Camp at Reti.—The Plague in Karachi, Calcutta, and Bombay.

AFTER the first outbreak of plague in Karachi the city was free for several months. With the object of preventing a fresh importation into Sind and also with the view to put a stop to the influx of persons coming from Bombay and other infected places, railway inspection and a detention camp were established at Reti, the frontier station in Sind, on the borders of the Punjaub. The plague has since been extending and ravaging many villages in the Punjaub, and recently a recrudescence or, as some prefer to call it, a reimportation, has occurred in Karachi. This has been followed by a second outbreak, which promises to far eclipse the primary epidemic of last year. The measures adopted at Reti of examining all passengers have greatly deterred passenger traffic into the Sind province. Europeans are passed but native passengers of whatever class are detained if from an infected area, as are all native third-class travellers for at least 24 hours from whatever district they may come, the people themselves and their kit being disinfected, while those coming from the neighbourhood of an infected area are further detained for a period of 6 days, and those coming from an infected area are detained for the maximum period of 10 days. Since the examining station and the camp were established on Jan. 20th only one case of plague has been discovered, so that the value of these measures can only be ascribed to preventing an influx of people. Seeing how the disease has since developed in Karachi it is doubtful whether the supposed benefit is at all commensurate with the inconvenience to traffic and the expense of an elaborate organisation. Between 11,000 and 12,000 people have been detained in the camp. The country around Reti is a barren waste and the climate is intensely hot. One of the special plague medical officers from England is in charge with native assistants and a small force of the native police.

In Karachi itself the disease is rapidly developing and the mortality is excessively high; 1183 cases and 992 deaths—a death-rate of over 83 per cent. The Civil Hospital under European control and two or three small native hospitals have so far provided for the sick. English nurses are working at the former place, but the lodging accommodation for them immediately over the plague wards on the ground floor is most unsatisfactory. Moreover, sufficient leisure does not seem to be allowed them to leave the hospital precincts, so that they must be almost constantly breathing an infected atmosphere. In Bombay the English nurses working under the Plague Committee had many complaints against the lodging and board accommodation made on their behalf.

The medical advisers of the Government have at length come to recognise the probable influence of the rat in the spread of plague and the Government have recently issued instructions that in the reoccupation of towns and villages the multiplication of rats should be watched and persistent efforts made to destroy them. The occurrence of dead and dying rats in houses shortly before the plague breaks out among the occupants has now been repeatedly observed and that the disease in the rat is plague has been over and over again proved by bacteriological investigation. It is only recently, and especially at Calcutta, that any systematic attempt has been made to destroy the rat population prior to the occurrence of plague cases. In Calcutta only a few cases of plague have as yet occurred and although one or two fresh cases are being discovered daily it is gratifying to find that the outbreak is apparently under control. Inoculation is reported as being at a standstill. This sudden rejection of inoculation, not only for its own benefit but as an alternative to detention and segregation, is peculiarly unfortunate, because in view of a probable outbreak large numbers of the people might have availed themselves of the protection which it affords. In Bombay the plague is dying a rapid and natural death, the total daily mortality having at last come down to two figures, from 70 to 80 being the average daily number of deaths at this period of the year.

May 12th

The Plague in Calcutta, Bombay, and Karachi.—The Mortality in the Bombay Presidency.

The irony of fate has been plainly expressed by the course of events in Calcutta. Freed for so long from invasion of the plague, and probably by the great precautions which have everywhere been taken to prevent its importation, Calcutta is now suffering not so much from plague as from panic. Only a few cases have been reported and the disease does not seem to make any headway, but the alarm caused by the anticipated carrying out of the much-talked-of sanitary measures has been followed by strikes, disturbances, and the flight of large numbers of the people. Calcutta has been declared an infected port, which has also added to the trade disturbance, but the real cause of alarm is with the house-to-house visitation, isolation of the sick, segregation of contacts, and all the other measures laid down by Government for combating the plague. The corporation do not appear to be quite in sympathy with these measures and the proposed alternative of inoculation to segregation has had quite the opposite effect to that which was intended. False reports of different kinds have produced a state of unrest and mistrust among the natives, so that every action taken by the authorities is misunderstood. After the elaborate preparations which have been made in Calcutta in the event of an outbreak occurring this condition of panic and opposition must have proved very disturbing to those responsible for its sanitary administration and seems to have disorganised all attempts at concerted efforts.

In Bombay the plague continues to linger but it is rapidly diminishing. The number of plague cases recorded from September, 1896, when the epidemic was first discovered, or rather when cases of plague were first registered, up to April 22nd, 1898, is 29,062 with 26,239 deaths—a mortality of 90·2 per cent. This is much higher than elsewhere.

In Karachi the plague returns are very unsatisfactory. The numbers are very large for the size of the city and the mortality is very high—76 per cent. Inoculation is being carried on to a limited extent at various centres, but the effort must prove so small in its results because the numbers who will submit to the operation or who offer themselves for it are so few. The people are still leaving Karachi notwithstanding the various quarantine camps in Sind and the inconveniences of detention which they necessarily have to go through.

The returns showing plague cases and deaths in the Bombay Presidency from September, 1896, to April 24th, 1898, give the following rates of mortality: Bombay city, 90·2 per cent.; Karachi city, 80·5 per cent.; Thana district, 80·0 per cent.; Satara district, 78·0 per cent.; Poona district, 75·0 per cent.; Poona city, 74·4 per cent.; and Surat, 74·4 per cent. It is almost certain that the figures for Bombay are vitiated by the false returns made at the cemeteries and burning-grounds. Large numbers of cases were probably never reported. The returns from the hospitals show a mortality of about 80 per cent.

May 18th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Lunatic Asylums.

THE report of the Lunatic Asylums Committee of the town council has just been issued. The medical superintendents show that there has been considerable crowding in the wards, but that some relief had been obtained by the lease of Sandwell Hall for male patients and the exchange of 30 female for 30 male patients by agreement with the Lancaster county authorities. The admissions during the year were 250 males and 189 females, that is 60 patients more at the end of the year than at the commencement, there being an increase of 87 males and a decrease of 27 females. It is pointed out that taking the ratio of these admissions to 10,000 of the population they do not show any appreciable increase in the disease itself, but merely that the excess is due to increase in population. In reviewing the causes it is found that intemperance in drink claims no less than 61 males and 47 females as its victims, showing a proportion to the total admissions of 24·4 per cent. males and 24·8 per cent. females. This is an excess over previous years and the greatest number hitherto recorded. The hereditary tendency was found to exist in 48 males and in 13 females, while no less than 99 of the total number admitted had had previous attacks of insanity. The necessity of abstinence from alcohol in those thus predisposed is emphasised by this testimony. Among other causes

22 males and 20 females suffered from epilepsy; and in the case of 16 males and 8 females some other bodily disease is attributed as a cause. Domestic troubles are assigned in 15 males and 5 females, the remaining cases being 17 puerperal and 14 congenital. The question of prevention is dealt with from a social standpoint and other subjects of interest are discussed in a very able report.

Medical Benevolent Society.

The seventy-sixth annual meeting of this society was held on May 27th. The report stated that the invested funds now amounted to £12 582 2*s.* 2*d.* and that there was a balance at the bank of £776 12*s.* 9*d.* The society has received a valuable addition to its funds in the form of a legacy of £2000 from the late Mrs. Bromell and one of £250 from the late Dr. Sharples. There were 17 annuitants on the books, the annual value of the grants ranging from £20 to £40, the total being £560. The benefit members of the society numbered 373, 17 new members being admitted during the year. The reports were adopted, votes of thanks were passed, and a dinner was subsequently held as usual.

Hospital Saturday Fund.

The Hospital Saturday collection this year amounts to £16,877 3*s.* 2*d.* from 1694 contributing establishments, as compared with £16,734 12*s.* 9*d.* from 1714 contributors at the corresponding stage of the collection last year, an increase of £142 10*s.* 5*d.*

The Ticket System at Hospitals.

At the Coventry and Warwickshire Hospital this question was discussed at a special meeting on May 25th. A sub-committee had reported that they were not satisfied with the ticket system as at present conducted. They considered that applicants for treatment, if members of sick clubs, should produce a certificate from the medical men that they were cases for hospital aid and that the medical officers should have more discretionary power in dealing with them. An amendment was carried that the report be referred back and the sub-committee asked to see whether they could not suggest proposals which would be really effective in preventing abuse of the hospital.

June 7th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Medical Staff Corps.

WHITSUNTIDE is a great holiday time in Lancashire and the people—gentle and simple—pour out of Manchester and the other large towns in crowds, while numbers more from the surrounding districts come into Manchester in search of amusement. It is a great week for Volunteers camping out and on the coast of North Wales and Lancashire their white tents may be looked for every Whitsun week. Sometimes they have good weather and enjoy their experience of life under canvas, but this year the rain has interfered much with their comfort. The two Manchester companies of the Volunteer Medical Staff Corps went into camp at Lytham under the command of Surgeon-Captain Coates. There were also present Surgeon-Captain Fairclough, Surgeon-Captain Mann, Surgeon-Lieutenant and Adjutant Phillips, Surgeon-Lieutenant Smith, Surgeon-Lieutenant Pritchard, and the acting chaplain, the Rev. Canon Kelly. The number of men under canvas was about 130. Instruction was given in bearer-company drill, the establishment of field-dressing stations, ambulance and waggon drill, &c. The corps were inspected on June 3rd by Surgeon-Colonel Scott, C.B., the principal medical officer of the north-western district. He said that he was struck with the smart and soldier-like bearing of the men and he commended the rapidity with which the work was done and the excellent manner in which the stretcher exercises were performed. He thought "the whole of the camp, and especially the work of the bearers, reflected very considerable credit upon Surgeon-Captain Coates and the officers under his command." There is one matter in which an improvement in the treatment of the Volunteers might and ought to be made. A large proportion of the tents used by the Cheshire and Lancashire Volunteer Brigade were old and worn and they "acted like sieves when the rain came, and time after time deluged their occupants as they lay in bed." They were unhesitatingly condemned by an officer of the Ordnance Department as "unfit for further service." As is well known, when a tent is thoroughly wet if it is touched on the inside by a man's head or anything else the water, instead of running down outside, drips on to the unfortunates within, much to their discomfort. The first four days of this year's camping out were excessively wet and when eight men were inside one of the bell-tents its shape rendered it almost certain to be touched by a head or two, as one of the sufferers feelingly pointed out. Notwithstanding this there seems to have been very little sickness.

Poor Children at the Seaside.

Among the most commendable of the efforts for benefiting the slum children of Manchester is that of sending them in relays through the season for a week's sojourn in summer camps by the sea. There are two small camps at St. Anne's-on-the-Sea, to which forty children will be sent weekly till the end of September. Tents have given place to corrugated iron buildings, and an excellent feature of the scheme is that military discipline is maintained—a most valuable lesson. There is another camp for little slum girls, where some 240, from six to twelve years of age, will have a fortnight's holiday during June, July and August. About two miles from St. Anne's-on-the-Sea 488 boys and 44 officers of the Manchester battalion of the Boys' Brigade have been under canvas, and at Birkdale, Southport, the committee of the Strangeways Refuges, Manchester, have their annual camp. Since the latter was started, about fifteen years ago, from 12,000 to 14,000 poor lads from the crowded districts—the back streets and alleys of Manchester and Salford and other places—have had the benefit of a week's holiday at the seaside. It is difficult for those in a different condition of life to realise what this must mean to children who have known nothing but crowded streets with all the sordid and depressing surroundings of slum life in town. In addition to the physical benefit, the mental effect of the marvellous revelation of the existence of a brighter world than that hitherto known will be difficult to calculate, but altogether good. If there are any previous ideas of cleanliness they are extended and some notion of method and orderly arrangement is obtained from the rules and regulations which are carried out with military precision. The health of the boys while in camp has been very good. On arrival their own coat, vest, and cap are exchanged for a scarlet tunic and a round forage cap bearing the name of the institution and the lad's own clothing is fumigated. At the opening of the camp this year Sir George A. Pilkington, M.R.C.S., and other gentlemen addressed the boys. There are more of these agencies for giving poor town children a country holiday, but though much is done the numbers are so great that if all are to benefit these agencies may be extended almost indefinitely

Manchester Corporation Dwellings.

It may be remembered that after the demolition of some notoriously insanitary property the Manchester corporation built large blocks of dwellings in Oldham-road and Pollard-street, which were ready for occupation in the summer of 1894. There was a strong prejudice at first among the labouring class and others against these "barracks" as they were often called, but in a couple of years it died away and now applications for tenements are so numerous that a selection can be made of the most suitable as to character. Payments are made weekly, the total number in Oldham-road being 284 and in Pollard-street 135. The rents are paid regularly and from April 1st to May 14th last there was not in either block of dwellings a single penny of arrears.

An Unfortunate Case.

An inquest was held on May 27th by Mr. Smelt, the city coroner, on the body of Thomas Smith, a carter, of Nelson, who died in the Manchester Infirmary on the previous day "from delirium consequent on his injuries." He was kicked by a horse about 9 A.M. on May 13th and sustained "a compound fracture of the right knee-cap," was taken to a medical man, who, after having attended temporarily to the leg, sent him on an ambulance to the Victoria Hospital, Burnley. To make a long story short he was received at the hospital, but as there was—or had been shortly before—a case of scarlet fever there it was thought safer for him to be removed to the workhouse infirmary. This was not done at once, and after having passed a night in the infected hospital they would not have him at the infirmary, so he was sent home and got there between 8 and 9 o'clock on Saturday night, the 14th.

He was taken to the Manchester Infirmary on Tuesday, the 17th, where he died. There has been a good deal of newspaper correspondence on this most unfortunate case under the heading, "The Burnley Hospital Scandal," and an inquiry is being arranged for between the guardians and the hospital authorities, presumably to apportion the blame, if any. A verdict of "Accidental death" was returned, but it will be difficult to convince the public that no one was at fault.

June 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

THOUGH no official announcement has been intimated it is generally understood that Principal Caird has resigned. He has occupied the positions of Principal and Vice-Chancellor for nearly twenty-five years and has devoted himself not without success to the cultivation of the highest and best interests of the University. His dignified presence and lofty eloquence have for long been recognised distinctions of academic tradition, and it is not less true that in the inner life of the University his scholarship, culture, and devotion to the noblest ideals have been influences of the highest value. The appointment, which is in the gift of the Crown, is of the value of £1000 a year, with a residence in the University grounds.—During the past week the examinations for degrees in medicine and surgery have been in progress. For the first time the written examinations have been taken first, the clinical tests being fixed for a later date. The 127 candidates include 19 women students from Queen Margaret College.

Glasgow Samaritan Hospital.

The dispensary for out-door patients in connexion with this hospital has until recently been carried on in a building at some little distance from the main institution presented to the directors by the late Miss Agnes Barr. An opportunity recently presented itself of selling this building to the corporation and in this way the directors have been enabled to build a new dispensary in connexion with the hospital This has now been opened and is to be called "The Agnes Barr Dispensary." The building is admirably adapted for its purpose and is fitted up with all modern conveniences.

Convalescent Home for Nurses.

The late Dr. Samuel Johnston Moore of Glasgow directed his trustees to apply the residue of his estate, amounting to about £45 000, to the provision and endowment of a convalescent home for nurses whose health might have temporarily or permanently broken down in the exercise of their profession. In conformity with this bequest the trustees have recently acquired some property at Busby, a few miles from Glasgow, and this will shortly be utilised for the above purpose. The house, which has been a family residence, stands in its own grounds and commands a beautiful stretch of country. It has undergone appropriate alterations and seems admirably adapted in every respect for a convalescent home. Dr. Moore also bequeathed a number of his books, ornaments, and pictures to the home and the comfort and convenience of the nurses have been fully consulted.

Glasgow Public Dispensary.

It has for some time been rumoured that an unfortunate dispute has been in progress between a section of the medical staff of this dispensary on the one hand and the directors with a majority of the staff on the other. The minority somehow or other appears to have managed to assert its position, for an official announcement intimates that the leading directors and five members of the staff have resigned their connexion with the dispensary.

Aberdeen City Hospital.

It has been agreed to extend this hospital (for infectious diseases) by erecting three new wings for the accommodation of servants, and as reception- and departure-rooms for patients, at a total cost of £4650. The accommodation will now be as follows: in wards for patients, 150 beds; matron, 1 room; resident medical officer, 1 room; nurses, 30 rooms; wardmaids, 7 rooms; laundrymaids, 6 rooms; head laundress, 1 room; house servants, 6 rooms; cook, 1 room; total, 53 rooms. The whole buildings have cost about £40,000.

Aberdeen Medical Volunteer Staff Corps.

This company, which is 100 strong, went into camp on June 2nd on the picturesque grounds of Urie, near Stonehaven, the county town of Kincardineshire, under the command of Surgeon-Captain J. Mackenzie Booth, and returned to Aberdeen on June 6th.

June 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Surgeons in Ireland.

THE annual ballot for the election of the President, Vice-President, and Council of the Royal College of Surgeons in Ireland took place on June 6th and excited more than usual interest on account of the close contest for the Vice-Presidency. Dr. Myles, surgeon to the Richmond Hospital, was elected by a small majority. Mr. R. L. Swan succeeds Sir William Thomson as President of the College.

The Royal Institution of Public Health.

The Lord Mayor of Dublin visited the Royal University Buildings on May 26th to confer with the Exhibition Committee in connexion with the coming Hygienic Congress. The announcement has now been made that a Health Exhibition will be held at the Royal University Buildings from Aug. 18th to 27th under the auspices of the Royal Institute of Public Health and in connexion with the Hygienic Congress which will take place at Trinity College during the same week. The proceedings will open on the morning of Aug. 18th with a reception there, after which the reading of papers, &c., will commence. On Friday evening Alderman Meade, the Chairman of the Reception Committee, will give a garden party at Ailsbury-road, while Sir Christopher Nixon will entertain the visitors at Roebuck. During that week Dublin is always overcrowded and its hotels are filled by people who come from all parts of the kingdom to attend the horse show. Visitors should remember this and make their arrangements beforehand.

The Irish Medical Association.

The annual meeting of the Irish Medical Association was held at the Royal College of Surgeons in Ireland on June 6th, the President, Dr. T. H. Moorhead, occupying the chair. The annual report, which was read, dealt largely with the provisions of the new Local Government Bill, which will make serious and important changes in matters affecting the medical officers of the Poor-law service. Dr. Arthur Benson, after speaking in favour of medical superannuation and with reference to the continued abuse of the so-called *red tickets* for free medical relief, moved the following resolution:—

That the Council be requested to persevere in the efforts made for so many years to induce successive Governments to amend the present Poor-law system; that particular regard be given to the question of superannuation of medical officers; the issue of medical relief tickets so that persons in independent circumstances may be prevented from availing themselves of the means provided by the ratepayers for the sick poor; and that annual leave of absence be granted to medical officers.

The ballot for officers for the ensuing year resulted in the election of Sir Thornley Stoker as President of the association. The annual dinner took place at the College of Surgeons on the same evening and was attended by many distinguished non-medical visitors — the Lord Mayor of Dublin, the Right Hon. the Lord Chancellor (Lord Ashbourne), the Right Hon. Alderman Meade, LL.D., the Right Hon. C. H. Hemphill, M.P., Sir Andrew Reed, C.B., Mr. J. H. Campbell, Q.C., M.P., and many others.

The Royal Medical Benevolent Fund Society of Ireland.

The fifty-sixth annual meeting of this society was held in the afternoon of June 6th at the Royal College of Physicians of Ireland. Sir George Duffey, President of the Royal College of Physicians, occupied the chair, and received the report of the Central Committee read by Dr. J. W. Moore, one of the honorary secretaries. Sir William Stokes, in moving the adoption of the report, alluded to the deficient funds of the society and to the advisability of founding free medical studentships whereby some deserving student in poor circumstances would be assisted in the progress of his profession and education. Professor Bennett, President of the Royal

Academy of Medicine, having been voted to the second chair a vote of thanks was unanimously passed to Sir George Duffey.

Gallantry.

A man named Kenny was cliff-climbing on Whit-Monday near the falls at Paula-phouca and fell into the river. A member of the Irish Constabulary, Constable A. Madden, instantly plunged in after him but was dashed against a rock to which he had to cling, while Kenny was seen clinging to another rock. A rein was brought from a neighbouring hotel and placed round Kenny's body by Mr. Richard Shaw of Dublin and Constable Madden, who had succeeded in reaching him. On Kenny being brought safely to land both Mr. Shaw and Constable Madden were warmly cheered by the spectators.

The Health of Belfast.

At the meeting of the city corporation held on June 1st it was reported that between April 24th and May 21st 428 cases of zymotic fever had been notified, viz.: 254 cases of typhoid fever, 90 of simple continued fever, 42 of scarlet fever, 21 of erysipelas, 17 of diphtheria, and 2 cases each of membranous croup and puerperal fever. The total death-rate from all causes in Belfast was 25·5 per 1000. The number of cases of typhoid fever, though large, was less than in the preceding month. An animated discussion followed the reading of the report of the Public Health Committee at the corporation meeting, several members of the city council speaking of the inefficiency and unsatisfactory condition of the Public Health Department. A sub-committee has been appointed to inquire into and report upon the working of the Health Department of the corporation. There is no doubt that there is an unusual amount of sickness in Belfast for the present season of the year. There seems to be widely prevalent an epidemic of an influenza type, some of the cases culminating in sharp attacks of laryngitis, others ending in gastric catarrh. They may in part be caused by the present weather, as few remember such an extraordinary wet season as that which we are at present experiencing. There would appear also to be cases of typhoid fever in almost all parts of the city.

Workmen's Compensation Act.

Notice has been given by the Home Secretary that applications for appointments as medical referees under the Workmen's Compensation (Ireland) Act, 1897, may be sent to his office. The referees are to be men of independent position and high standing in their profession and should have such experience of the class of questions arising as will enable them to decide with authority points in which there may be divergence of medical evidence. Other things being equal, preference, it is announced, will be given to those holding important hospital appointments or having had other special opportunities of gaining wide experience of accidents and their consequences. The Treasury have fixed the scale of fees as follows: For a first reference, to include examination and written report, two guineas; for a further written statement on the same reference, one guinea; for a second or subsequent reference in the same case, one guinea; for attendance at the proceedings on the request of a county court judge at a time and place to be arranged, three guineas. If the medical "referee" has to travel more than two miles from his residence he will be paid an addition of 5*s.* for each mile of distance. These medical referees (of whom at first one or more will be appointed for each county and paid by the Treasury) will have as their principal duty to act as the advisers in medical matters of the committees, arbitrators, and county court judges who are empowered to decide all questions arising in proceedings under the Act.

June 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Pott's Disease by Forcible Reduction.

M. CALOT brought before the Academy of Medicine on May 31st about twenty young persons who had suffered from Pott's disease and had been successfully treated by his method. He allows his patients to walk some weeks after the reduction of the deformity if the disease has come to an end, but only some months after it if the disease is still in progress and they continue to walk as long as the treatment is continued. He attaches much importance to this part of the procedure, which by enabling the children to move about has the best effect on their general health and appears to promote the consolidation of the spinal column. It can, however, be accomplished only when the apparatus is large and well made, surrounding the body and fitting the lower part of the skull; it must keep the spinal column exactly in position without interfering with the act of walking. As soon as consolidation has begun the large plaster apparatus is replaced by a corset, which is worn for a year or two, or even longer, if requisite for ensuring the rigidity of the spine. With this corset—which is very little, if at all, perceptible under the clothing—the children can attend school and in most respects do as other children do. M. Calot showed two children who walked about wearing a large plaster apparatus which fitted the lower part of the skull and also two children with the little corset.

Foreign Bodies in the Œsophagus.

At the same meeting of the Academy of Medicine M. Monod read a report on an observation by M. Monier relative to a case of a foreign body in the œsophagus. A child, five years of age, had swallowed a coin of the size of a halfpenny which had become impacted at the level of the left bronchus. M. Monier ascertained its position by means of the Roentgen rays and performed external œsophagotomy, which resulted in recovery. M. Monod considered that this operation was preferable to direct extraction, as the foreign body had been swallowed a year previously and was by this time embedded. Radiography was of conspicuous advantage in cases of this kind. M. Réclus mentioned a similar observation in which a coin had been swallowed for five days and was already embedded. In this case, also, radiography enabled its exact position to be determined.

A New Tuberculin.

MM. F. Ramond and P. Ravaut reported to the Society of Biology on May 28th that bacilli of the tuberculosis of fish, discovered by Dubard, had been cultivated by them in bouillon containing glucose and glycerine, and that on filtering these cultures through porcelain they obtained a toxin which by its smell and its biological reactions exactly resembled the tuberculin derived from the bacillus of tuberculosis occurring in the human subject. With this new toxin they made experiments in two series as follows. First, a tuberculous guinea-pig was inoculated with the toxin, the result being the production of pyrexial reaction with shivering and prostration lasting for six hours, although neither the control guinea-pig nor even the tuberculous guinea-pig, which had received control injections of glycerinated bouillon, showed any pyrexial reaction. Secondly, two guinea-pigs, which had been inoculated on different dates with the bacillus of fish tuberculosis and which exhibited some emaciation, were injected with half a cubic centimetre of ordinary tuberculin; they both showed a well-marked pyrexial reaction, amounting in the first to 2° C. and in the second to 1·5° C.

Mental Derangement after Operations.

At the Surgical Society M. Picqué, on May 5th, resumed a long discussion, which has already occupied several meetings, on the subject of Mental Derangement after Operations. His conclusions were as follows:—1. There are lunatics who only seek surgical advice under the influence of insane ideas and against whom the operator must be on his guard. 2. There is a class of patients who do not show any signs of mental disorder at the time of the operation but subsequently become deranged sooner or later. These are examples of mental derangement after operations, a state which must not be mistaken either for toxic delirium or for that produced by infection. Gynæcological operations do not predispose to it more than others. 3. The mental disorder does not assume any constant form; it may be marked either by excitement or by depression. 4. As regards the cause of these phenomena the majority of the observations show that a great number of the patients have either suffered from actual insanity or have an hereditary predisposition to it. 5. The mental state of the patients ought to be examined before every operation, but this examination would not enable mental disorder following the operation to be foreseen.

The Maternity Hospital.

M. Felix Faure, the President of the Republic, accompanied by M. Barthon, M. Le Gall, and General Hagron, visited the Maternity Hospital in the boulevard de Port Royal on May 27th. The President passed through all the

wards of the establishment and spoke to the patients whose circumstances called for any special remark, listening to the recital of their needs and wishes. Many of them had husbands who were at home either ill or out of work and children with no one to look after them, the consequence being that the women refused to remain in the hospital till their health and strength were fully restored and many serious complications originated in this way. The President of the Republic has consulted the Director of the Assistance Publique and the presidents of the municipal council and the general council with respect to this question and has expressed a desire to take joint action with them. The part of the hospital last visited was the ward containing the incubators for prematurely born infants. On leaving, M. Faure complimented the staff on their zeal and devotion and in his own name handed to the director a sum of 500 fr. (£20) to assist necessitous patients on their discharge.

A New Ambulance Station.

A new station for municipal and city ambulances in the rue Caulaincourt, in the north of Paris, was formally opened on June 3rd at 5 P.M. After an inspection of the premises lunch was served in one of the rooms, and M. Veber, a member of the municipal council, speaking in the name of the council, enlarged on the necessity for developing all the public services connected with hygiene. M. Strauss, a member of the Senate, then briefly recounted the endeavours which had been made by the council to organise a system of first aid for sick and injured persons. The new ambulance station has nine vehicles, together with a large staff of male and female attendants, telephone clerks, and coachmen, and is furnished with every requisite not only for first aid to the sick and injured, but also for the disinfection of living rooms and personal effects.

June 6th.

Obituary.

ROBERT WALLIS, M.R.C.S. ENG., L.S.A., J.P.

THE death of Mr. Robert Wallis of Old Ridley, New Stocksfield, Northumberland, in his eighty-ninth year, is felt as a real loss in the neighbourhood of Newcastle. He was one of a considerable number of medical men whose constitution and whose talents enabled them to live, as it were, two lives. Mr. Wallis filled for the last fifty years many most important public offices. He was alderman and twice mayor of South Shields, of which town he was a native, before his removal to Old Ridley nearly forty years ago. He was for fifty years a director of the South Shields Gas Company and for forty of these its chairman, only on one occasion failing to attend its annual meeting, where he was in the habit of making lucid statements of the state and prospect of the business. He discharged this function so lately as February last. He was a member of the River Tyne Commission. He was an active county magistrate and for some time chairman of the Hexham bench. He was also an energetic member of the county council of Northumberland and held the very important position at one time of chairman of the Standing Committee. Such are the public offices which Mr. Wallis filled and filled with such ability as to call forth the wide and just praise of the press of his district. But such accounts, which are exceedingly gratifying to us to read, scarcely mention his professional life, which was an honour to his native town. He was trained at University College and was a pupil and, if we remember rightly, a house surgeon under Mr. Liston. He had all the qualities which endear a practitioner to the community which he served. Naturally, and by the privilege of his pupilage, he was a good surgeon; his judgment in the treatment of disease was sound; and his courtesy and kindness were unfailing and without respect of persons. No wonder that his advice was much sought and that he was much consulted and entirely trusted by his fellow practitioners as well as by his fellow townsmen. Such professional lives may be partly eclipsed when they are succeeded by a public life of great activity and usefulness. But it is our duty as it is our pleasure to recall the medical basis of the whole life and to show that such a basis is one of the best on which to build public character and public work. Mr. Wallis married somewhat late in life and leaves a widow and two sons to mourn their loss.

WILLIAM ILIFFE, M.R.C.S. ENG., L.S.A.

MR. ILIFFE, medical officer of health for the borough of Derby, died very suddenly about 10 P.M. on June 3rd at his residence in Osmaston-road. He had felt unwell for some little time, but had nevertheless on the day of his death attended to his professional engagements as usual, including a visit to the infectious diseases hospital, and was passing the evening with his family when the fatal seizure occurred. Mr. Iliffe was a native of Nuneaton and was fifty-three years of age. He studied medicine at St. Bartholomew's Hospital and in 1866 took the diploma of M.R.C.S. Eng., to which he added that of L.S.A. in the following year. About 1870 he went to Derby, where he practised in partnership with his brother, Mr. Frank Iliffe, and showed such professional ability that in 1876 he received the appointment of medical officer of health, the duties of which he carried on concurrently with an extensive private practice until 1895, thenceforth devoting his whole time to the service of the borough. Mr. Iliffe was very energetic in his public health work, and did much to improve the sanitary condition of the district under his charge. He has left a widow, one son, and three daughters. An inquest was held by the coroner on June 4th, when the jury returned a verdict of "Death from syncope" and expressed their sympathy with the family.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, MAY 31ST.

THE earlier proceedings of the Council on this the last day of the session have been reported in THE LANCET of June 4th.

The Pharmacopœia.

The Pharmacopœia Committee beg leave to report to the Council as follows:—

Since the last meeting of the Medical Council the fourth British Pharmacopœia, which has been in preparation during the past five years, has been published. The final revise having been approved by the Pharmacopœia Committee on Feb. 21st, 1898, the Chairman of the Committee, our late President, Sir Richard Quain, handed over the completed proof to the Executive Committee for publication, and subsequently, on behalf of the Executive Committee, ordered the printing of 20,000 copies. Thus by almost the last official act of his life he completed a work in which he had taken the greatest interest and over which he had watched with solicitude and care. It is worthy of note that his official connexion with the revision of successive Pharmacopœias dates from 1864 and remained unbroken up to the time of his death.

The distribution of the Pharmacopœia of 1898 commenced on May 7th, and up to the 25th of the month 11,385 copies have been sold. The committee desire to place on record their special indebtedness to two members of their own body, Dr. Leech and Dr. MacAlister, whose original investigations have greatly assisted in the solution of many problems which called for anxious consideration and who have brought to bear upon the whole of the work a very remarkable combination of great chemical, pharmacological, and pharmaceutical learning with the skill and experience of practical physicians. In the preface to the Pharmacopœia of 1898 it is stated that "the Council have in contemplation the early preparation of an addendum, in which medicinal plants and other substances suggested for inclusion by Indian and colonial authorities will be dealt with more fully than has now been possible." The committee have already initiated the necessary arrangements for the preparation of this addendum. A first proof will be ready in about six months and will be submitted to the Indian, colonial, and other medical authorities interested. It is hoped that the addendum may be completed for publication in eighteen months.

Resolutions have been passed by the committee to the following effect:—(1) That Dr. Tirard be asked to continue his service as secretary until the publication of the colonial addendum; and (2) that Dr. Attfield be appointed editor of the addendum, and that he be assigned an additional honorarium of one hundred guineas.

The Pharmacopœia Committee have drawn up, with the assistance of the editor and secretary, the appended account of the methods adopted in preparing the British Pharmacopœia of 1898:—

The British Pharmacopœia of 1898 has been prepared by methods more or less resembling those adopted in preparing the pharmacopœias of 1864, 1867, and 1885, and the Addenda of 1874 and 1890, but with important modifications and elaborations of former procedure.

In the British Pharmacopœia of 1864 the Pharmacopœias of London, Edinburgh, and Dublin were merged, hence its compilation was appropriately carried on by three sub-committees sitting respectively in the three capitals. The members of the Pharmacopœia Committee appointed by the Medical Council associated with themselves Members from the three Colleges of Physicians, members of the Pharmaceutical

Society of Great Britain, and several experts. This body of compilers then divided into three sub-committees, each undertaking a third portion of the whole work. To each sub-committee a secretary was appointed. The resulting volume was in two parts: (1) Materia Medica; and (2) Preparations and Compounds (Minutes of Council, vols. i., pp. 6, 70, 89; ii., 30, 80, 159, 213, 238; xxxii., 17). In 1867 the Pharmacopœia of 1864 was revised by two editors under the direction of a small committee sitting in London. The division of the book into parts was discontinued, the metric system of weights and measures was recognised in an appendix, while many of the published researches that had been reported at the suggestion of the Medical Council (Minutes, vols. iii., p. 464, and v., pp. 312, 323) and by the present editor (*Pharmaceutical Journal*, second series, vols. v., pp. 561, 628, and vi., p. 7) were utilised. A small volume of "Additions" was issued in 1874. The third British Pharmacopœia in 1885 was prepared under the direction of the Pharmacopœia Committee of the Medical Council by three editors aided by suggestions and assistance from several of the medical bodies, from medical practitioners, and from pharmacists. The methods adopted in its compilation were those of the previous Pharmacopœia, but the chemical nomenclature was modernised, proportional parts were freely introduced as gradually leading up to the more general use of the metric system of weights and measures, and the omission of detailed processes for chemical substances was commenced. In 1890 an Addendum was issued under the supervision of the Pharmacopœia Committee of the Medical Council, aid in selecting the additions being rendered by twelve of the medical bodies of Great Britain and Ireland and practical assistance being given by a committee of the Pharmaceutical Society of Great Britain. The annual reporter to the Council, who had been appointed in 1885, was the editor of the Addendum.

The British Pharmacopœia of 1898 was prepared, like the three previous Pharmacopœias, under the supervision of the Medical Council's Pharmacopœia Committee, which includes representatives of the medical bodies of England, Scotland, and Ireland. All the meetings of the committee were held in London. In selecting additions to, and in deciding on omissions from, the previous Pharmacopœia aid was rendered by sixteen medical bodies of the kingdom. Assistance, advisory and experimental, was rendered by a committee of the Pharmaceutical Society of Great Britain. For the first time medical and pharmaceutical bodies in India and the colonies contributed to the production of the Pharmacopœia. The help of referees in chemistry, botany, and therapeutics was occasionally obtained. The editor advised specially on all matters relating to pharmaceutical chemistry. The yearly abstracts of published researches which had been drawn up by the reporter from 1886 onwards at the desire of the Council were found of much value. The metric system of weights and measures appeared in the text of the Pharmacopœia, side by side with the imperial system, and was alone employed in all paragraphs relating to analysis. Except in the Latin titles the chemical nomenclature was further modernised and the exclusion of details of the modes of making chemical substances, begun in 1885, was completed.

So far the methods of preparing the British Pharmacopœia of 1898 have been described broadly and in relation to the methods adopted in preparing the Pharmacopœias of 1864, 1867, and 1885; some details will now be given. The decision to alter, amend, and republish the British Pharmacopœia of 1885 was taken by the Medical Council in December, 1893. Soon after the publication of the third Pharmacopœia—namely, on Nov. 17th, 1886—the attention of the Council had been drawn to "the question as to whether or not any changes—and, if any, what changes—can be effected in a British Pharmacopœia to better adapt it to Indian and colonial requirements" (Minutes, vol. xxiii., p. 127). A letter received by the Council in 1892 from the Government of India, suggesting the omission of saffron from certain official preparations and the use of an oil indigenous to India in the manufacture of official ointments, emphasised the question. The result was that letters were written by the President of the Council to the Lord President of Her Majesty's Privy Council, stating that if the medical and pharmaceutical authorities resident in India and the colonies would bring before the Medical Council such a list of suggestions relating to any part of the British Pharmacopœia as their knowledge of the pharmacology and pharmacy of their respective countries or districts might enable them to make, the communication should receive the fullest and best consideration of the Medical Council, and praying the Lord President to direct the attention of the Indian and colonial authorities to the matter. The development of this action induced the Council on Dec. 4th, 1893, to decide on the preparation of another Pharmacopœia and to appoint an editor (Minutes, vols. xxix., p. 77; xxx., pp. 73, 74, 122, 162).

In the earlier portion of 1894 the President, at the suggestion of the editor, decided that when omissions and additions had been settled, and the first series of preliminary experimental investigations had been completed, the alphabetically arranged Pharmacopœia should be temporarily broken up into ten sections and that proofs, one section at a time, should be set up in type and laid before the Pharmacopœia Committee of the Medical Council and a Committee of the Pharmaceutical Society (Minutes, vol. xxxi., pp. 82 to 84, and 164 to 171). In November, 1894, the Pharmacopœia Committee of the Council decided that letters should be addressed to the respective medical authorities of Great Britain and Ireland asking for their coöperation and assistance, replies being requested before the ensuing April. At the same meeting the Council of the Pharmaceutical Society of Great Britain was invited to nominate a Pharmaceutical Pharmacopœia Committee to report, with the concurrence of the Society's Council, to the Medical Council through the Pharmacopœia Committee of the latter Council. At the May Session of the Council in 1895 the Pharmacopœia Committee had the following 34 printed documents at disposal as material for preparing the new Pharmacopœia: Nine Annual Reports, 1886 to 1894, on the Progress of Pharmacy in relation to the revision of the Pharmacopœia, 194 pages; Reports from Sixteen of the Medical Bodies of Great Britain and Ireland containing suggestions as to omissions, additions, and alterations, 84 pages; a Tabulated "Summary" of the sixteen Reports just mentioned, arranged for ready reference and discussion by committees and including blank columns on which to record the decisions reached, 123 pages; a Summary of Twenty-eight Communications from India and the colonies respecting the revision of the Pharmacopœia and respecting local requirements which might be met should any extension of the usefulness of the Pharmacopœia to all parts of the empire be carried out, 57 pages; a Tabulated Memorandum on the British Pharmacopœia by the Therapeutic Committee of the British Medical Association, including statements from nearly 6000 medical practitioners as to official medicines "often," "rarely," or "never" used, and opinions respecting additions, alterations, and omissions, 12 pages; Statistical Tables founded on answers to questions as to official medicines "frequently," "seldom," or "never" prescribed or sold, and conclusions as to additions and omissions, from the Pharmacopœia Committee of the Pharmaceutical Society, 17 pages; Analysis of 10,000 Prescriptions dispensed by pharmacists in various districts of the United Kingdom during the first quarter of the year 1886, extracted from the *Chemist and Druggist* of April 24th, 1886; Analysis of 12,000 Prescriptions dispensed in six pharmacies in Aberdeen, Bournemouth, Carlisle, Cork, London, and Oxford, by W. Martindale, 91 pages; a Tabulated Summary of the four preceding documents, arranged in columns and including a column showing how many of 13 medical bodies of the United Kingdom recommend omission of the respective official articles, 79 pages; the Unofficial Formulary of the British Pharmaceutical Conference, 32 pages; a General Report from the editor giving (*a*) a description of the work already accomplished; (*b*) an outline of the contents of the foregoing documents; (*c*) an estimate of the amount of work to be done and an estimate of the date on which the first proof of the whole Pharmacopœia might be expected to be ready, the estimated date being four years from the commencement of the work. (Minutes of Council, vol. xxxii., p. 90; also the Minutes of the Meetings of the Pharmacopœia Committee of May 31st, June 3rd, and June 5th, 1895.)

To deal with this mass of material it was decided on June 5th, 1895, to call the members of the Pharmacopœia Committee together for three days towards the end of July and again in the following November prior to the autumn session of the Council. The Pharmaceutical Society's Committee was at the same time requested to be good enough to give the Council the benefit of its advice on the pharmaceutical questions raised in the summaries of the suggestions by the British, Indian, and colonial authorities and generally on the preparations in the Pharmacopœia, copies of the summaries accompanying the request as well as copies of the nine annual reports, bound together, with a general index. The editor was instructed to place his services at the disposal of the Pharmaceutical Committee. On June 5th, also, a secretary to the Pharmacopœia Committee of the Medical Council and at the same time referees in chemistry, in botany, and in pharmacology and therapeutics were appointed.

A year and a half had now been occupied in getting together from all parts of the empire the material necessary for the production of the fourth British Pharmacopœia. The next two years were fully occupied with the elaboration of the respective ten sections of the book and then nearly one year was required for (*a*) the scrutiny by the Council of the reunited sections; (*b*) the preparation of eleven appendices; (*c*) the harmonisation of text, appendices, prefatory pages, and index; (*d*) the preparation of a few scores of copies of the Pharmacopœia for a month's inspection by pharmacists and for notice by the journals of medicine and pharmacy; and (*e*) for seeing an edition of 20,000 copies through the press. It may here be stated that every proof of each of the ten "sections" was submitted four times at least to the Council's committee and four times to the Pharmaceutical Committee. Thus, the editor having prepared a proof of a given section, it was submitted to the committees; the first time for general examination and for any additional adaptations of general principles, the second for revision, the third for provisional acceptance, the fourth for confirmed acceptance; each time the corrections were incorporated in a single proof, which was reprinted and distributed to the members of the two committees. For three of the sections five different proofs were necessary, for one of the sections six proofs, and for the first section seven proofs. The following statement shows the classification of the sections, the number of separate proofs examined, and the percentage proportion of the Pharmacopœia occupied by each of the respective sections.

1. Alcohol, spirits, tinctures. Seven proofs. 7·4 per cent. of the pages of the book.
2. Materia medica. Four proofs. 13·3 per cent.
3. Waters, decoctions, infusions, mixtures, wines. Five proofs. 3·3 per cent.
4. Confections, mucilages, oxymels, sugars and syrups, tablets, lozenges. Five proofs. 3·5 per cent.
5. Chemical substances, in text and appendices. Five proofs. 28·4 per cent.
6. Fats, glycerins, liniments, oils, ointments, plasters, resins, suppositories. Four proofs. 9·4 per cent.
7. Extracts, pills, powders, juices. Four proofs. 7 per cent.
8. Vinegars, hypodermic injections, discs, solutions, lotions. Four proofs. 6 per cent.
9. Preface and prefatory pages. Four proofs. 5·7 per cent.
10. Index. Three proofs. 16 per cent.

The Pharmacopœia Committee of the Medical Council met on thirty-five days; the Pharmaceutical Society's Committee also met on thirty-five days; every sitting of a committee occupied an average of four hours. The editor attended each of the seventy meetings to contribute his editorial services and as far as possible to keep the two committees in communication with each other. When the material of the eight sections of the text had been re-arranged in alphabetical order the whole was revised, and the appendices, prefatory pages, and index were duly added. There were four revisions of the completed book before a proof of the whole was presented by the Medical Council's Pharmacopœia Committee to the Executive Committee on Feb. 21st, 1898. The type of the book was set up for the ultimate octavo-page volume, but the proofs were printed on a quarto page, and on one side only, thus allowing ample margins and blank pages for comments. Every proof was marked "Private and Confidential."

On assembling for three days in July, 1895, the Pharmacopœia Committee of the Medical Council proceeded to deal with the material and with the subjects described in the foregoing paragraphs. Several matters of detail having been disposed of, the committee considered a long preliminary report from the Pharmaceutical Society's Committee on the many pharmaceutical questions which had been raised by the medical authorities of Great Britain. The second important subject was only provisionally dealt with; it was that of the 95 suggested "additions" to the Pharmacopœia. The consideration of the 410 suggested "omissions" was commenced on the third day, and of 175 substances it was decided to retain 78 and postpone decision respecting 24. On re-assembling for two days in November, 1895, the committee,

after dealing with many matters of detail, completed the consideration of the remaining 235 "omissions" suggested by the medical authorities. As a result the "omissions" recommended by the committee amounted to 188, the "additions" to 80, while 11 articles were transferred from the text to an appendix. The official articles in the text of 1885 and the additions of 1890 amounted to 943. Deducting the 11 transferred articles, the previous Pharmacopœia contained 932 articles, the present 829. The prefatory pages of the present Pharmacopœia may be consulted for further results of these methods of dealing with the subject of additions to and omissions from official remedies prior to 1898, but allowing for any slightly altered substances which appear under new names and for any altered substances which still retain old names, there is a reduction of at least 10 per cent. in the very large number of official remedies at the disposal of prescribers prior to 1898. The application of similar methods in future may be expected to result in the gradual elimination of other less trustworthy medicinal articles and the possible inclusion of newer remedies.

The editor's proofs were in the first instance placed before the Pharmacopœia Committee of the Medical Council and then were submitted to the Pharmacopœia Committee of the Pharmaceutical Society for general consideration and suggestions, while special difficulties were reserved for the referees. The President of the Medical Council in his address on June 2nd, 1896, stated that "the Pharmaceutical Society's Pharmacopœia Committee has been engaged more or less continuously in replying to the many questions of the Pharmacopœia Committee of the Council and has already sent in three reports." A fourth report, dated Feb. 5th, 1897, was subsequently received. Moreover, the results of the deliberations of the Pharmaceutical Committee and of pharmaceutical processes carried out by its members were noted by the editor on the margins of his proofs and duly conveyed to the Medical Council's Committee, the deliberations of the latter in all matters pertaining to pharmacy being similarly conveyed to the Pharmaceutical Committee in accordance with the understanding between the two committees. The work of the Pharmacopœia Committee of the Medical Council during 1896 and 1897 included the consideration of reports on doses by a sub-committee, reports from the eight referees, reports from the secretary and the editor respecting the index to the Pharmacopœia, the examination of some hundreds of samples of tinctures, spirits, concentrated solutions, ointments, and other substances prepared by the editor; reports from the editor on the strengths of certain dilutions of alcohol respecting which he had sought the assistance of officers of the Excise, on weights and measures in which he had unofficially sought the help of the Warden of the Standards, on the descriptions of the processes by which chemical substances are prepared in which he had been assisted by manufacturing chemists, a report on chemical nomenclature appropriate to the Pharmacopœia, and a report on a practical method of introducing metric weights and measures into the text of the Pharmacopœia. But the chief and most laborious duty of the committee was the detailed consideration and correction of the proofs of the ten sections of the Pharmacopœia and of four proofs of the whole Pharmacopœia. Not only were the proofs considered at the meetings, but the members of the committees both of the Medical Council and of the Pharmaceutical Society gave much attention to them in the intervals of the meetings and frequently corresponded with the editor respecting them. Completed copies of the volume were submitted to the members of the Medical Council, and their corrections having been inserted the final revised proof was by the authority of the Council put into the hands of the Executive Committee for publication.

To minimise the inconvenience to medical practitioners and pharmacists inevitably attending the publication of an altered and amended Pharmacopœia the Executive Committee, on the recommendation of the Pharmacopœia Committee, gave to all persons concerned access to copies of the final proofs in London, Edinburgh, and Dublin, and placed copies of the proofs at the disposal of the editors of the chief British journals of medicine and pharmacy during the period occupied in printing, binding, and preparing for sale a very large edition of the book. The plan has been so far satisfactory that not only during a whole month did a large number of persons attend at the chief office and branch offices and examine the copies, but the journals gave full and in some cases most minute and carefully compiled descriptions of all omissions, additions, and alterations as between the issues of 1885 and 1898.

All important documents relating to the production of the British Pharmacopœia of 1898, including correspondence and all proofs annotated by compilers, have been arranged and preserved for any future reference that may be necessary.

In submitting the motion Mr. CARTER said he hoped that in future the chairmanship of this Pharmacopœia Committee would be filled by Dr. Leech. The appendix to the report was intended to be a history of the steps and methods in which the new edition of the British Pharmacopœia had been compiled and would be a valuable piece of historical information.

Dr. LEECH congratulated the Council on the completion of the work. Their late President, Sir Richard Quain, had been most anxious that the new edition of the book should be completed during his life and that his name should be associated with it and he (Dr. Leech) thought the Council would be glad that Sir Richard Quain's wishes were realised. The Council should express their obligation to other workers on the book. To the referees they were much indebted for criticisms and suggestions. In the committee of the Pharmaceutical Society they had a large number of the ablest pharmacists in this or any other country who had paid the greatest attention to the subjects remitted to them, with the result that they had more correct descriptions of doses, &c., than ever previously published. Then the Council were indebted to the nineteen corporate bodies which sent reports and very greatly indebted to Dr. Attfield for his editorship and excellency of organisation in the preparation of the book.

The PRESIDENT proposed:—

That the best thanks of the Council be given to the Pharmacopœia Committee for the laborious duties which they have discharged during the last five years and which have resulted in the production of a work which they have every reason to believe will be satisfactory to the profession.

This proposal was unanimously carried, as was also a second motion tendering thanks to the committee of the Pharmaceutical Society; to the referees in chemistry, botany, and pharmacology; to Dr. Tirard, the secretary; and to Dr. Attfield, the editor.

A Special Case.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, it was agreed, on the recommendation of the English Branch Council, to register the name of Dr. Robert Arnold Barker, Lic. Soc. Apoth. Lond. 1861, M.D. Univ. St. And. 1862. The mover explained that the case was on all fours with others dealt with in previous sessions.

Students' Registration.

On the motion of Sir DYCE DUCKWORTH, seconded by Dr. MACALISTER, a six-page report by the Students' Registration Committee was adopted.

Unqualified Assistants.

Mr. TEALE, on behalf of the committee appointed on the previous Thursday to consider certain petitions and communications relating to the Council's new regulations respecting the employment of unqualified assistants, presented a report. He thought it was to be regretted that a subject which had attracted so much attention should have been reached only on the last day of the session, and owing to the hour of the day which had been arrived at he was compelled to speak under great pressure for want of time, and he was consequently afraid he would hardly do justice to the subject matter in hand. When the question of the employment of unqualified assistants was before the Council at their meeting in November last he had tried to get the Council to see that they were making a new departure. He had failed to convince them of that and he maintained still that their resolutions formed an entirely new departure. Certainly it was foreseen that their action must come and he was not saying that the Council were not right in doing what they did, but what he contended was that in introducing such a change they ought to have given sufficiency of notice to all who might be affected by it. It had been his view that it would be reasonable notice if it was decided that the Council's resolutions should not take effect until 1900. He, however, had been overruled on this point also, and the insufficient appreciation accorded to his position on the matter was made clear, he thought, in what had resulted. Many members of the Council had had it brought to their notice that the resolutions had inflicted very great hardships on unqualified assistants and very great inconvenience and some hardships upon medical men who had been using unqualified assistants. A sort of panic had been created among the latter, mainly, however, because they had not quite understood the Council's meaning. Anxious not to do wrong they had read into the Council's resolutions more severe requirements than the Council intended. He did not suppose the Council would now go into a more minute explanation of what was meant and the committee on whose behalf he now spoke did not recommend that they should do so. But in carrying out the new rule he hoped, if the Council did not see their way to go back to his proposal that the resolutions should remain in abeyance until 1900, that they at least would adopt the view of the committee. On examining the documents referred to them the committee had found that the chief questions raised therein might fairly be classified under the following heads:—

1. Whether the Council can consistently with the law authorise the examining bodies to hold special examinations for a particular class of persons who have lately been employed as unqualified assistants.
2. Whether the Council is prepared to suspend the operation of the resolution adopted on Nov. 24th, 1897, in the interest of certain practitioners who state that they are at present unable to obtain qualified assistance in their practice.
3. Whether the Council can take any steps for the reinstatement of certain unqualified assistants who have been dismissed by their employers since the issue of the Council's notice.
4. Whether the Council should issue any detailed definitions or explanations as to the extent to which unqualified persons may be "legitimately employed" by registered practitioners.

The committee, Mr. Teale went on to show, had carefully considered these questions and they recommended that the

answers to them by the Council, who should not receive deputations on the subject, should be:—

1. The Council has no power under the Medical Acts to request or to authorise any of the licensing bodies to institute special examinations for a registrable licence other than the "Qualifying Examinations" in Medicine, Surgery, and Midwifery defined by the Act of 1886.

2. There appears to be evidence that at the present moment certain practitioners do find difficulty in obtaining the services of legally qualified assistants. Junior practitioners are no doubt unwilling in many cases to accept the inferior and ill-paid positions which have hitherto been occupied by unqualified men. But it is reasonable to expect that before long improvement in the terms and conditions offered by principals and the natural operation of the economic law of supply and demand will remove the difficulty complained of. The Council cannot regard such a temporary inconvenience as a ground for suspending the operation of a resolution deliberately adopted by it with a view to the repression of fraudulent and dangerous practices.

3. It is not within the province of the Council to take any steps in the direction suggested.

4. The terms of the notice issued by the Council convey with sufficient clearness the limitations which it was intended to place upon the employment in connexion with medical practice of unqualified persons by registered practitioners. The registered practitioner will be liable to proceedings before the Council: (1) if he knowingly allows "such unqualified persons to attend or treat patients in respect of matters requiring professional discretion or skill"; (2) if he thus allows "such a substitution of the services of an unqualified person" for his own, this substitution being "in its nature fraudulent and dangerous to the public health"; (3) if under cover of his own qualifications he knowingly does anything to enable "an unqualified or unregistered person to attend or treat any patient, to procure or issue any medical certificate or certificate of death, or otherwise to engage in medical practice, as if the said person were duly qualified and registered."

The employment of unqualified "dressers, midwives, dispensers, and surgery attendants" can be "legitimate" only (1) if it does not come under one of the foregoing heads, and (2) when it is carried out "under the immediate personal supervision of registered medical practitioners." The Council do not think it necessary or expedient to issue more precise definitions or to lay down regulations intended to meet all the particular cases which may arise. As in all other instances the Council must deal with each case on its merits. Whenever a practitioner is alleged to be making improper use of unqualified assistance the Council will have to be satisfied that the allegation is fully substantiated.

These recommendations were moved one by one by Mr. TEALE and seconded chiefly by Dr. BRUCE. In seconding the last of the four Dr. MACALISTER remarked that if the Council's position was made clearer by it he should be very glad. The sub-headings and definitions had been taken from the notice already issued and in this "No. 4" there was nothing fresh in principle.

The new form for the notice was supported by Mr. BROWN and Mr. HORSLEY and all the four recommendations were unanimously adopted.

It was stated by Dr. MACALISTER, in reply to the PRESIDENT, that these answers would be sent to the persons who had communicated, or might communicate, with the Council on the subject of the employment of unqualified assistants.

Council Documents.

Dr. MACALISTER, seconded by Mr. BRYANT, moved:—

That in pursuance of the Council's resolution of May 25th in reference to the inspection of documents, the following chapter be added to the Standing Orders.

XXIII.—INSPECTION OF DOCUMENTS.

1. Members of the Council who desire access to unpublished documents (other than documents relating to Penal Cases) which are the property of the Council shall be required to obtain leave for inspection thereof either from (1) the Council, or (2) the Executive Committee; or (3) if neither body be in session or about to be in session from the President.

2. The application for leave shall be in writing and shall specify so far as is possible the nature of the documents to which access is desired and also the purpose for which the inspection is to be made.

3. Leave to inspect documents relating to penal cases shall not be given except by the Council itself.

4. Documents to which access is permitted under this Standing Order shall not be removed from the offices of the General Council.

5. All information derived from the inspection of the Council's documents under this Standing Order shall be regarded as strictly confidential.

Dr. MACALISTER said that he had added paragraph 4.

Mr. HORSLEY rose to resist this motion because, he said, he was convinced from what he had heard that members of the Council had agreed to the resolution without a full knowledge of the facts. He did not intend to repeat the points raised when Dr. Glover's proposal was under consideration. He had abstained absolutely from taking part in the discussion and division on the proposal, but now that it was proposed to make the resolution into a Standing Order the situation had become too serious to permit it to go forward without at least a protest. Mr. Horsley was proceeding to contend that it was within the rights of members at all times to see the documents belonging to the Council, and that the action of the President in shutting him out from documents, and of the Council under this motion, was *ultra vires*, when

The PRESIDENT informed him that he could not revive the old discussion of Tuesday, May 24th.

Mr. HORSLEY contended that he had a right to speak.

Dr. HERON WATSON pointed out to him that the President had ruled him out of order.

Mr. HORSLEY did not understand that.

The PRESIDENT said that he had ruled Mr. Horsley out of order.

Dr. HERON WATSON moved the previous question.

Dr. MACALISTER: That is an unfortunate proposal, for if it be carried the Council must proceed to the next business on the paper.

On a division the previous question was rejected by 9 votes to 6, and Dr. MACALISTER'S motion was passed by 12 votes to 3.

The PRESIDENT said that as the motion had now become a Standing Order he would make it a rule that the answer to all applications made to him should be given through the Registrar, so that there might be a copy of his answer in the office.

Mr. CARTER suggested that it would be in form if applications to the President were also made through the Registrar.

Committees.

The Council proceeded to the appointment of standing committees. The Pharmacopœia Committee was re-appointed, with Dr. Leech as chairman. No change was made in the Finance Committee. Mr. Tomes was appointed a member of the Dental Committee and also of the Dental Education and Examination Committee. Sir William Thomson was put upon the Students' Registration Committee in the place of Dr. William Moore. The other committees were composed as follows:—

EXAMINATION COMMITTEE.—Sir Dyce Duckworth, Mr. Bryant, Mr. Teale, Dr. Heron Watson, Dr. Pettigrew, Dr. McVail, Sir Philip C. Smyly, Sir William Thomson, and Sir Christopher Nixon.

EDUCATION COMMITTEE.—Dr. Mac Alister, Dr. Glover, Dr. Church, Sir John Batty Tuke, Sir William Gairdner, Dr. Reid, Dr. Bennett, Sir William Thomson, and Dr. Little.

PUBLIC HEALTH COMMITTEE.—Sir Richard T. Thorne, Mr. Teale, Dr. Church, Dr. Bruce, Dr. McVail, Dr. Cameron, Mr. Tichborne, Dr. Bennett, and Sir P. C. Smyly.

The Registrar's Salary.

It was agreed to increase the salary of the Registrar (Mr. H. E. Allan) from £500 to £600. Mr. Miller, the former Registrar, had, it was stated, a salary of £700 per annum.

This having concluded the business of the session, the Council adjourned till November next.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the Fellows of the College on Monday, June 6th, the following were elected for the ensuing year: President: Robert Lafayette Swan, F.R.C.S. Vice-President: Thomas Myles, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: Archibald H. Jacob, F.R.C.S.; Edward Hallaran Bennett, F.R.C.S.; Henry Gray Croly, F.R.C.S.; Sir Philip Crampton Smyly, F.R.C.S.; Sir William Stokes; Henry Rosborough Swanzy, F.R.C.S.; William Ireland Wheeler, F.R.C.S.; Sir William Thomson, F.R.C.S.; Austin Meldon, D.L., F.R.C.S.; Sir Charles A. Cameron, F.R.C.S.; L. Hepenstal Ormsby, F.R.C.S.; Richard D. Purefoy, F.R.C.S.; John J. Cranny, F.R.C.S.; Henry Gregg Sherlock, F.R.C.S.; Henry Fitzgibbon, F.R.C.S.; Arthur Henry Benson, F.R.C.S.; Francis T. Heuston, F.R.C.S.; John Lentaigne, F.R.C.S.; and Arthur Chance, F.R.C.S.

UNIVERSITY OF CAMBRIDGE.—The following have been appointed Examiners for the M.B. and B.C. final examinations:—*Medicine:* Dr. Humphry, Dr. Foxwell, Dr. Martin, and Dr. Mitchell Bruce. *Midwifery:* Dr. Cullingworth and Dr. Freeland Barbour. *Surgery:* Mr. Pitts, Mr. Bennett, Mr. Watson Cheyne, and Mr. Golding-Bird. Honorary degrees are to be conferred in connexion with the approaching Congress of Zoology and of Physiology on the following distinguished men of science:—Dr. A. Dohrn, Professor Milne Edwards, Professor Haeckel, Professor Hubrecht, and Professor Kowalevsky, in Zoology; Professor Bowditch, Professor Golgi, Professor Kronecker, Professor Kühne, and Professor Marey, in Physiology.

FOREIGN UNIVERSITY INTELLIGENCE. — *Bonn:* Dr. Albert Peters, Dr. Adolf Schmidt, and Dr. Leonhard Jores, *privat-docenten*, have been granted the title of Professor. Dr. Robert Rieder, *privat-docent* of Surgery, has been appointed Extraordinary Professor.—*Breslau:* Dr. Henke of Tubingen has been recognised as *privat-docent* of Pathological Anatomy.—*Cracow:* Dr. Klecki has been appointed Extraordinary Professor of General and Experimental Pathology.—*Halle:* Dr. Kurt Heilbronner has been recognised as *privat-docent* of Psychiatry.—*Munich:* Dr. R. Hecker has been recognised as *privat-docent* of Pædiatry.—*Rio de Janeiro*: Dr. Joaquim Xavier Pereira da Cunha has been appointed Professor of Clinical Ophthalmology.—*New York (College of Physicians and Surgeons)*: Dr. Edwin B. Cragin has been appointed Lecturer in Midwifery.—*St. Petersburg (Military Medico-Chirurgical Academy)*: Dr. Kirikoff has been recognised as *privat-docent* of Internal Medicine and Dr. Mikhnoff as *privat-docent* of Midwifery and Gynæcology.—*Budapest:* Dr. Ludwig Makara has been recognised as *privat-docent* in Surgery, Dr. Géza Krepuska as *privat-docent* in Otology, Dr. Desider von Kuthy as *privat-docent* in Hydrotherapy, and Dr. Ludwig Nékám as *privat-docent* in Dermatology.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on April 5th.—The President (Mr. Berry) read his opening address on the Sanitary Progress in Wigan during the last Thirty Years.—In moving a vote of thanks to the President for his address Mr. William Mitchell Roocroft said that it was advisable for each sanitary authority to have a bacteriological assistant employed in its public health department. This met with the approval of the members present. The following cases were exhibited by members of the staff of the infirmary: (1) Fracture of the Patella; (2) Double Inguinal Hernia; Radical Cure; (3) Lumbar Colotomy for Cancer of the Rectum; (4) Compound Fracture; Excision of the Malleoli; (5) Severe Lacerated Wound of the Arm; (6) Resection of the Inferior Maxilla; and (7) Talipes, Equino-varus.—A meeting was also held on June 2nd, Mr. Berry (President) being in the chair, and there was a good attendance of members.—Dr. Charles Macalister, honorary physician to the Stanley Hospital, Liverpool, gave an address on Osteo-arthritis, illustrated by lantern demonstrations of the disease and of radiographs taken from interesting cases, which came out well on the screen.—The lecture was much appreciated and a discussion followed, Dr. R. Prosser White, Dr. Blair, and Dr. Benson taking part in it. A hearty vote of thanks was accorded to Dr. Macalister, on the proposition of Mr. Graham, seconded by Mr. Brady.

PRESENTATIONS TO MEDICAL MEN.—Mr. R. Buttercase, M.B. Glasg., was the recipient, on May 14th, from the members of the ambulance class at Benton-square, Newcastle-on-Tyne, of a marble timepiece as a mark of esteem.—Mr. Ian G. Sibbald, M.B. Edin., of the Northern Infirmary, Inverness, who has been appointed to the Stirling Hospital, was presented on May 12th with a testimonial from the matron and nursing staff of the infirmary, which took the form of a silver curling-stone and requisites in silver and two silver ash trays.—On May 17th, at the Victoria Hall, Auchtermuchty, in the presence of a large assembly of friends and residents of the district, Mr. W. F. MacDonald, M.B. Edin., was presented, on the occasion of his leaving Auchtermuchty after thirteen years' professional service there with a silver bowl on an ebony stand, bearing a suitable inscription, and a purse of sovereigns, as tokens of goodwill and regard.—Mr. William Edwin Williams, F.R.C.S. Edin., J.P., the medical officer of health of Abertillery (Mon.), has been presented with a dessert service and a set of dessert knives and forks on the occasion of his marriage.—At a social meeting on May 26th at Reading Mr. David T. Key, M.R.C.S. Eng., of that town, who has been the honorary instructor for the past four years of the local branch of the St. John Ambulance Brigade, was presented, on his leaving Reading, with a gilt mounted inkstand and a gold "Swan" fountain pen as tokens of appreciation of his gratuitous services.—On May 31st Mr. William Christie, M.B., C.M. Aberd., of Woodside, was the recipient from friends in the district of an illuminated address and several volumes of medical works on his leaving that locality.—On the same day Mr. George M. Robertson, M.B., F.R.C.P. Edin., medical superintendent of the District Asylum, Murthly, Perth, was presented by the staff, on the occasion of his marriage, with a revolving writing-desk and blotting-pad.—At the recent distribution of certificates in connexion with the St. Buryan (Cornwall) ladies' branch of the St. John ambulance class, Mr. Ashley T. Jago, L.R.C.P. Lond., M.R.C.S. Eng., was presented with an inkstand suitably inscribed in appreciation of his services as honorary lecturer.—The medallions and certificates awarded to members of the St. John ambulance classes held in connexion with the Great Western Railway at Plymouth were distributed on June 3rd by Mrs. Adye, wife of the divisional superintendent. After the distribution the secretary (Mr. Evans), on behalf of the class, presented Mr. W. A. Buchan, M.B., C.M. Edin., with a silver-mounted walking-stick in appreciation of his services as honorary lecturer.

NEWTON ABBOT COTTAGE HOSPITAL.—Mr. W. S. Penley recently gave a dramatic performance at Newton Abbot in aid of the funds of the cottage hospital, with the result that the institution benefited to the amount of £43.

MRS. JACKSON desires to express through THE LANCET her very sincere thanks to all those who, by their interest and votes, secured her son's election to the Royal Medical Benevolent College on the 27th ult.

ROYAL MEDICAL BENEVOLENT COLLEGE.—The following are the names of the successful candidates at the recent election for pensionerships and foundation scholarships:—Pensioner: Henry Morrison, 3539 votes. Foundation Scholars: John B. Rankin, 8195 votes; Horace D. Sawtell, 8172 votes; Vyvyan St. A. Phillips, 7860 votes; Clarence Francis Quin, 7312 votes; Frank H. Wilson, 6555 votes; Lancelot R. Jackson, 6286 votes; Wm. Arnold Stables, 4670 votes; and Wm. R. Ward, 4600 votes.

THE LATE DR. H. MARSHALL.—A meeting at which the Dean of Bristol presided was held on May 29th for the purpose of initiating a movement for perpetuating the memory of the late Dr. Henry Marshall, and on the motion of the Roman Catholic Bishop of Clifton it was unanimously resolved that the memorial should commemorate Dr. Marshall's connexion with the Bristol General Hospital. A committee was appointed to consider the form which the memorial should take.

THE MARY WARDELL CONVALESCENT HOME FOR SCARLET FEVER, STANMORE.—With the exception of the Metropolitan Asylums Board Hospitals this is the only home which receives persons recovering from scarlet fever. It is to be hoped, therefore, that the efforts which are being made to raise a sum of £2000 in order to clear off the debt and to provide for the thorough cleansing and repairing of the home will meet with success. Contributions may be sent to Messrs. Barclay and Co., 1, Pall-mall East, S.W., and to Miss Mary Wardell, hon. secretary, Stanmore, Middlesex.

THE LATE DR. WRIGHT OF WAKEFIELD.—The celebration of a golden wedding is an event so comparatively unusual that it is due to the memory of Dr. T. G. Wright of Wakefield, whose obituary we published in THE LANCET of June 4th, to mention that he and Mrs. Wakefield were many years ago the principal figures on such an auspicious occasion. Dr. Wright commenced practice in Wakefield in 1833 and in 1835 he married a Miss Hubbard of Leeds, by whom he had thirteen children. Mrs. Wright died in October, 1890, in her seventy-eighth year. When the time for the golden wedding arrived Dr. Wright's medical brethren entertained him at dinner and presented him with a silver kettle. He was also some years later the recipient of a testimonial consisting of nine hundred guineas.

LITERARY INTELLIGENCE. — Among the new books shortly to be issued by Messrs. J. & A. Churchill, the following may be mentioned:—A work on Ovariotomy and Abdominal Surgery, by Mr. Harrison Cripps, the scope of which may be gathered from the following extract from the preface: "The chief object of this work is to record only such operative details as I have found valuable in my own experience, for without the book running into a larger scope than was intended it is impossible to describe in detail the various methods adopted by other operators"; a Treatise on the Mental Affections of Children — Idiocy, Imbecility, and Insanity — by Dr. W. W. Ireland; a second edition of the Attendant's Companion, a manual of

the duties of attendants in lunatic asylums, by Dr. Charles Mercier; a second edition of Lectures on Medicine to Nurses, by Dr. Herbert Cuff, which will include two new lectures, namely on Dropsy, and on Diseases of Children; and the ninth edition of Valentin's Practical Chemistry, Qualitative and Quantitative Analysis, by Dr. Hodgkinson, Professor of Chemistry in the Royal Academy, Woolwich.

ROYAL MICROSCOPICAL SOCIETY.—There will be an exhibition of sponges by Mr. B. W. Priest at the next meeting of the society on Wednesday evening, June 15th, at 7.30, at 20, Hanover-square, W.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Plague in India.

IN the House of Commons on Tuesday, June 7th, Lord George Hamilton, Secretary of State for India, made a statement with regard to the general condition and finances of the Indian empire. As to the plague, he said we are now at a time of the year when this terrible disease is least destructive in its ravages and when it is most easily kept under control; but while saying this there was no use disguising the fact that in spite of the vigilance and exertions of the local authorities the plague had made great ravages during the past six months. Every effort had been made by the Government to prevent its spread and no pains had been spared to reassure the people as to the measures to be adopted for its suppression and to secure if possible their coöperation. In many districts, he said, they have heartily coöperated and with successful results.

Corporal Punishment in Prisons.

During the week this question has been considered in two connexions. On Tuesday the House had before it a private Member's Bill in which it was proposed to prohibit personal correction altogether, but the House declined by 112 votes to 38 to give it a second reading. In the Grand Committee on Law the Home Secretary brought up a clause for insertion in the Prisons Bill of the Government providing that the prison rules issued by the Home Office shall not authorise the infliction of corporal punishment except in case of mutiny or incitement to mutiny or gross personal violence to an officer or servant of the prison and after there has been a formal inquiry on oath before not less than three members of the Board of Visitors or Visiting Committee of the prison. Several members of the committee, including Mr. Asquith, the late Home Secretary, expressed themselves in favour of a judicial tribunal of some sort and an open inquiry, and Sir M. White Ridley undertook before the report stage of the Bill to see whether something cannot be done in this direction.

HOUSE OF COMMONS.

MONDAY, JUNE 6TH.

Chest Measurement of Recruits.

Sir Charles Dilke asked the Under Secretary of State for War why there had been omitted from the annual reports of the Army Medical Department for 1895 and 1896 the average chest measurement of the total number of recruits approved in the year, always given in previous years, and whether the missing statement for the two years could be supplied.—Mr. Brodrick replied: The returns hitherto rendered showed chest measurements exceeding 35 in. in one group as measurements above 35 in. without giving details, and in calculating the average these have been taken as being all 35 in. This does not represent the true average and an alteration has been made so as to approximate to it more nearly. The report for 1897 will show an average calculated in this manner. The averages for 1895 and 1896, worked out on a basis similar to previous calculations, were in each year 33·7 in., as compared with 33·6 in. in 1893 and 1894.

TUESDAY, JUNE 7TH.

Phosphorus Poisoning in the Match Trade.

Mr. Tennant asked the Home Secretary whether he was aware that in France the Government issue of lucifer matches to strike everywhere was marked "sans phosphore"; and whether, in view of the serious disclosures revealed by the recent prosecution of Messrs. Bryant and May and the statement by that firm that it was only for the manufacture of the matches which strike everywhere that yellow phosphorus was required, he would confer with the French Government with a view to prohibiting the use of yellow phosphorus.—Mr. Provand, Mr. Holland, and Mr. Steadman asked questions on the same subject. — Mr. Charles McArthur asked the right hon. gentleman whether he was aware that the danger of phosphorus poisoning might be obviated by modern machinery capable of making, drying, and boxing the matches without close proximity to the worker, and whether, before taking the drastic course now suggested, he would make inquiries as to the system adopted in other match factories than those of Bryant and May.—Sir M. White Ridley said: In answer to the last question I have to say that I am, through the inspector of factories, aware of the machinery and appliances to which the hon. Member alludes, and so far I have had nothing but satisfactory accounts of them. But it is too early to give any conclusive opinion about them. I have already stated that I am making inquiries as to the use of yellow phosphorus in France and other foreign countries. The suggestion of a conference seems to me to be somewhat premature at the present stage. I may also say, in reply to the questions of the hon. Members for Glasgow and Stepney on the same subject, that the prosecution they refer to was ordered by me and is the result of inquiries made by the factory inspectors at my request. I am now considering what further steps I shall take in the matter, particularly in the direction of strengthening the special rules and securing additional medical inspection; but though I have power to regulate I have none to prohibit the use of yellow phosphorus. I should like it to be clearly understood that the medical man who failed so seriously in his duty in this case was the works doctor and not the certifying surgeon. The latter, who, I may say emphatically, by the nature of his appointment, is a perfectly independent medical man, was in no way concerned in this case and had no power to intervene. The answer to the remaining question is that the lady inspectors have their headquarters in London and their services are available in the fullest manner for the inspection of the match factories in the London district.—Mr. John Burns asked whether the Home Secretary would lay the conduct of the works doctor before the Royal College of Surgeons.—Sir M. White Ridley said he must ask for notice of this question and assured the House that the whole subject was receiving his most anxious consideration.—Mr. Burns intimated that he would repeat his question on another occasion.

Lead Poisoning in the Potteries.

Mr. Hedderwick asked the Home Secretary whether, having regard to the large number of women and children employed and subjected to the risk of slow poisoning by lead in English potteries, he would consent to appoint a lady inspector for the purpose of protecting as far as may be the interests of these workers in their unhealthy and dangerous occupation, and whether he could see his way to prohibit the use of lead in glazing processes in potteries altogether or to bring such processes within the scope and operation of the Workmen's Compensation Act.—Sir M. White Ridley replied: The hon. Member is evidently unaware that the existing staff of lady inspectors has already done most useful work in the Potteries district and will continue to be available in future as often and for as long as may be necessary. I am most sensible of the value of inspection by women in this industry and shall not hesitate to increase the staff if I find it necessary, though the most urgent need in the dangerous trades appears to me to be the appointment of a medical inspector, a matter which I am carefully considering. I am in hope that the use of dangerous glazes will diminish, and, as the hon. Member must remember, I have appointed experts to inquire into the subject, and am making inquiries abroad. I have no power, however, to prohibit the use of lead entirely. The extension of the Workmen's Compensation Act which the hon. Member suggests would require legislation which I am not prepared to propose; but I trust that the new special rules will materially diminish the dangers to which the workpeople are exposed.—Mr. Tennant asked whether the House was to understand that he had definitely decided to increase the number of lady inspectors.—Sir M. White Ridley replied: No, sir, I have not said that, but the whole question of the increase of the staff has been under consideration for some months and a good deal depends on what is done in a medical direction.

WEDNESDAY, JUNE 8TH.

Pharmacy Acts Amendment Bill.

This Bill was passed through the committee stage and read a third time. The object of the Bill is to alter in several respects the constitution of the Pharmaceutical Society—for instance, to make persons registered as apprentices or students eligible to become student associates of the society and to make those whose names appear on the register of chemists and druggists eligible to become members of the society. When the Bill was in committee several members, including Dr. Farquharson and Dr. Clark, took advantage of the opportunity to press upon the Government the necessity of introducing a Bill on the subject of the sale of poisons and Colonel Brookfield, speaking as the Member in charge of the Bill, said he would invite the Pharmaceutical Society to coöperate with the Government in any attempt they may make to further safeguard the sale of poisons in the interest of the public.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BURGES, R. E., M.D., M.Ch. Dubl., has been re-appointed Medical Officer of Health by the Hoole Urban District Council.

DEARDEN, C. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 2 Sanitary District of the Ecclesall Union, vice J. H. Wilson, resigned.

ELLIS, H. D. A., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the Ambleside Urban District Council.

FLINN, D. E, M.R.C.P., F.R.C.S. Irel., D.P.H., has been appointed a Medical Inspector by the Local Government Board for Ireland.

GREY, J. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Hollingbourn Union.

HIGGINSON, C. G., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Resident Medical Officer for the Workhouse by the Chorlton Board of Guardians, vice G. Ashton, resigned.

JACKSON, T. VINCENT, F.R.C.S. Edin., M.R.C.S., has been appointed Consulting Surgeon to the Orphan Asylum, Wolverhampton.

LEWIN, OCTAVIA M. S., M.B., B.S. Lond., has been appointed a Junior Resident Medical Officer for the Workhouse by the Chorlton Board of Guardians.

MARKS, H. G. K., M.D., L.R.C.S., L.K.Q.C.P. Irel., has been appointed a Medical Officer at Herberton, Queensland, vice L. G. A. MacDonnell.

MARTIN, JAMES, L.R.C.P., L.R.C.S., L.F.P.S. Glasg., has been appointed a Health Officer for Black Flag, Western Australia.

MATTHEWS, T., L.R.C.P., L.R.C.S. Edin., has been appointed a Government Medical Officer and Vaccinator for the districts of Shoalhaven, Nowra, and Terara, New South Wales, vice J. B. Brereton.

MCILROY, A. J., M.B., C.M. Edin., has been appointed a Public Vaccinator for Brunnerton, New Zealand.

MCKEE, J. C., L.R.C.P., L.R.C.S. Edin., has been appointed Officer of Health and Public Vaccinator for the Borough of Eaglehawk, Victoria, Australia, vice L. J. Thom.

MONTGOMERY, J. P., M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Rosedale, Toongabbie Riding, Victoria, Australia.

MORRIS, W., M.D. Erlang., has been appointed a Public Vaccinator for Little River, New Zealand.

MURRAY, G. L., M.B., M.Ch. Syd., has been appointed a Medical Officer for the Mount Morgan Hospital, Queensland.

MYERS, CHAS. J., M.R.C.S., has been appointed Medical Officer of Health by the Louth Rural District Council.

PIM, J., F.R.C.S., L.R.C.P. Irel., has been appointed a Medical Officer to the Royal Irish Constabulary of the Ballybrack and Cabinteely District, vice C. C. Mayne, resigned.

PLAYER, C. R., M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Melton, East Riding, Victoria, Australia, vice N. C. A. Vance, resigned.

REYNOLDS, FRANCIS MORTIMER, M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Ottery St. Mary Urban District Council.

ROUGHAN, J. A., M.B., B.S. Irel., has been appointed a Resident Medical Officer for the Williams District and a Public Vaccinator for the Urban, Suburban and Rural Districts of Williams, Western Australia.

SIMPSON, D., M.B., Ch.M. Glasg., has been appointed Officer of Health for the Shire of Fern Tree Gully, Victoria, Australia, vice W. J. Craig, resigned.

SMITH, E. C. T., M.B., B.S. Irel., L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Medical Officer for the Hospital, Mount Morgan, Queensland.

SPENCE, H., M.B., Ch.B. Melb., has been appointed, pro tem., Officer of Health for the City of Footscray, and for the Shire of Braybrook, Victoria, Australia, and also Acting Public Vaccinator for Footscray.

SPRAKELING, R. J., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Borough of Bootle.

TEARE, JOHN, M.B., B.S., Victoria Univ., Manchester, has been appointed a Public Vaccinator for the District of Wellington, New Zealand.

WILLIAMS, SAMUEL, M.D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Llanelly School Board.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CARDIFF INFIRMARY.—Assistant House Physician for six months. Board, washing, and apartments, and an honorarium of £10.

CLAYTON HOSPITAL, Wakefield.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, lodging and washing.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Resident Medical Officer for twelve months. Salary £60 per annum, with board, lodging, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per year, with board, apartments, and laundress.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—In-door Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, London.—Junior House Physician for six months. Board and lodging in the hospital provided.

HOSPITAL OF ST. FRANCIS, 145, New Kent-road, London.—Second Honorary Assistant Surgeon and Honorary Assistant Physician and two Clinical Assistants.

LINCOLN COUNTY HOSPITAL, Bank-street, Lincoln.—Assistant House Surgeon for six months. Honorarium £10, with board, residence, and washing.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer for the Gore Farm Convalescent Small-pox and Fever Hospital, Darenth, near Dartford, Kent, unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, and washing, subject to statutory deduction. Applications to the Clerk to the Board, Norfolk House, Norfolk-street, Strand, W.C.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House Physician for two years, unmarried. Salary £60 per annum, with board, lodging, and washing.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £100, with apartments, board, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Anæsthetist for twelve months.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board, residence, and washing.

RIPON DISPENSARY AND COTTAGE HOSPITAL, Ripon.—Resident House Surgeon and Dispenser, unmarried. Salary £50 first year and £70 second year, with board and lodging.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon.

ROYAL INFIRMARY, Sheffield.—Vacancy on the Honorary Surgical Staff.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE, London.—Assistant Demonstrator of Chemistry.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, London.—Resident Medical Officer. Salary 100 guineas per annum, with an annual increase of 10 guineas to a maximum of 120 guineas, with furnished apartments, attendance, coal, and light.

SCHOOL BOARD FOR LONDON, Victoria-embankment, W.C.—Medical Practitioners to give lectures in First Aid and Home Nursing to the pupils of the Evening Continuation Schools. Fee 3 guineas for a course of six lectures.

SHEFFIELD PUBLIC HOSPITAL FOR DISEASES OF THE EAR, THROAT, AND SKIN, Sheffield.—Honorary Physician.

SHEFFIELD ROYAL HOSPITAL—Honorary Ophthalmic Surgeon.

WEST RIDING ASYLUM, Wakefield.—Pathologist. Salary £150, increasing to £200.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon and to act as Surgical Registrar. Salary £100 a year, with board, lodging, and washing.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser for two years, unmarried. Salary £70 per annum, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to Mr. W. Draper, De Grey House, York.

Births, Marriages, and Deaths.

BIRTHS.

ANDREW.—On June 5th, at Hethersett, Hendon, the wife of F. W. Andrew, M.R.C.S., L.R.C.P., of a daughter.

BOYD.—On June 3rd, at Portishead, Somerset, the wife of George Boyd, M.R.C.S., L.R.C.P. Lond., of a son.

COOPER.—On June 7th, at Belmont, Lyme Regis, Dorset, the wife of H. J. Cooper, M.A., M.B. Cantab., of a daughter.

CUTFIELD.—On June 6th, at Merton House, Ross, Herefordshire, the wife of Arthur Cutfield, B.A., B.Sc., M.R.C.S., of a daughter.

DAVIS.—On June 7th, at Sunnydene, Sidcup, Kent, the wife of G. W. Davis, M.D. Durh., of a son.

EMMETT.—On June 3rd, at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

HAUGHTON.—On May 29th, at Truro, the wife of J. Welby Haughton, L.R.C.P., of a daughter.

JONES.—On June 5th, at Pen-y-bank, Clydach, Swansea, the wife of J. Jones, M.D., B.S. Lond., of a son.

OWEN.—On June 3rd, at St. Alban's Place, Blackburn, the wife of O. Trafford Owen, M.B. Edin., of a daughter.

MARRIAGES.

BATES—SPEAKMAN.—On June 2nd, at Faulkbourne, by the Rev. Stephen Penney, John Edwin Bates, M.B. Cantab., of Wimbledon, son of the late William Bates, M.D., F.R.C.S., of Manchester, to Marion, youngest daughter of the late Thomas Speakman of Faulkbourne-hill, Witham, Essex.

BELL—BELL.—On June 7th, at St. Mark's, Surbiton, Wm. Blair Bell, M.B. Lond., M.R.C.S., L.R.C.P., second son of Wm. Bell, of New Brighton, to Florence, second daughter of James Bell, of Surbiton.

CLARK—KERR.—On June 7th, at Nelson-terrace, Glasgow, Allan Aiken Clark, M.B., C.M., Sheffield, to Alexandra Tarbat (Lily), second daughter of the late James Kerr, Solicitor to the Caledonian Railway Company.

DRAKE—WARNER.—On June 7th, at St. Peter's, Eaton-square, Courtenay H. Drake, F.R.C.S., of Rathgar Cottage, Streatham, to Ellen Mary, daughter of William H. Warner of Buckingham Palace-gardens, S.W.

FOX—FOX.—On June 2nd, at the Friends' Meeting House, Plymouth, George R. Fox, F.R.C.S., of Beccles, Suffolk, to Constance M., youngest daughter of Francis B. Fox, Uplands, Tamerton Folliot, Devon.

FRITH—STYLES.—On June 2nd, at the Parish Church, Swanscombe, Kent, by the Rev. W. A. Frith, M.A. Oxon., rector of Welby, Lincs, father of the bridegroom, assisted by the Rev. F. Auriol Murray, M.A. Oxon., Vicar of St. Peter's, Rickmansworth, and the Rev. Hugh C. Frith, B.A. Cantab., Walter S. Frith, M.B. Cantab., of The Limes, Rickmansworth, to Caroline Elsie, daughter of the late George Gaviller Styles, of Knockhall, Greenhithe, Kent.

GARDINER—FELL.—On June 2nd, at Christ Church, Crouch-end, Douglas Clark Gardiner, M.B., C.M. Edin., Queen's-avenue, Muswell-hill, to Ada Mary Ann, eldest daughter of Robert Fell, of Coolhurst-road and Aldersgate-street, E.C.

GRANT-WILSON—JENKIN.—On June 2nd, at St. James's, Swansea, by the Rev. Canon Roberts, of Llandaff (uncle of the bride), assisted by the Rev. Chancellor Smith, Vicar of Swansea, and the Rev. F. Millar, Curate-in-charge, Charles Westbrooke Grant-Wilson, of Bromley, Kent, elder son of George Grant-Wilson, of Heathfield House, Streatham-common, Surrey, to Lilian Frances, only daughter of the late Rev. Albert Jenkin, of Harbridge, Hants, and Mrs. Jenkin of The Mirador, Swansea.

PHILLIPS—GALE.—On June 1st, at St. Barnabas Church, Clapham, Percy C. Phillips, M.R.C.S., L.R.C.P., of Vine House, Grantham, to Dida Gale, daughter of H. Gale, Esq., of Bridport.

DEATHS.

WELCH.—On May 25th, at Perak, Straits Settlements, John L. Welch, M.A., M.B. Edin., second son of the late Rev. John Welch, Jamaica.

YOUNG.—On June 4th, at Hounslow, Edward Young, M.D. (late of Salisbury), in his 78th year. No flowers by special request.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 9th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 3	30·00	W.	...	111	66	46	50	55	Fine
,, 4	29·99	WNW	...	94	64	51	53	57	Cloudy
,, 5	29·95	WSW	..	116	75	52	56	61	Fine
,, 6	29·79	S.	0·14	98	70	56	62	67	Fine
,, 7	30·02	WNW	..	106	74	55	56	61	Fine
,, 8	30·06	S.E.	0·01	80	69	56	57	64	Cloudy
,, 9	30·06	N.E.	...	81	65	59	59	63	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (18th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (14th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. R. Bradford and Dr. H. B. Shaw: Five Cases of Acute Leukæmia.—Dr. A. P. Luff: The Influence on Gout of the Mineral Constituents of Various Vegetables. Dr. N. Moore will show a Case of Displaced and Moveable Kidney.

WEDNESDAY (15th).—NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Monthly Demonstration of Cases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (13th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Whistler: Catarrhal Conditions of the Nose and Throat.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. Wyatt Wingrave: The Origin and Nature of Polypi of the Nose, Throat, and Ear.

TUESDAY (14th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. Martin: The Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Nævi.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. M. Gunn: Lecture.

CITY ORTHOPÆDIC HOSPITAL.—5.30 P.M. Mr. J. Poland: Deformities of Bones after Injury.

LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. A. Harbord: Syphilis.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Mr. H. W. Dodd: On Disorders of Vision in relation to Diseases of the Nervous System.

WEDNESDAY (15th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Infectious Diseases.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Arkle: Aortic Valvular Disease.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: Femoral Hernia.

THURSDAY (16th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. Martin: The Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. P. Manson: Clinical Lecture.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. M. Murray: Demonstration of Medical Cases. (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Kellock: Demonstration of Selected Cases.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr. D. Grant: Diseases of the Antrum of Highmore.

FRIDAY (17th).—LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Erysipelas and Suppuration.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MEDICAL DISPENSARIES IN LANCASHIRE WANTED.

Soulby's Ulverton Advertiser of June 2nd publishes in a leading article a plea for self-supporting proprietary dispensaries for the very poor in Lancashire villages, where "doctors and trained nurses ..... are practically unknown." There are besides the very poor, the writer points out, those who cannot afford to run a bill for attendance but who are really in need of skilled medical advice; yet between the private practitioner whom they cannot afford to pay and the chemist who will charge 1*d.* for a box of pills there is no intermediate refuge. It is suggested that the working man of this class would often be saved from a premature grave if he could obtain medical advice for about 1*s.* 6*d.* per week. That the writer does not wish to encourage the abuse of cheap medical practice is evident from the following paragraph: "Of course the man who can easily spare half-a-guinea will go to his private medical man; and if he does not he ought to, for medical men have to keep up expensive establishments, in addition to which their mental training has cost them many years of study and has been a considerable expense, for which they ought to be recouped by those who are well able to pay."

"THE LADY DISPENSER."

To the Editors of THE LANCET.

SIRS,—In reply to "M.D. Lond." (THE LANCET, June 4th) I am writing to say that there is a College and Pharmacy for Ladies at 7, Westbourne-park-road which has been established for some years. The lady dispensers educated there find no difficulty in getting appointments. Any particulars can be obtained from the Secretary.

I am, Sirs, yours faithfully,

June 6th, 1898. A LADY DISPENSER.

THE LATE MR. ARTHUR JEFFARES BARLOW: A SECOND APPEAL.

AN appeal was made in these columns a month ago by certain medical men to their fellow practitioners and others on behalf of the young widow of Mr. Arthur Jeffares Barlow, who died suddenly on March 11th last at the early age of thirty-seven years. We have been asked to repeat this appeal, which resulted in the collection of the sum of £32 11*s.*, in the hope that a few more subscriptions may accrue for Mrs. Barlow's benefit. Arthur Jeffares

Barlow was the eldest and only surviving son of the late Frederick Archer Barlow of 14, North Great George-street, Dublin, and will be remembered by many old friends and fellow students at Trinity College, Dublin. Unfortunately his position through ill health prevented his making any provision for his widow, who is without any means whatever and has no friends to assist her. She is in delicate health caused by long strain of nursing her husband and the shock of his sudden death. It is hoped that a generous response will be made to the appeal and that substantial aid may be given to such a sad and deserving case. Subscriptions will be received by Dr. J. W. Moore, 40, Fitzwilliam-square West, Dublin; Dr. John Barton, 26, Upper Merrion-street, Dublin; Dr. C. J. Clibborn, 76, Owen-terrace, University-street, Belfast; Dr. L. H. Ormsby, 92, Merrion-square West, Dublin; Dr. Henry, 2, Lewisham-park, Lewisham, London; and Dr. A. Matson, 619, Holloway-road, London. To the subscriptions which have been from time to time announced in our columns the following should be added:—Per Dr. Moore: Acquaintance, Dublin, £1; Freemason, Godalming, 10s.

"THE VALUE OF A DIPLOMA IN PUBLIC HEALTH."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 28th in an annotation under the above heading you relate a case in Essex where at an election of medical officer of health the holder of a D.P.H. was passed over and the appointment given to one who had no public health diploma. The same thing has occurred recently in this the opposite side of England. A rural sanitary council advertised for a medical officer of health. I applied, and was the only candidate with the D.P.H. who did, but I was not elected. When I obtained the diploma I naturally supposed that it would stand me in good stead at such an election. I find now, however, that it is perfectly valueless where the population is under 50,000, as in my case. It seems to me that experience such as mine is not calculated to encourage men to go to the trouble and expense of getting a diploma from which they obtain no practical advantage.

I am, Sirs, yours faithfully,

June 6th, 1898. D.P.H. CAMB.

AUSTRALIAN BRANDY.

IN THE LANCET of July 2nd, 1892, and March 16th, 1895, we dealt analytically with a specimen of brandy from the Victorian vineyards which was submitted to us by Messrs. Joshua Brothers, of 26 and 28, Mark-lane. We then expressed the opinion that the sample submitted was a genuine grape spirit, at the same time pointing out the undoubted advantages of spirit having such an origin over one distilled from grain. We are now informed that the Government of Victoria (Australia) have issued a special guarantee with each bottle of this brandy certifying the same to be pure and the product of wine only, their official stamp being branded on each cork.

THE PERILS OF WINDOW-CLEANING.

To the Editors of THE LANCET.

SIRS,—An inquest was held at Crewe on May 28th on the body of a girl, aged sixteen years, who was killed by falling from a window which she had been cleaning. She had been in the service of her employer for eighteen months, so that he must have known that she was subject to "fits," as one account gives it, or "fainting fits," according to another. But whether fainting or epileptic no one subject to any kind of fits ought to have been employed in such dangerous work. It is some satisfaction, though very slight, to know that the coroner, at the request of the jury, recalled the employer, a builder, and "censured him for having permitted the girl to engage in this work knowing that she was subject to fainting fits." He got off very easily.

I am, Sirs, yours faithfully,

June 7th, 1898. X. Y. Z.

HOLLAND'S INSTEP ARCH SOCK FOR FLAT FOOT.

THE relaxation of the natural arch of the foot, commonly known as flat-foot, not only leads to an ungainly manner of walking, but causes those who suffer from it to be less capable of active exertion than normal individuals. When the condition is of such long standing that there is no prospect of the muscles, tendons, and ligaments regaining their proper tension it may sometimes be advantageous to have a mechanical support which will partially restore the shape of the foot. The instep arch sock, introduced by Mr. Thomas Holland, of 40, South Audley-street, W., is a useful appliance of this kind. It consists of two layers of leather shaped like the inner sole of a shoe, the proper form for supporting the instep being given by a thin elastic metal plate interposed between them.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS.—Permit me through the columns of THE LANCET to offer the following suggestion *re* "the unqualified man"—viz., let two or three examinations be held for all men who have taken out their full curriculum, or nearly so, and on passing the said examinations allow them to become registered and enjoy all the advantages of the present qualified assistant—viz., inquests, post-mortem examinations, death certificates, legal evidence, &c., but do not permit them to practise on their own account or recover fees by law except for their principal. If such were possible I think it would settle the matter and be a decided benefit to the present unqualified man and to the practitioners who would employ them; if they choose afterwards to obtain any other diploma let them do so by conforming to the four or five years' regulations and passing the necessary examinations.

I am, Sirs, yours faithfully,

June 6th, 1898. UNQUALIFIED.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—May I ask through the columns of THE LANCET if any of your readers could tell me of a home, private or otherwise, where a youth of eighteen years suffering from occasional attacks of epilepsy would be looked after on reasonable terms? As the attacks are neither very severe nor very frequent the youth could make himself useful on a farm or in a workshop. He at present is engaged on the waterside and is continually exposed to danger. His friends have made application to the Colony for Epileptics, but may have to wait years for a vacancy. I thank you in anticipation for the courtesy of inserting this letter and would ask that correspondence should be addressed in the first instance to THE LANCET Office, 423, Strand, W.C.

I am, Sirs, yours faithfully,

June 7th, 1898. M.

BUDE.

To the Editors of THE LANCET.

SIRS,—It may interest your readers to know that the railway to Bude is to be opened in August next, thus bringing this favourite health resort into touch with London, one result of which, it is hoped, will be to make the place better known to the medical profession as a place to which to send convalescents in the winter and spring, its genial but bracing climate being especially suited for the overworked either in brain or body. I shall be happy to give any information to your readers as to temperature, &c.

I am, Sirs, yours faithfully,

THOMAS WHITEHEAD.

Erdiston, Bude, North Cornwall, June 4th, 1898.

J. M.—The catalogue of the Motor Manufacturing Company, Limited 47, Holborn-viaduct, E.C., contains the notice of a motor bicycle, price £50. The same firm manufactures motor tricycles. The catalogue of the British Motor Syndicate, Limited, 40, Holborn-viaduct, E.C., also contains a notice of a motor tricycle. Our correspondent might communicate directly with the companies. We regret we have no extended practical experience.

L.R.C.P. should certainly be paid a fee, but would it not be better to send in a bill to the patient? If the patient repudiates the account and the arrangement made by the other medical man a strong representation should be made to that gentleman. If this does not produce any result legal proceedings may have to be taken; but our correspondent will do well to have a solicitor's advice.

Electro, M.R.C.S.—The process is described in most modern text-books and forms a routine treatment at general and special hospitals. The answer to the second question is that every man in such matters must be a law to himself. So long as the methods employed are not unprofessional the work should not be looked upon by anyone as derogatory.

Mr. Sidney C. Lawrence.—This position is the one which has previously been assigned to the physicians and surgeons at State and Royal funerals.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Derby Telegraph, Scotsman, Newcastle Leader, Alford Gazette, Bradford Observer, Dundee Advertiser, Times of India, Pioneer Mail, North British Daily Mail, Southport Times, Midland Times, Architect, Isle of Wight Chronicle, Warwick Advertiser, South Wales Daily News, Rugby Advertiser, Yorkshire Post, Builder, Preston Guardian, Glasgow Herald, Hinckley Times, Brighton Gazette, Lymington Observer, Liverpool Daily Post, Ormskirk Advertiser, North Wales Chronicle, Devon Gazette, Bristol Mercury, Sussex Daily News, Kidderminster Shuttle, Rochdale Observer, Citizen, Leeds Mercury, Accrington Observer, Isle of Man Examiner, Walsall Observer, Malvern Advertiser, Birmingham Daily Post, Birmingham Gazette, Leicester Post, Cambridge Times, Manchester Courier, Eastern Morning News, Hampshire Independent, Warwick Advertiser, Leighton Buzzard Observer, Boston Independent, Lynn Advertiser, Louth Times, Alfreton Journal, Bury Guardian, Bromley Telegraph, Durham Chronicle, Kentish Gazette, Southampton Times, Sanitary Record, Friendly Societies' Recorder, Local Government Chronicle, Public Health, Reading Mercury, City Press, Hertfordshire Mercury, Mining Journal, Daily Mail, London, Local Government Journal, Sowby's Ulverston Advertiser, Leytonstone Express and Independent, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Wrexham Advertiser, West Middlesex Herald, Canterbury Times, New Zealand Morning Mail, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. A. Ambrose, Buckhurst Hill; A. V. W.; Messrs. Armour and Co., Lond.; Amiral Soap Syndicate, Lond.; Messrs. Alder and Wright, Lond.; Annan's Anti-Accident, Manager of.

B.—Mr. C. L. Bathurst, Lond.; Mr. H. C. Burrows, Grantham; T. B. Browne, Ltd., Lond.; Messrs. Bates, Hendy, and Co., Reading; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. E. S. Bishop, Manchester; Mr. H. Beale, Reading; Dr. W. J. Brown, Chester-le-Street; Dr. P. H. Boyden, Thorpe Hamlet; *Broad Arrow*, Lond., Manager of; Messrs. Burroughs, Wellcome, and Co., Lond.

C.—Surgeon-Major J. Clarke, St. Moritz; Chesterfield Hospital, Secretary of; Messrs. Crossley, Moir, and Co., Lond.; Miss Annie S. Chase, Lond.; Dr. Cole, Bath; Cymro; Cortland Wagon Co., Lond.; Central Stationery and Printing Co., Liverpool; Clayton Hospital, Wakefield, Hon. Secretary of; C. W. B.; Mr. J. J. Clarke, Lond.; Messrs. Coxeter and Son, Lond.; Messrs. J. and A. Churchill, Lond.; Dr. R. Cunyngham-Brown, Lond.; Dr. F. M. Cambridge, Highland, U.S.A.; Dr. R. J. Colenso, Lond.; Cardiff Infirmary, Secretary of.

D.—Dr. H. Davies, Lond.; Dr. J. R. Dawson, Leyton; Doncaster General Infirmary, Hon. Secretary of; Mr. L. B. Dhargalker, Bombay; Mr. C. Davis, Glossop.

E.—Mr. J. East, Winslow; Messrs. Eason and Son, Dublin.

F.—Surgeon-Captain L. G. Fischer, Jhansi, India; Mr. Xavier Field; F. W. G.; Dr. D. J. Freeman, Brighton.

G.—Mr. J. W. T. Gilbert, Folkestone; Dr. C. D. Green, Upper Edmonton; Great Eastern Railway, Lond., Continental Traffic Manager of; Mr. A. Greenwood, Lond.; Mr. H. B. Gardner, Lond.; Mr. G. Penn Gaskell, Lond.; Dr. L. G. Guthrie, Lond.; Dr. Ramon Martin Gil, Malaga; Dr. A. B. Griffin, Sandgate.

H.—Mr. Victor Horsley, Lond.; Messrs. Hodder and Stoughton; Lond.; Herren Haasenstein and Vogler, Lausanne; Mr. J. J. Hicks, Lond.; H. C. P.; Mr. J. B. Hallam, Sheffield; Mr. Hubert, Billingshurst; Dr. R. G. Hebb, Lond.; Mr. G. B. Howat, Lond.; Mr. J. Heywood, Manchester.

I.—Dr. H. Illoway, New York.

J.—Dr. W. J. S. Jerome, Oxford; Mrs. Jackson, Beccles; J. B. R.; J. M. N.

K.—Rev. D. M. Kennedy, Plumpton; Messrs. R. A. Knight and Co., Lond.; Messrs. Krohne and Sesemann, Lond.; Messrs. P. S. King and Son, Lond.

L.—Mr. R. L. Leyba, Hamburg; Dr. A. W. Lyons, Thames Ditton; Dr. W. T. Law, Lond.; Messrs. Lorimer and Co., Lond.

M.—Mr. B. L. Mansel, Ashtead; Mr. S. M. S. Mellor, West Malling; Mr. J. A. Morgan, Llanwrtyd Wells; Mr. L. Mackay, Pitlochry; Messrs. C. Mitchell and Co., Lond.; M.W.; M.D., Bristol; Mountjoy Brewery, Dublin; Dr. H. H. Murphy, Twickenham; Mr. J. H. Menzies, Lond.; Dr. W. G. Mortimer, York; Dr. J. A. Mearns, Huddersfield; Dr. T. G. McLauchlan, Birmingham; Mr. L. Minahan, Lond.; Dr. M., Fulham-road; Mr. Malcolm Morris, Lond.

N.—Mr. B. J. Nolan, Lond.; Norfolk and Norwich Hospital, Secretary of.

O.—Mr. E. W. Ormerod; O. L. P.; Messrs. Orridge and Co., Lond.; O. A. N., Port Said; Dr. Isambard Owen, Lond.

P.—Messrs. Pilditch, Chadwick, and Co., Lond.; Pathological Laboratory, Cambridge, Superintendent of; Peckham-road, 27; Plumbers, London Society of.

R.—Dr. C. Reinhardt, South Stoke; Mr. F. A. Rogers, Lond.; Mr. F. J. Rebman, Lond.; Mr. W. K. Rix, Southbourne; Messrs. H. Roberts and Son, Mold; Dr. H. D. Rolleston, Lond.; Mr. R. H. Russell, Melbourne; Mr. J. Ray, Beccles; Mr. J. A. Raye, Banbury; Messrs. A. Reddick and Co., Lond.

S.—Dr. J. A. Shaw-Mackenzie, Lond.; Dr. D. W. Samways, Brides-les-Bains; South-East London Medical Mission, Hon. Secretary of; Messrs. Spiers and Pond, Lond.; Mr. J. J. Sell, Hong Kong; Dr. H. W. Syers, Lond.; Mr. W. G. Stoneham, Windsor; Sun Life Assurance Society, Lond., Secretary of; S. R. J.; Messrs. W. H. Smith and Son, Manchester; Sheffield Royal Hospital, Secretary of.

T.—Dr. J. C. Thresh, Chelmsford; Messrs. J. Thompson and Son, Boston; T. L. H., Lond.; Herr G. Thieme, Leipzig.

W.—Dr. Wiggin, New York; Mr. J. G. Wilson, Monmouth; Wigan Medical Society, Hon. Secretary of; West Riding Asylum, Wakefield, Secretary of; Wolverhampton General Hospital, Secretary of; Messrs. Williams and Norgate, Lond.; Mr. T. Waterman, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Messrs. Allen and Hanburys, Lond.; A., Lingfield; A. T. H.; Apollinaris Co., Lond.; Apothecaries Hall, Dublin; Miss J. Atkinson, South Milford.

B.—Dr. R. W. Branthwaite, Rickmansworth; *Buxton Advertiser*, Proprietor of; Messrs. J. Beal and Son, Brighton; Bournemouth National Sanatorium, Secretary of; B. J. L.

C.—Mr. H. Connop, Brailsford; Church Stretton Private Asylum, Proprietor of; Dr. H. J. Cooper, Lyme Regis; Messrs. A. Cohen and Co., Lond., C. V. W.; Mr. H. Cox, Williton; C. A.; Dr. Cotton, Darsham.

D.—Mr. J. B. Dunn, Preston; Dethier, Brussels.

E.—Dr. R. Edwards, Colwyn Bay; E. A. P.

F.—Dr. D. A. Fraser, Montrose; Mr. J. Forsyth, Eyemouth; Ferru-Cocoa Co., Carmarthen; Fuller's, Ltd., Lond.

G.—Dr. W. G. Galletly, Northwold; Mr. J. T. M. Giffen, Chester; Messrs. Grindlay and Co., Lond.; Miss F. Gallaher, Lond.; G. G. R.; G. M. D.; Messrs. Garland-Smith and Drake, Lond.; G. G. W.; G. B. J.

H.—Dr. T. W. Hime, Bradford; Mr. W. Hall, Southampton; Mr. M. Houghton, Ilford; H. P.; H. L. A. B.; Mr. G. Henderson, Kirn; Dr. G. P. Hadley, Birmingham; Mr. F. R. Humphreys, Lond.; G. L. C.; H. M. W., Cambridge; Mr. R. N. Hartley, Leeds; H. W.; Hill, Sheffield.

I.—Mr. A. T. Ilott, Lond.

J.—Mr. G. M. Jones, Alton; J. H.; Dr. J. Jones, Clydach; J. S. B.; Jeyes' Sanitary Compounds Co., Lond.; J. K.; J. J. M.; J. A. G.; J. McC. M.

K.—Mr. R. A. Keys, Castlefin; K.; Mrs. Kingscote, Lond.; Dr. W. H. B. Knaggs, Scarborough.

L.—Mr. C. J. Lathbury, Dunstable; Mr. S. Lupton, Weston-super-Mare; Dr. J. T. Leon, Lond.; Mr. T. A. Ledwich, Retford; Mr. H. B. Long, Charing; Loughborough General Hospital, Secretary of; Locum, Eckington.

M.—Dr. J. F. D. Macara, Durness; Mr. J. A. Marsden, Lightcliffe; Mr. W. Mayhew, Aldbro'; Mr. J. McMurtie, Glasgow; Dr. T. G. McLauchlan, Leamington; M. B., Blackburn; Messrs. Morris and Edwards, Nantile Vale; Mr. A. Moxon, Nuneaton; Mr. R. T. Morgan, Clevedon.

O.—Mr. G. B. Over, Rugby; Dr. O. T. Owen, Blackburn.

P.—Dr. W. H. Packer, Cressage; Mr. J. W. Pratt, Wiveliscombe; Messrs. Parry and Tinsley, Swansea; Parish of St. Mary Islington, Clerk of; Miss E. Perrott, Luppitt; Mr. P. C. Phillips, Killin.

R.—Surgeon-Captain O. L. Robinson, Crosshaven; R. R. D.; Mr. M. A. Robinson, Honiton; Messrs. Robertson and Scott, Edinburgh; R. A. D. D.; R. N. G.

S.—Mr. B. S. Sanders, Ilfracombe; Dr. S.; St. Mungo's College, Glasgow, Secretary of; Messrs. M. Samuel and Co., Lond.; Mr. J. F. Stockwell, Wickham Market; Dr. G. P. Sylvester, Toronto; Messrs. Slinger and Co., York; S. H. J.

T.—Mr. J. Thompson, Macclesfield; Tutor, Lond.; T. H. K.; T. J. D.

W.—Mr. C. O. Wynne, Llanrwst; Wilts County Mirror Co., Salisbury; Dr. W. Whitla, Belfast; Wyleys, Ltd., Coventry; Mrs. M. M. Watson, Wargrave; Dr. J. H. Waterhouse, Maltby Grange; W. H. B. C.; W. H. B.

Y.—Mr. P. C. Young, Hounslow.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only hould be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

The Croonian Lectures

ON

THE CHEMICAL PRODUCTS OF PATHOGENIC BACTERIA CONSIDERED WITH SPECIAL REFERENCE TO ENTERIC FEVER.

Delivered before the Royal College of Physicians of London

BY SIDNEY MARTIN, M.D. LOND., F.R.S.,

FELLOW OF THE COLLEGE; PROFESSOR OF PATHOLOGY, UNIVERSITY COLLEGE; AND ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR CONSUMPTION, BROMPTON.

LECTURE I.[1]

Delivered on June 14th, 1898.

MR. PRESIDENT AND GENTLEMEN,—I propose in the following lectures to discuss generally the nature and action of the poisons and chemical products formed by pathogenic bacteria and to illustrate the subject by an investigation which has occupied me recently of the pathogenic action and the chemical pathology of the typhoid bacillus and of two other bacilli closely related to it. Most of the poisons which are to be considered are substances which cannot be defined chemically and this at the outset is a very great difficulty in an attempt to classify such poisons accurately.

The transformations which bacteria, both non-pathogenic and pathogenic, produce in substances are of great variety. Some non-pathogenic bacteria are concerned, for example, with nitrification, a process in which ammonia compounds are transformed into nitrates and nitrites. These bacteria are more or less specific, and although some pathogenic organisms have a somewhat similar action in this respect it is very slight. Another example of a similar character is the splitting up of urea into ammonia and carbonic acid by the micrococcus ureæ. These actions, however, are not of the nature of the chemical changes produced by pathogenic bacteria. The changes which bacteria produce in carbohydrate substances—e.g., starches and sugars—are the transformation of the starch into one or other kind of sugar and the decomposition of the sugar into alcohol and acid bodies such as lactic, acetic, and butyric acids. Such changes are usually spoken of as those of fermentation and are allied to changes which occur in the digestive processes of the higher animals, by means of the organic, as distinguished from the organised, ferments.

Some bacteria are capable of still further acting on the acids produced in the first-named fermentations; thus, the bacillus butyricus can transform lactic acid into butyric acid with the formation of carbonic acid and hydrogen. These are, again, not the changes which are of the greatest importance in considering pathogenic bacteria. Although some pathogenic bacteria act on starches and sugars with the formation of acid bodies and gases, yet the products so formed play but a small part in the production of disease. Fats which are largely present in the body and are taken in with food are also broken up by bacteria of one kind or another. The products, however, from a pathological point of view, are of minor importance. From the albuminous substances, however, the third great class of organic substances which serve as food and act as important chemical constituents of the body, the pathogenic bacteria produce substances possessing important physiological actions. The albuminous molecule, containing carbon, hydrogen, nitrogen, sulphur and frequently phosphorus, is unknown as regards its chemical constitution. It is no doubt highly complex and is capable of being broken up both by organic ferments and by bacteria into numerous bodies of the most complex nature. Although the actual constitution of the albuminous molecule is at present undetermined it is capable of being transformed only in certain directions. Thus, by the action of mineral acids and alkalis with the aid of heat, white of egg or the serum proteids are transformed into acid and alkali albumin which differ from the original proteid mainly in their solubilities in acid or alkaline solution. The acid form is precipitated by an alkali and *vice versâ*, the precipitate being capable of coagulation. Like the original proteid, however, these bodies are capable of digestion. The digestive transformation which takes place in the stomach and small intestines consists in the change of these slightly soluble and coagulable proteids into more soluble and diffusible ones, the formation of the so-called albumoses and peptone. The important members of this class are soluble in water, are not precipitated by heat and are capable of some amount of diffusion. They all give a bright pink colour with a trace of copper sulphate solution and an excess of potash. True peptone differs from some of the albumoses in the fact that it is not precipitated by nitric acid. One of the characteristic albumose reactions, for example of proto-albumose, is that the precipitate by nitric acid is soluble on heating the solution and comes down again on cooling. Peptic digestion probably does not go farther than the formation of peptone and results chiefly in the transformation of the proteids into albumoses. Pancreatic digestion, however, can split up the proteid molecule or part of it into crystalline bodies containing nitrogen, such, for example, as leucin and tyrosin. This digestive action on proteids produced by organic ferments is also a feature of the action of some of the organised or bacterial ferments, except that the effect is more pronounced and results in the breaking up of the proteid molecule into many different non-proteid substances, which may be considered the final products of the digestive action. This digestive action of pathogenic bacteria is, however, only a part of the question we shall have to consider. The chief cell of the peptic gland secretes pepsin, which is discharged in the gastric juice into the stomach cavity; the pancreatic cell secretes trypsin and other ferments, which are discharged into the small intestine with the pancreatic juice; and, therefore, in any digestive mixture obtained from the stomach or intestine there is present, besides the products of digestion, the ferment or the active agent in the transformation. In the case of bacteria growing in an artificial medium outside the body or developing in the body there is, in addition to what digestive products may be formed, a living bacterial cell and any secretion which it may produce; and it will be seen that the body of the bacterium as well as its secretion, whether this be of the nature of a ferment or not, are both of the highest importance in the consideration of the diseased conditions and processes. In bringing these aspects of bacterial action to your notice it will be seen to what extent the products of their digestion of albuminous substances or the mere secretion of poisonous substances act in disease.

The study of putrefaction, which is produced by many different micro-organisms, has shown that, besides the production of albumoses as the early products of digestion, numerous chemical substances or final products are formed, some of which are not toxic, although many are highly poisonous. It is not necessary to dwell on this part of the subject except to say that the effects of these toxic bodies of putrefaction are (1) that of intense local irritation, whether they are injected under the skin or introduced into the digestive tract; and (2) an action on the central nervous system whereby, besides the production of muscular twitchings and clonic and tonic spasms, there is with many of them a tendency to the production of stupor and coma, ending in death. These chemical products of putrefaction, with perhaps one exception—that of mydaleine—do not cause a rise of body temperature, so that the fever which is observed in cases of poisoning by putrefactive products, such as those occurring in some cases of food poisoning, are due to other products of the bacteria. At one time similar chemical products, or animal alkaloids as they are called, were supposed to play a large part in the processes of specific infective diseases. Thus Brieger isolated two bodies, tetanin and tetano-toxin, which were supposed to be the active agents in the production of the convulsive spasms of tetanus. He also isolated typho-toxin, a chemical body which was supposed to be an active poisonous agent in typhoid fever. The existence of these bodies has, however, not been confirmed by subsequent research. It does not follow, of course, that in all diseases such final products may not play a part in the production of the symptoms. As I have shown, in anthrax such a product is formed and is one of the active poisons in the disease. Of later years, especially as the result of the study of the chemical pathology of diphtheria and of tetanus, the most active poison which is

[1] Lecture II. was delivered on June 16th, and Lectures III. and IV. will be delivered on June 21st and 23rd respectively.

produced by the micro-organism is not of the nature of an animal alkaloid but a substance which cannot be defined chemically but only by the investigation of its physiological action.

Separation of bacterial poisons.—The three kinds of poisons which have been indicated must be borne in mind—(1) the poisons secreted by the bacterium itself; (2) the products of the digestive action of the bacterium—i.e., the albumoses; and (3) the final non-proteid products, which may be provisionally called animal alkaloids. The first two poisons are precipitated from solution by means of alcohol. Generally speaking, the last class of poisons is soluble in alcohol. In the separation of the first two classes of poisons by means of alcohol great care has to be taken that they are not exposed for too long a time to the action of the reagent, so that their toxic properties may not be diminished. The prolonged action of alcohol, for example, on pepsin will diminish its activity, and so it is found that its prolonged action on the poisons of diphtheria and tetanus greatly diminishes their activity. Any method, therefore, in which alcohol is employed must be a rapid one, the poison not being exposed to its action for longer than a few hours.

Another method which is employed in the separation of these poisons is precipitation by means of saturation of the liquid with neutral ammonium sulphate. By this means all the proteids are thrown down with the poisons and may be collected, redissolved, and dialysed. To my mind, however, this method is open to grave objections. Ammonium sulphate is itself poisonous and it is extremely difficult to remove the last traces of the salt except after prolonged dialysis in the presence of antiseptics, which may be hurtful to the poisons. During the process of dialysis the solution becomes greatly diluted owing to the absorption of water from outside the dialyser, so that there is at the end a very dilute solution of the poison which has to be concentrated before it can be used. There is no advantage in this method because, although it gives rapid precipitation of the poison, yet the final product is not any purer than when alcohol is used as a precipitant. Other methods have been used by Brieger and others whereby the poisons have been precipitated by the salts of heavy metals which are got rid of afterwards by various means. Even in this case we are not much nearer the chemical identification of the poisonous substances.

Preparations of secretory products of the bacteria.—The two best known examples of toxic secretory products of bacteria occur in the bacilli of diphtheria and of tetanus. They are produced by growing the bacillus in a medium made of sterilised extract of meat, to which 1 or 2 per cent. of commercial peptone and a small proportion of common salt are added. This is the ordinary broth peptone. It is a medium in which the proteids exist in a digested form, so that any digestion by the bacterium of the proteids does not take place as it might do if serum albumin or white of egg were present. After growing in the medium for a certain time—three weeks, a month, or longer—and after filtering off the bacilli through a porcelain filter a clear sterile liquid is obtained which is extremely poisonous. This liquid when injected into an animal gives rise—in the case of diphtheria—to the characteristic symptoms of the disease—namely, a palsy, which is mainly dependent on the degeneration of the peripheral nerves, and in the case of tetanus to the characteristic symptoms of the disease. In this poisonous liquid no manipulation has as yet demonstrated the chemical identity of the poison. Such a liquid gives a copious precipitate with alcohol or on saturation with ammonium sulphate and this precipitate is itself highly poisonous, containing most of the poison present in the liquid, and consists almost entirely of the peptone which has been added to the liquid in the preparation of the culture medium with some of the salts of the broth.

An attempt was made by Roux and Yersin to isolate this poison by adding phosphoric acid and then lime to the liquid, the precipitate of calcium phosphate formed carrying down the poison. It was found that the small amount of this calcium phosphate mixture which killed an animal did not show any appreciable difference in weight from the amount of calcium phosphate present; that is, the amount of poison present was practically imponderable. This may also be appreciated by the statement that even as little as one-twenty-fifth of a cubic centimetre of the broth filtrate may kill a guinea-pig weighing 300 grammes in 48 hours. Kitasato also found in his experiments on the bacillus of tetanus that the broth filtrate was poisonous in what were practically infinitesimal doses. It is evident that in these cases we are dealing with a poison which is at present quite outside the domain of chemistry; it cannot be expressed chemically, it can only be expressed from its pathological effects.

Separation of the digestive products.—To obtain these it is necessary to grow the bacillus in a liquid containing either alkali-albumin, serum, or any of the liquids of the body containing proteids in solution. Extract of meat and salt (i.e., broth without peptone) is with advantage added, as it thus makes a better culture medium for the bacterium. After the bacillus has grown in this liquid for from three to five weeks and it is filtered off through porcelain the clear filtrate after concentration at 40° C. is precipitated by an excess of alcohol, and the precipitate collected and redissolved in water, reprecipitated by alcohol, and after washing in alcohol and ether is dried over sulphuric acid. In this way a lightish brown powder is obtained, readily and completely soluble in water and giving the reactions of albumoses—namely, the biuret reaction and the characteristic precipitate with nitric acid.

Some bacteria, for example, the anthrax bacillus, have practically no toxic secretion and the albumoses are readily separated in as pure a form as can be obtained; but with others, for example, the diphtheria bacillus, where there is not only a secretory product, but also digested products: the powder which is obtained by the method thus stated contains not only the secretion but also the albumoses. There are no chemical means of separating these secretory products from the albumoses, but some degree of separation may be obtained by keeping the solution at 60° C. for a longer or shorter period, whereby the secretory product is rendered inert. This is, of course, only a rough method, inasmuch as heat also damages, in some instances, the action of the albumoses.

Separation of the final products.—The third point is the separation of the final products. These final products are contained in the alcoholic filtrate after precipitation of the proteids in solution. This alcoholic filtrate is evaporated to dryness at a temperature of 40° C. and extracted with absolute alcohol. The extract is filtered, evaporated again to dryness, and redissolved in alcohol. After filtration and if necessary concentration it is thrown into an excess of ether, which causes a precipitate; and the alcoholic extract may thus be separated into two parts, one of which consists of substances which are soluble in alcohol and insoluble in ether and are precipitated by ether and other substances—chiefly fats—which are soluble in ether and alcohol, but insoluble in water. This manipulation and separation of the substances is of course at present a very imperfect one inasmuch as the substances so separated have not been obtained in a sufficiently large quantity, nor are their chemical characteristics sufficiently worked out to enable a definite idea of these characteristics to be obtained, but for the purposes of physiological experiment and of determination as to the general nature of the poisons produced by pathogenic bacteria I have found this method of great value.

In the investigation of toxic products formed in infective disease not only must they be studied by means of the artificial culture of the bacillus in suitable media, but a chemical examination of the body itself, especially as regards the blood, the spleen, and the liver, is necessary in order to determine whether the same products are found in the body as in the artificial culture. This study is of great value when the poisons have a specific action—for example, in the case of diphtheria and of tetanus; but in the diseases in which there is no specific symptom due to a chemical poison it may be impossible to prove the identity of the poisons produced by the bacterium and those found in the bodies of patients dead from the disease.

Intra cellular bacterial poisons.—The three classes of poisons just considered or described are extra-cellular bacterial poisons, but besides these, which are present in the culture fluid in which the bacteria are grown, poisons may be present in the bodies of the bacillus—intra-cellular poisons—and these have to be studied by means of other methods. One method is to kill the bacillus which is grown in broth by chloroform. If a few drops of chloroform are added to the liquid and shaken up and allowed to act for twenty-four hours or longer the bacilli are killed, so that on testing the liquid is found to be sterile. The bacilli are still suspended in the liquid, and after evaporation of the chloroform *in vacuo* the liquid may be used for experiment. Besides the bodies of the

bacilli it of course contains any secretory poisonous product it may form. The results obtained by the injection of this liquid may be compared with those observed with a broth culture also chloroformed, and from which the bodies of the bacilli are removed by centrifugalisation. The comparison of the two results enables one to observe the difference in the action between the poison contained in the body of the bacillus and the secretory product; between the intra-cellular poison and the extra-cellular.

Another method is, after growing the bacillus on a large surface of agar, to scrape the culture from the surface and suspend it in sterile salt solution. Some amount of extra-cellular poison may be present in this suspension as well as in the first case. In filtering a culture fluid through a Chamberland filter some of the toxic products may be held back by the filter itself, and this is the more likely to be the case if the solution contains a large amount of undigested proteid—for example, serum. The method of killing the bacillus in the fluid by means of chloroform and centrifugalisation to get rid of the bodies of the bacilli is therefore a very important one in the investigation of the toxic products of the bacterium, especially as in this way the intra-cellular poisons of the bacillus can be investigated.

Toxic action and reaction.—The physiological action of these products may be investigated by studying the effects produced by their injection subcutaneously, into the peritoneal cavity or into the venous system. As the result of the intravenous injection of poisons a more rapid effect is produced than by other methods and observations may be made in rabbits as to the effect of the poison on the temperature, on the body weight and on the intestine (as regards the production of diarrhœa), as well as its effect on the production of microscopical lesions in the nervous system, the heart, liver, spleen, and kidneys. From the experimental point of view infective diseases may be divided into two great classes. In one of these the symptoms are only those of what we must call a toxæmia or blood-poisoning—that is, there is fever in a greater or less degree, with great bodily depression and loss of weight, with some alteration in the secretion of the glands, more evidently those of the kidney and the skin. At some period or other of this process the fever may be absent and yet the process of poisoning may be progressive. In the second class of cases besides the symptoms of toxæmia there are present during the acute disease, or following as sequelæ, specific lesions, mainly of the nervous system. Examples of toxæmia without specific lesions occur in anthrax or malignant pustule and in typhoid fever. Examples of the second class are diphtheria and tetanus, in both of which, besides the toxæmia, there are specific symptoms referable to the nervous system.

The animals which have been used in the investigation were rodents (rabbits and guinea-pigs), between which and the higher animals there is a great gap, chiefly on the side of the nervous system. This point must be borne in mind in any deductions made upon the action of poisons upon the nervous system in rabbits. The method of procedure in the experiments was as follows. The weight and rectal temperature of a healthy rabbit are taken for two days at least previously to the experiment. In this way an indication is obtained by the increase of weight in the animal and by the regularity of the temperature as to whether it is healthy or not. The injection is then made, usually into the marginal vein of the ear, and the effect of the poison on the temperature, body weight, &c., observed during the life of the animal. After death or at killing cultivations are made from the heart's blood, the peritoneal cavity, and the spleen or liver, to demonstrate the absence of bacterial action, and the nerves (the phrenic and branches of the anterior crural) are stained with osmic acid for the investigation of degeneration, and a portion of the left ventricle of the heart is also stained in the same liquid for examination of any change in the fibres. Bacterial poisons appear to have a specific action on the heart of the rabbit in the production of degeneration of the muscle fibre, a degeneration which is the expression of the cardiac failure so frequently observed in infective disease in the human animal.

One important point as regards the action of these bacterial poisons must be noted—namely, that they have in many cases a very slow action, so that following on a single dose there may be some slight change observed in the temperature or in the body weight which passes off. Subsequently, the animal either progressively goes downhill and succumbs after a week or fourteen days or longer or there may be no apparent downward progress and death occurs suddenly. This slow action of the bacterial products is so common as to be noted particularly and in some cases it precludes any exact investigation of their effects on the circulation of the blood within the time limits of an experiment.

Toxic reaction.—Besides the poisonous effect of the bacterial products on the body whereby an injury is effected on the tissues, producing either alteration in function with or without obvious degeneration of the tissue itself, bacterial products may produce what may be called a toxic reaction. This occurs most readily as the result of the injection into an animal refractory to the disease of small but gradually increasing doses of poison. There is no accumulation of the poison in the body, but there is a gradual increase in the blood and tissues of a substance or substances which are inimical to the poison or the bacillus—that is, under certain conditions they may prevent, when injected at the same time, the fatal effects of the poison on the bacillus. These substances probably fall into two groups: (1) the antitoxic, which counteract the effects of the poison itself; and (2) the anti-microbic, which counteract the effects of the bacillus itself. In one and the same animal the blood may contain a substance or substances which are both antitoxic and anti-microbic—such, for example, as occurs in the process of the formation of the diphtheria and tetanus antitoxic serum. As an introduction to the investigation which I have more recently done it will be well to discuss as examples the chemical and pathological processes which occur in anthrax, diphtheria, and tetanus.

Anthrax.—I have previously shown, and subsequent experiment has only confirmed the observation, that the bacillus of anthrax produces in the body of an animal the subject of anthrax and in an artificial culture medium containing digestible proteids a large quantity of albumoses and of a body which gives some of the reactions of an alkaloid. Both these classes of bodies are poisons, the albumoses producing fever and causing death in coma when given in large doses; the alkaloidal body, which is much more poisonous, producing no rise of body temperature and causing stupor ending in coma and death in mice, guinea-pigs, and rabbits. According to the dose given death may not be produced, but the stupor and coma may last for a certain time and then be recovered from. The bacillus of anthrax is a typical infective micro-organism and it is the chief example of the class of micro-organisms whose toxic products are the results of the transformation of the proteid solutions in which it grows. Practically it produces no toxic secretion. If any is produced at all it must be in very small amount, inasmuch as when grown in peptone broth it imparts little or no toxicity to the liquid as tested by injection after removal of the bacilli through the filter.

Tetanus.—This is quite different from the results obtained in the bacillus of tetanus. If this is grown in a solution of peptone broth under suitable conditions it is found to produce a highly toxic substance, which, as has been previously stated, is practically unweighable. This substance, which must be considered a secretion of the bacillus, possesses a characteristic physiological action in that it produces the characteristic convulsions of the disease tetanus. It is the chief toxic agent produced by the bacillus. Kitasato once found it in the heart's blood of a patient dying from tetanus. In a number of cases of tetanus which I examined chemically I did not find this poison, although perhaps this result is not of much value, as the method I employed would possibly destroy the somewhat sensitive toxin. I found in the spleen and blood of patients dying from tetanus albumoses in fair quantity which did not possess any other action than that of producing fever; they produced no convulsions and did not cause death. I have previously stated that in one experiment I found that the ether extract of the spleen in tetanus produced convulsions when injected intravenously in rabbits. This undoubtedly occurred, but I am not at all sure that it is of very great significance; at any rate, I could not confirm the observation and I do not wish to lay any stress on it. It must be considered at present that the chief, if not the only, active poison in tetanus is the secretion of the bacillus, which when injected into the body after a certain period produces convulsions. With regard to the albumoses which are present in the body, in the spleen and blood of patients dying from tetanus, they may be in some cases the result of a mixed infection by the bacillus of tetanus and other

bacteria, but they may be the result of the direct action of the tetanus bacillus or of its toxin, although the proof of this is at present wanting. I did not find that the tetanus poison had any digestive action.

Diphtheria.—The chemical processes in diphtheria closely resemble those in tetanus. There is a secretory product which is produced when the bacillus is grown in peptone broth which is present in the membrane of diphtheria and probably in the tissues as well. This secretory product possesses a characteristic action on the nervous system, causing in rabbits paralysis dependent on nerve degeneration. When the bacillus is grown in a solution containing digestible proteids it digests these with the formation of albumoses and certain bye-products. These albumoses separated in the ordinary way have a toxic action, similar to, although not so powerful as, that shown by the secretory product. They are also found in the spleen and blood of persons dying from diphtheria and possess a similar action. Whether the whole of the toxic action of the products is to be ascribed to the albumoses themselves is perhaps a matter of debate, inasmuch as the only method by which the physiological action of the secretory product can be separated from that of the albumoses is that of heat, which also affects the action of the albumoses.

What I have called the secretory products of tetanus and diphtheria are remarkably sensitive to heat; that of tetanus, for example, is completely destroyed by raising to a temperature of 80° C.; that of diphtheria is destroyed at a temperature of 60° C.; and heating to lower temperatures weakens the action of the poison or alters its effects.

It is evident that the action of the powerful secretory products of pathogenic bacteria is unlike that of crystallisable poisons. Firstly, they produce a large effect in very small doses; secondly, this effect does not come on immediately after injection, but is preceded by a period during which no apparent change is occurring in the body; thirdly, the poisons are frequently selective in their action, affecting mainly the nervous system, on which they produce a profound effect; they may also disorganise the general nutrition of the body; and fourthly, they are very sensitive to heat and external conditions. Their injection into the body—their effect being preceded by a period of incubation—reproduces the action of the bacillus itself, so that one has to do with a poison which, although not living, possesses a progressive change in the tissues of the body like the bacillus.

The Ingleby Lectures

ON

EXTRA-UTERINE PREGNANCY.

Delivered at Mason College, Birmingham, on May 11th, 18th, and 25th, 1898,

BY JOHN W. TAYLOR, F.R.C.S. ENG.,

PRESIDENT OF THE MIDLAND MEDICAL SOCIETY; SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN; CONSULTING SURGEON TO THE WOLVERHAMPTON HOSPITAL FOR WOMEN, ETC.

LECTURE III.[1]

Delivered on May 25th.

ON THE DIAGNOSIS AND TREATMENT OF EXTRA-UTERINE PREGNANCY.

Diagnosis.

MR. DEAN AND GENTLEMEN,—When extra-uterine pregnancy is present and has by its symptoms driven the patient to seek for advice, at every stage—up to "term" with death of the fœtus—there are certain indications to be derived from history, symptoms, and physical signs which are sufficient in most cases to establish a correct diagnosis. In my own series of 37 cases a correct diagnosis was formed in 27 cases. In one case (the first case) no diagnosis was made. In 3 cases the diagnosis was made of tubal disease only. In 2 cases the diagnosis was made of myoma. In 4 cases the diagnosis was made of ovarian cystoma. Three of these were instances of ovarian cyst complicated by the co-existence of tubal pregnancy, and in one of these an alternative diagnosis was recorded of ovarian cyst or tubal pregnancy. In only 3 of the cases was the diagnosis absolutely mistaken and in two of these, and even in some of the cases of imperfect diagnosis, I think it may be said with perfect truth that the fault was my own and that imperfect knowledge, carelessness, or some false suggestion at the outset was responsible for the blunder. The omissions or mistakes which I have just enumerated are necessarily confined to cases on which I have operated. I believe I know of 2 other cases in which I did not fully recognise the condition and therefore failed to do my duty. The one was a case of diffuse hæmorrhage—probably from early rupture of the tube. The patient was quite pulseless when I was called to her and although there was some history of delayed menstruation I could not find on examination any pelvic tumour or physical sign pointing to a misplaced pregnancy. I did not know at that date that in some cases of very early rupture this may be entirely wanting. I was uncertain and the possible moment for action was lost. The other case was one of early tubo-ligamentary pregnancy. The patient was herself suspicious that something was not right about her pregnancy and asked my opinion. After careful bimanual examination I came to the conclusion that the pregnancy was intra-uterine and normal and reassured the patient. Some nine or ten months after this I found that the time for confinement had been passed without result and that one of my colleagues had operated on the patient, removing a dead fœtus from an intra-peritoneal sac which was exactly similar to those I have described as posterior-ligamentary or retro-peritoneal. It is worthy of notice that the only case of this kind which figures in my own series (No. 4) had been seen at an early stage of the pregnancy by the same colleague and had been considered by him to be intra-uterine and normal. There is probably some good reason for the occurrence of the same mistake in the practice of two surgeons, both of whom have had special experience of extra-uterine gestation. Again, my operation list does not of course contain any case in which I have diagnosed an extra-uterine pregnancy and found a different condition. Four of such mistakes I can remember. One was a case of retroflexion of the gravid uterus with intra-peritoneal adhesions. This occurred very early in my practice. Two were cases of double pyosalpinx with temporary cessation of the menses; the other case was one of malignant tumour of both ovaries. In this case also there was consequent amenorrhœa. Other cases in which an alternative diagnosis was made or in which the possibility of extra-uterine pregnancy was entertained will be referred to under "differential diagnosis." Finally, I have to add to my list of successful diagnoses some six additional cases of extra-uterine pregnancy in which the operation was performed by another surgeon. In one of these cases a tubal pregnancy of one side was complicated by a pyosalpinx of the opposite side, the only instance in my own practice in which I have found tubal pregnancy and suppurative salpingitis directly associated. As subsidiary material helping to form my experience I have also to add nearly 50 cases of extra-uterine pregnancy which I have watched during the last fourteen years in the practice of my colleagues.

In considering both the diagnosis and the treatment of extra-uterine pregnancy I shall follow as nearly as possible the divisions already framed when dealing with its pathological history. Our first consideration, accordingly, will be the diagnosis of a case of earliest rupture of the tube with diffuse hæmorrhage. The patient is probably a married woman and one who of course must necessarily be within the limits of the child-bearing period. She has probably been in perfect health until an hour or so ago. She was then suddenly seized with a pain in the abdomen, "as if something had given way inside her." She became faint and collapsed, was sick and lay down upon the couch or was assisted to her bed. She was given a little stimulant and for a few minutes felt perhaps slightly better. On reflection the attack did not altogether surprise her. Her proper menstrual period was due last week, but instead of coming on as usual was delayed for some days (an uncommon occurrence for her), and during the last three or four days, although there has been some discharge of blood from the vagina, which for an hour this morning was quite profuse, the period has not come on "properly" or in a customary manner. Such, or something like it, is the history. On glancing at the patient the observant practitioner will probably notice at once the paleness of her

[1] Lectures I. and II. were published in THE LANCET of May 28th and June 4th, 1898, respectively.

countenance and lips and her seriously "passive" expression. This can only arise from simple faintness with but little or no loss of blood or from active hæmorrhage. The pulse will decide it. If from simple faintness, although it may be temporarily lost or difficult to find, the pulse when felt again will be found to be slow and moderately full, while if hæmorrhage be still in progress the pulse increases in frequency as the hæmorrhage proceeds and after a time becomes perceptibly weaker. Perhaps the normal pulse-rate is known, and if so it will be found that it is twenty or thirty or forty beats in the minute faster than is usual and that the ratio is still increasing. This is obviously not due to nervousness or excitement, for the patient is curiously self-contained and quiet. Every now and then the pulse becomes fluttering and difficult to count and at these times there is usually some nausea and vomiting. Between these periods of extra-faintness it may temporarily improve in quality, but its rapidity does not diminish so long as the bleeding is unchecked. The temperature is sub-normal. If the hæmorrhage continue unabated a colder greyness slowly creeps over the countenance, the voice becomes feeble, the sight is dimmed, the fingers become white and rather cold, and the patient now speaks but little or only in answer to direct questions. Still, however, the mind remains clear and the patient is often acutely observant of all that passes around her. I have known a patient in this condition, rescued from imminent death by operation, speak afterwards of several things connected with her operation of which at the time it was thought she was practically unconscious. It is needless to try to trace the symptoms any farther—the patient is dying—and if anything is to be done to save her life it must be done at once.

In some of the worst cases (the symptoms of which I have been attempting to describe) there are no pelvic or abdominal signs of any definite importance or certainty. The hæmorrhage may come from a very little swelling near the cornu of the uterus and if the latter be inclined to retrovert the tubal swelling may be inaccessible. The blood is fluid; it is continually pouring or dribbling into the abdomen and the patient never has vitality enough for any kind of inflammatory reaction. In addition the patient may be stout, the abdominal parietes thick, and a satisfactory bimanual examination be altogether impossible. Then without any sign directly pointing to the tube the symptoms of internal bleeding must be our ground for action. Fortunately, however, in the majority of cases there is additional, and sometimes abundant, evidence to be obtained by careful examination. Sometimes a tumour is to be distinctly felt at one side of the uterus—sometimes a "decidua" has been passed *per vaginam;* usually the pouch of Douglas may be felt distended by blood-clot, the sensation of an ill-defined but full and boggy swelling being communicated to the finger of the examiner. In one case I detected absolute fluctuation of the blood through the abdominal walls before opening the abdomen, and other indications of blood in the abdomen may be elicited by percussion—dulness in the flanks very slowly changing with changes of position (Mayo Robson)—while in all cases which survive the first few hours, and in which the bleeding is temporarily checked, there is difficulty in the passage of flatus and motion—the patient suffers from considerable abdominal pain and, in short, the signs are present of peritonitis as well as those of recent hæmorrhage. In these cases it is but very rarely (if ever) that any evidence pointing to pregnancy is to be obtained from the condition of the breasts or areolæ or from the sensations of the patient. These are always feeble and more often wanting in the early stages of extra-uterine pregnancy, and any search for them with reliance on their importance will probably increase doubt at a time when certainty and action are of the utmost value.

Now as to differential diagnosis: in a case of early rupture with diffuse hæmorrhage the symptoms are so notably sudden and instant in their origin that there is but small danger of any other affection being suspected save those of similar acuteness. To one unversed in gynæcological disease the idea of poisoning is apt to come uppermost. Gastric or intestinal perforation from ulcer of the stomach or acute appendicitis may also be suspected. In all of these there may be the same sudden onset, but except as a curious and improbable coincidence there would not be the contemporaneous presence of an irregular blood-discharge from the vagina, and the history, however poor, of some delay in the appearance of the period. In all of these, too, the immediate pain and distress are much more violent than in hæmorrhage, while in gastric perforation (which usually occurs in young unmarried women) and in acute appendicitis there are antecedent symptoms or attacks which point to the stomach or the appendix as the source of trouble. As a matter of fact the question of these diseases has occurred to those concerned rather as post-mortem doubts and fancies after the patient has died than as serious diagnostic difficulties during life. The chief danger of the practitioner in my own experience has been to under-estimate the importance of the condition before him. The medical attendant has been unaffectedly surprised at the consultant's diagnosis and in one case he was evidently incredulous until the blood was pouring out of the opened abdomen. It has been the difficulty of making any diagnosis at all rather than the making of a wrong one which has usually been the stumbling-block and in two of my cases a physician was the first consultant who was sent for. In both of these cases I am happy to say the condition was recognised by the physician, and the surgical interference recorded was the result of his diagnosis.

Our next consideration is the diagnosis of an unruptured tubal pregnancy—of tubal mole and of peri-tubal hæmatocele. In the preceding section, when dealing with early rupture and diffuse hæmorrhage, we found that of the three chief factors which go to form the diagnosis, the symptoms—symptoms of internal abdominal bleeding—were on the whole the most reliable, that the history was of next importance, and that the physical signs of any tumour (although of the utmost value when present) were uncertain and might be practically wanting. As we proceed with our subject and discuss later and still later developments of extra-uterine pregnancy we shall find both history and physical signs increasing in value, and it is to these, therefore, that we shall mainly direct our attention: but at all the stages referred to (except the very latest) diffuse internal hæmorrhage may intervene and add its special signs and symptoms to those already present.

The previous history of the patient—the history before the pregnancy begins—is of some importance. There is a certain amount of well-being of the genital organs which is probably necessary for conception to take place, and in any case of pregnancy, whether uterine or extra-uterine, the patient has usually been moderately well and free from any marked pelvic trouble immediately before the act of impregnation. This period of ante-pregnant or ante-amenorrhœal well-being, which is of little or no importance in normal pregnancy, is worthy of special attention when there is a possibility of misplaced pregnancy, because the tumours with which this is liable to be confounded have usually some history of illness rather than of health immediately preceding their formation. Again, in rather more than half the number of cases of extra-uterine pregnancy several years have elapsed since the last normal pregnancy took place, and although the absence of this interval is of no diagnostic significance (as the accompanying tables will show), its presence in a suspicious case may be held as slightly increasing that suspicion and as being in accordance with the history of other recorded cases.

From the consideration of these two points we pass on to the history of the pregnancy itself. It is obvious that as the duration of the pregnancy increases so must its history be traceable for longer and still longer measures of time, and the chief sign which marks this is the absence of the normal menstrual period—not necessarily the absence of all sanguinolent discharge, but the absence of the normal period in its usual course. Some critical discrimination is often needed in order to arrive at a just conclusion on this point. For instance, in tubal mole (as I pointed out in 1894), there is often no definite history of amenorrhœa—that is, the patient has never gone "over her time" without vaginal loss, and if carelessly questioned such a patient will probably answer that she has been "regular" throughout, but that the present period is unusually protracted. On closer inquiry (of the same patient) we may, however, probably elicit the fact that the hæmorrhage which has been taking place during the last three or four weeks is very different in character from that of a normal menstrual period, and the patient has no difficulty in fixing a date some seven or eight weeks previously when she was last "properly poorly." Dr. Cullingworth has recently drawn attention to the characters of the hæmorrhage observed in this condition. He writes: "The blood is

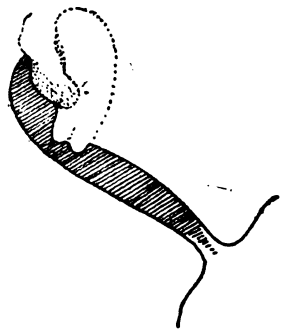
almost invariably dark in colour, moderate in amount, thickish in its consistence, and steady in its rate of flow. Gushes of bright red blood occur occasionally but are quite exceptional." If we add to this that the hæmorrhage is very persistent and that it may carry with it some shreds or portions of decidual membrane, all its special features have been noticed. Apart from the presence of decidua the most practical point, in my opinion, is the contrast often afforded by this bleeding to the normal bleeding of the menstrual period in the same individual. The type of menstruation often varies but little for years together and it is very rare that an intelligent patient is unable to detect the difference. Amenorrhœa, then, together with or followed by persistent, dark-coloured uterine bleeding of moderate amount is almost always met with. The hæmorrhage is usually due to some separation of decidual membrane from the interior of the uterus and is, moreover, a sign that the vitality of the pregnancy is endangered or destroyed. So long as the pregnancy—although out of place—is growing and uninjured there is, as a rule, no uterine bleeding. If the decidua be shed it does not follow that the bleeding ceases. Hæmorrhage continues from the interior of the uterus while the abortive pregnancy remains as a source of irritation within the tube, and in some cases at least I have very little doubt that the hæmorrhage comes directly from the tube—the tube containing the mole of pregnancy—bleeding alike into the uterus by its open uterine end and into the pelvis by its open fimbriated end.

We now pass to the physical signs elicited by examination of the patient. When dealing with the pathological history of tubal pregnancy I noticed that one of the earliest and most marked phenomena attending its presence was the increased vascularity of the parts affected. There is a sign, a very constant and valuable one, accompanying this—the presence of pulsating vessels in the vaginal vault on the affected side. All the branches of the uterine artery are subject to very marked enlargement on the side of the pregnancy. It is often easy to touch a vessel the "pulse" of which is very comparable to that of the radial and, although inflammatory affections may sometimes give rise to very similar hyperæmia, the pulsation of the vessels is rarely so marked and so easy to elicit as in tubal pregnancy.

The next point is the finding of the extra-uterine tumour. If we turn to the sequence of illustrations which I used when describing tubal mole and peri-tubal hæmatocele [2] we shall at once recognise the leading features to be determined (if possible) by vaginal and bimanual examination. There is the tubal tumour caused by the misplaced pregnancy, its size, shape, position, and mobility, and there is the displacement (if any) of the pelvic viscera caused by its growth. When hæmatocele forms there may be the opportunity perhaps of following the alteration in the tumour produced by hæmorrhage—in watching the change from mobility to fixation, the rapid lateral and upward growth of the blood-mass, and the change from the insensitive little tubal tumour of the healthy and unruptured pregnancy to the acutely tender and extending hæmatocele. For at first, when the pregnancy forms within the tube, there is no pain or tenderness, and it is only by accidental good fortune that the opportunity arises for an examination under these conditions. In one case seen by me at this stage the patient had nothing to complain of except amenorrhœa of five or six weeks' standing, but to one side and behind the uterus a little moveable tumour was plainly felt which, by its shape and its contiguity to the uterus, suggested a tubal rather than ovarian origin. Another observer describes the tumour under these conditions as "sharply limited from the unaltered part of the tube, as closely corresponding to the size of the ovum, and as elastic but yielding" (Winter).

Later, if bleeding occurs within the tube its enlargement is not limited to the site of pregnancy but the whole of the tube becomes distended, and this is the stage when the diagnosis of the tumour is attended with least difficulty. The tube is not only distended but hard, its sinuous curves are easily followed, its tubal or "sausage-shaped" character is readily ascertained, and if the hæmorrhage be limited to the interior of the tube and no blood as yet has invaded the peritoneal cavity there is still but little or no tenderness and a full examination may be made without difficulty or pain. The following illustration (Fig. 36) will, perhaps, convey better than words can do what may be felt under such conditions by vaginal touch and bimanual examination. It also indicates the usual limitations to complete investigation. The uterus is inclined to retroflexion; its highest part can, perhaps, be felt bimanually, but whether this be fundus or the upper portion of the anterior surface is probably uncertain. Behind the cervix a sausage-like tumour is plainly felt closely applied to the back of the uterus and probably adherent to it. In

FIG. 36.



some cases it seems to partially encircle the uterus like a collar. One curve of it is thoroughly felt and above this the beginning of another is just accessible. Beyond this point any further investigation by ordinary vaginal or bimanual examination may be impossible. Rectal examination will afford larger and higher opportunities, but this is inadvisable except in cases of serious doubt and difficulty when the patient remains under the personal observation of the surgeon.

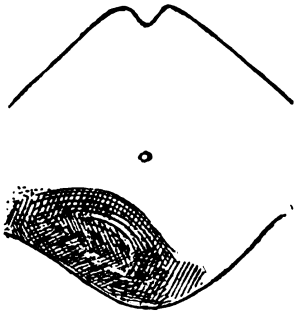
While the foregoing is a fair description of the tumour very generally found in cases of extra-uterine pregnancy it by no means follows that the tumour, or any tumour, is always met with in this situation. Sometimes the pregnant tube is altogether on one side of the uterus, the pouch of Douglas being quite empty, and when the uterus is much retroflexed the tumour may even be found in the front half of the pelvis, the pregnancy lying altogether anterior to the uterus. In this situation the tumour is very accessible to bimanual examination provided the bladder be empty. (The use of the catheter is always an important preliminary to a thorough examination of the pelvis.)

It might easily be supposed that, as hæmorrhage took place into the pelvis and the original distension of the tube was supplemented by the formation of a hæmatocele, so the resulting tumour would become increasingly prominent and more easy of diagnosis. But it is not so. With every bleeding into the peritoneal cavity there is pain, there is some collapse, and there is abdominal tenderness persisting for many days. The slightest pressure is objected to, the abdominal muscles are contracted, deep palpation is impossible, and any attempt at bimanual examination is apt to be most unsatisfactory. Furthermore, it will often be found on vaginal touch that the clearly-defined outlines of the tube are obscured or even lost in the swelling of the hæmatocele. There is evidently a tumour present and it appears to be connected with the Fallopian tube, but its upper limit cannot be palpated from the abdomen and its exact size and boundaries are uncertain. Here the displacement of the uterus, if definite and permanent, will afford valuable evidence as to the size of the swelling which causes the displacement. A little later, if the hæmorrhage is repeated and the hæmatocele increases, we find the upper limit of the swelling appearing above the pubes. In spite of the pain and abdominal distension there is then no difficulty in ascertaining the full extent of the tumour. Above one groin we usually find the convex outline of the mass arising from below. It is lateral, fixed, tender, and bulging, and may be conveniently represented in the usual way by the accompanying outline illustration (Fig. 37). The convex upper border of the mass is well marked. It is sometimes visible, it can be felt on gentle palpation, and tends to extend in an increasing curve towards the umbilicus. Below this line the percussion note is dull; above it, the adherent and probably distended intestine marks a clearly defined area of resonance. This applies to the central portion of the curve; each end of it shades off into inaccessible regions—on the one side toward

[2] Vide Figs. 8, 9, and 10, THE LANCET, May 28th, 1898.

the loin of the affected side, on the other beneath the pubes. Examined bimanually the abdominal mass above the groin is felt to be one with the tubal tumour in the pelvis and the displacement of the uterus to the non-affected side (which is now extreme) is marked and unmistakeable. This tumour, which is usually characteristic of the advanced

FIG. 37.

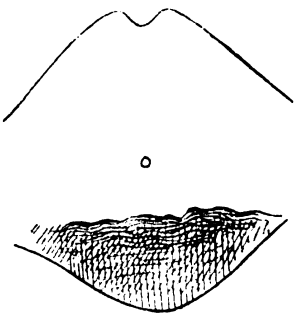


development of intra-peritoneal hæmatocele, the result of bleeding from the unruptured tube, and which then is produced somewhat slowly or after repeated hæmorrhages, may also be more suddenly formed by later rupture of the tube; and, so far as physical signs are concerned, there is no essential difference in the resulting hæmatoceles. The same description will accordingly apply to both formations.

Very similar, too, is the tumour formed by an intra-ligamentary pregnancy about the fourth month when the pregnancy is of the anterior or sub-peritoneo-pelvic variety. There is no difference except that the uterus is liable to be raised as well as displaced to the opposite side by the growing pregnancy and that in this case one is more liable to meet with the signs of a fixed iliac tumour growing into the abdomen above the groin without any symptoms of internal hæmorrhage, because under these circumstances the pregnancy may be uninterrupted by accidental changes. Frequently, however, disturbances do arise and then no differential diagnosis between the two hæmatoceles is possible until the abdomen is opened.

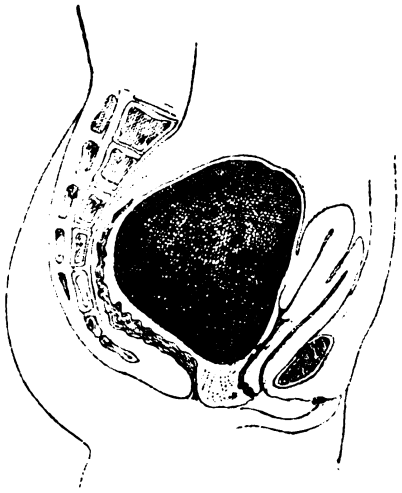
The only other tumour needing consideration at this stage is that of the typical retro-uterine hæmatocele when the pouch of Douglas is acutely distended, its opening above into the peritoneal cavity being temporarily occluded. The condition occurs but rarely as the result of tubal bleeding (an example is afforded by Case 2), but when it does take place the signs—both abdominal and pelvic—are very different from those I have already described. In the (two) cases I have seen the upper limit of the blood-mass was readily felt from the abdomen, but instead of being lateral, convex, and bulging it simply formed a hard, irregular wall or line stretching right across the abdomen, midway between the pubes and the umbilicus, the abdomen below this line being uniformly hard and dull with coagulated blood (Fig. 38). The active, grow-

FIG. 38.



ing, bulging pole of the tumour in this hæmatocele was transferred (as it were) from the abdominal to the pelvic aspect. The abdomen was quiescent; the pouch of Douglas was acutely distended. With one finger in the vagina and the other in the rectum the tense elastic swelling of the over-filled pouch could be thoroughly appreciated, bulging between the two. The leading features of this hæmatocele are well represented in the following illustration. (Fig. 39.) The

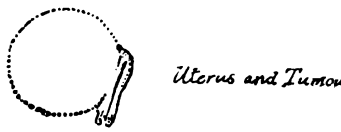
FIG. 39.



small intestines lie across and somewhat flatten the upper boundary of the blood-mass, while the fold of peritoneum between the vagina and rectum is transformed into a large sac full of blood and serum.

The next point is the determination of the size, position, and contents (if any) of the uterus. The uterus is nearly always slightly enlarged, the enlargement bearing a strong resemblance to that of the sub-involuted uterus after confinement and having but little in common with the broad and succulent enlargement of the pregnant organ. It is slightly thicker and longer than normal, as a bleeding uterus generally is, but the cervix is not specially soft and yielding, and

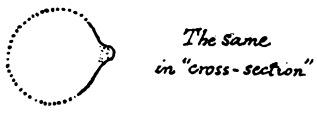
FIG. 40.



The tumour and the uterus in close relation.

if this be followed up by the finger beyond the vaginal reflexion and the tumour of the extra-uterine pregnancy or hæmatocele be encountered in its (close) relation to the uterus somewhere in the pelvis the cervix may often be followed beyond and above the lower limit of the tumour and the uterus may be felt something like a finger fixed to one side of the tumour. (Figs. 40 and 41.)

FIG. 41.



The tumour and the uterus in cross section.

We have already traced the early tendency of the uterus towards retroflexion and its later displacement to one side of the pelvis. Generally with the larger hæmatoceles produced by recurrent bleedings, and always in true retro-uterine hæmatocele, which we have just been considering, the uterus is strongly displaced forwards. When the pouch of Douglas is excessively distended it may also be carried upwards so that the cervix is difficult to reach. The exact position of the fundus and the emptiness or non-pregnant state of its cavity are very important, and sometimes very difficult, points to determine, but they must be decisively settled before any operation is undertaken. On careful bimanual examination, if (as already described) the supra-vaginal

cervix has been traced upwards by the examining finger from below, the direction of the uterus is followed as far as possible and the probable situation of the fundus—toward the front or the side of the pelvis—is definitely determined. Then, if the hand on the outside of the abdomen be carried to this point in spite of the larger displacing tumour of the pregnancy, the fingers of the outside hand may often be gently pressed down on the summit of the fundus and the whole of the uterus may be accurately mapped out (bimanually) by the fingers. Sometimes the conditions—the coexistence of peritonitis and abdominal distension—make such examination an utter impossibility, and then it may not only be allowable, but necessary, to pass the uterine sound in order to come to a certain conclusion. Both the passage of the sound and rectal examination should, however, be left to the discretion and use of the operating surgeon. All other reasonable methods for determining the condition of the uterus should have been previously used and the same delicate gauging of the probable position of the fundus and direction of its cavity as that already described should precede the final determination of the curve of the sound and of the passage of its tip within the external os.

We have now concluded the examination of the patient, but we have still to consider the symptoms which accompany intra-peritoneal bleeding and hæmatocele. Some have been incidentally referred to, such as abdominal pain and tenderness, distension, and rigidity of the abdominal muscles. The characteristic feature of these symptoms, as also of the collapse and faintness and vomiting generally accompanying them, is that they come on suddenly because they are directly due to the bleeding, and if the bleeding be slight or moderate they rather quickly diminish in intensity or entirely disappear. For instance, a patient suffering in this way may feel perfectly well all day, be attacked with sudden violent pain at 11 P.M., feel seriously ill for half the night, have a good sleep towards morning, and be attending to her usual household duties in the course of the following day. These attacks, in the same way as the bleeding which we have studied before, are almost inevitably recurrent, so that in a large number of cases treated by operation we have a clear history of three or four attacks before the abdomen is opened. The suddenness of these attacks is very frequently surprising to the patient herself. One of my patients in whom they occurred during the daytime gave a history of a fall with each attack, evidently supposing that the pain from which she suffered was the consequence rather than the cause of the fall in each case. Some of the remarks of the patients are as follows: "I was suddenly seized with pain on the left side of the belly, in the back, and in the thigh. I was bent double with it." "I was seized with sudden pain in the lower part of the stomach soon after getting out of bed." "I was seized with sudden pain three weeks ago on returning from church on Sunday, violent abdominal pain and vomiting being my chief symptoms. The pain was repeated on the following Thursday and Saturday and twice during last week." Vomiting very generally accompanies the attacks but is not persistent. At first the patient usually speaks of the pain as being all over the abdomen, but when questioned can generally differentiate one side as being more painful than the other. If the bleeding increases, and always if the hæmatocele extends above the groin into the abdomen or really fills and distends the pouch of Douglas, the condition of the patient becomes permanently serious—she is confined to her bed with abdominal pain and tenderness. She is, as a rule, visibly anæmic from the loss of blood; there is either present or there is the clear history of some acute peritonitis following the last attack. The pulse is quick and feeble—probably 120 or more. There may be considerable pyrexia, the temperature rising to from 100° to 103° F., and in a certain proportion of cases there is slight but decided albuminuria. This last symptom appears in some way to be directly due to the blood effusion, for in the cases in which I have observed it it has promptly disappeared after operation. The pyrexia in intra-abdominal hæmatocele is probably due to re-absorption of blood and need not be regarded as septic. When the peritoneum has been lifted from the rectum or the pouch of Douglas is shut off from the rest of the peritoneal cavity and this is acutely distended with blood the pyrexia which slowly comes on is of quite a different character. The proximity of the rectum, the anterior coat of which is stretched and thin or the serous covering of which may be defective, favours the passage of septic matter from the bowel into the hæmatocele; decomposition of the blood generally occurs and the temperature may rise to 104° or 105°. The iliac hæmatocele or the pouch of Douglas becomes further distended by inflammatory effusion, and all the symptoms of septic absorption are probably present. Apart from this condition the chief value of the symptoms is as a measure of the importance and severity of the internal bleeding. The anæmia, the faintness, the collapse, the vomiting, the abdominal pain, and the peritonitis will vary in direct ratio to the bleeding. If such symptoms are produced slowly they point to tubal mole with increasing hæmorrhage from the unruptured tube. If, on the other hand, they are produced suddenly they point to later rupture of the tube.

With this we complete the consideration of all the elements which go to form a positive diagnosis of extra-uterine pregnancy before and during those disturbances to its progress which are so common in the earlier months—the disturbance of intra-peritoneal bleeding and hæmatocele formation. Let us briefly recapitulate them: We have:—(1) A patient within the child-bearing limits of age, and one in whom a pregnancy is possible; (2) she has recently been in good health; (3) it is more likely than not that several years have passed since her last pregnancy; (4) there is a history of some amenorrhœa accompanied or followed by (5) irregular uterine hæmorrhage, dark in colour, moderate in amount, and persistent in its course; (6) with this there may be the history of the passage of some membrane, either in one pouch or bag as a "complete decidua," or in two pieces, or in shreds; (7) on examination pulsating vessels may be felt in the vaginal vault on one side of the uterus; (8) on this side also, and closely investing the back of the uterus, there is nearly always a tubal tumour (exceptionally this may have a different or curious situation); (9) this tumour enlarges markedly and suddenly by recurrent hæmorrhages and by the formation of a hæmatocele directly continuous with the original tubal tumour; (10) these hæmorrhages are signalised by sudden spasms of severe abdominal pain and by transient attacks of peritonitis; (11) the uterus is displaced by the hæmatocele at first backwards, afterwards to the opposite side of the pelvis, and sometimes forward (against the pubes) (it is very rarely that the uterus is permanently displaced downwards); and (12) the uterus throughout, although slightly enlarged, may be proved to be empty.

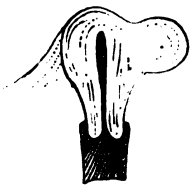
The differential diagnosis still remains for us to consider. Extra-uterine pregnancy under the conditions I have been describing may be mistaken for: (1) pyosalpinx, with amenorrhœa; (2) myoma; (3) simple abortion; (4) retroflexion of the gravid uterus; (5) anteflexion of the gravid uterus; and (6) twisted pedicle tumours—(*a*) of the tube, and (*b*) of the ovary.

1. Pyosalpinx is usually accompanied by regular menstruation, menorrhagia, or metrorrhagia. Every now and then, however, in double pyosalpinx (when the ovaries have probably been rendered temporarily functionless by dense enveloping adhesions) there is total amenorrhœa of from two to three or four months' standing, and then the symptoms and signs may be almost identical in the two conditions. The pyosalpinx will afford us a typical tubal tumour, and when both sides are affected the tube of the one side is nearly always very much more distended than that of the other, so that the main tumour is one-sided. The inflammatory thickening and adhesions closely surrounding the tube may simulate a hæmatocele. A pinhole perforation of the distended tube may cause abdominal pain, collapse, vomiting, and a consequent attack of peritonitis, and in short there may be nothing but the history to guide us to a wise and correct diagnosis. Here, the immediately preceding health or ill-health of the patient becomes a point of high importance. If the pyosalpinx be quite recent there will still be the history of purulent vaginal discharge preceding the pelvic inflammation, while if, as is more probable, the pyosalpinx be an acute recrudescence of an old affection the patient may confess to some similar attack two, three, or four years previously and to some tenderness or aching in one side during all these years.

2. The likeness to myoma is most marked when a tubal hæmatocele, not quite recent and hard from coagulation of the blood contained in it, is firmly fixed on one side of the uterus and is free from all other connexions. Then if the observer's mind be fixed on the condition of the uterus as a cause for continued uterine hæmorrhage and if on bimanual examination he can thoroughly palpate a globular immoveable "boss"—not specially tender—on one side of

the fundus uteri, he may easily imagine the case to be a clear one of myoma. Case No. 37 may be taken as an example. Mrs. K was sent to me as suffering from cancer of the uterus causing continued uterine hæmorrhage. The cervix was badly lacerated and diseased, but no certain sign of cancer could be detected. On further examination a hard tumour or out-growth was felt extending from the fundus. It moved with the uterus and had no other connexions. Here was the source of the bleeding. Yes; but not the source imagined. Instead of the myoma too hastily

FIG. 42.



Diagrammatic representation of uterus and tumour as felt in Case 37.

diagnosed the tumour was a peri-tubal hæmatocele around an early tubal pregnancy. A more careful attention to the history would have prevented such an error and would generally direct the thoughts into a right channel when extra-uterine pregnancy is present. In the present instance there was a history of acute abdominal pain corresponding to the formation of the hæmatocele and any attack of this kind is unknown or very unusual in myoma.

3. An extra-uterine pregnancy which has resulted in tubal mole and hæmatocele may easily be regarded as a simple abortion by any one who depends entirely on symptoms, for these may be very similar in both affections, the peritonitic pains of the one being closely simulated by the painful uterine cramps of the other. On vaginal examination, however, the two conditions are at once differentiated or the "abortion" is shown to be no simple one by the presence of a tumour outside the uterus. When the conditions are unfavourable for full examination, or when there are any grounds for supposing that a tumour may be present but inaccessible, great caution is needed. The interference that would be right in incomplete abortion may be very harmful when the main source of irritation is outside the uterus. No. 36 is a case in point. Mrs. L came to my out-patient room at the hospital with all the symptoms of an early abortion, and at her first visit I could find no trace of any tumour, the abdomen being rigid and the conditions generally unfavourable for full examination. The uterus was enlarged, the cervix was soft and open, and the hæmorrhage had been continuous for four weeks. Diagnosis was deferred. Some few days afterwards the uterus was dilated by the physician in attendance at the patient's home. Nothing was found within it. Severe abdominal pain set in coincidently with the dilatation. I saw the patient again, recognised a tubal pregnancy on the right side of the uterus, admitted her into the hospital, and operated. The tube was ruptured, the placenta protruding. There were also recent inflammatory adhesions about the tube and uterus.

4. Retroflexion of the gravid uterus has been recognised by most authors as a condition needing careful differentiation from extra-uterine pregnancy, because unfortunate cases have been recorded in which a distended tube in Douglas's pouch has been supposed to be the pregnant retroverted fundus and an injudicious attempt at its replacement (?) has ruptured the tubal sac and hastened the death of the patient. When one knows this and recognises the danger of any interference before a certain diagnosis is formed it will be found excessively rare or impossible for any similar mistake to recur. The position of the fundus must be ascertained by careful bimanual examination; its presence or its absence in front of the tumour must be satisfactorily determined. When there is any tumour other than the fundus filling the pouch of Douglas the whole of the uterus (generally quite straight) is pushed against the pubes; the cervix is looking directly downwards and if the bladder be empty the fundus may be felt on gentle pressure immediately above the pubes. When the pregnant fundus is in the pouch of Douglas there is of course no fundus to be felt in front of the tumour. Bimanually the fingers of both hands may perhaps be so closely approximated above the pubes that the cervix may be felt to be continuous with the posterior tumour and absolutely free from any other connexion. Retention of urine is more common in retroflexion of the gravid uterus while a discharge of blood (unattended with labour pains) is more common in extra-uterine pregnancy.

5. Anteflexion of the gravid uterus, although but rarely recognised as a possible source of error, may occasionally be quite as perplexing as the gravid retroflexion. Whether from an unusually high attachment of the impregnated ovum—quite at the fundus uteri—or from some other cause less easy to understand, a pregnant patient, usually a primipara, is sometimes found who suffers from severe pains during the early months of pregnancy and in whom the two or three months pregnant fundus forms a globular elastic tumour which appears to have little or no real continuity with the cervix (Fig. 43). The cervix remains

FIG. 43.

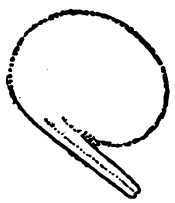


Diagram of anteflexed pregnant uterus with lengthened but undeveloped cervix.

thin, hard, undeveloped, pencil-like, and runs behind the tumour of the pregnancy as far as the finger can reach. Further, it is absolutely lengthened, so that it feels as if the whole of an infantile or ill-developed uterus was to be explored behind a sac of pregnancy. I have even known a sound passed to the top of the lengthened but undeveloped cervix under these conditions give almost or quite the normal uterine measurement, produce no abortion, and in this way afford to the practitioner who used it confirmation of his (mistaken) opinion that the pregnancy was outside the uterus. Again, the knowledge that such cases occur is the surest safeguard against error. Sometimes the round ligament can be felt on each side of the distended fundus, and if so it is certain that the tumour felt is the uterus itself. If serious doubt remains in spite of ordinary careful methods of examination (which should *not* include the passage of the sound) it may be a relief to remember that extra-uterine pregnancy as well as intra-uterine pregnancy in a misplaced uterus does not as a rule cause urgent danger or need immediate interference so long as there is no sign of uterine discharge. If the patient be kept in bed she may remain under observation until the condition becomes clearer or until a more experienced opinion can be obtained.

6. Twisted pedicle tumours—(*a*) blood tumours of the tube from twisted pedicle, and (*b*) blood tumours of the ovary from twisted pedicle. Small tumours of the tube or ovary arising from or increased after twisting of the pedicle are very liable to be mistaken for misplaced pregnancies which have resulted in internal hæmorrhage. Not only are the signs and symptoms extremely similar, but the physical condition, the resulting hæmatoma or hæmatocele, may be almost alike in the two conditions. When accompanied, as they sometimes are, with menstrual irregularity the history also may favour the suspicion of a tubal pregnancy with hæmatocele. The sudden abdominal pain which characterises the final twist when the return circulation is obstructed, the vomiting and faintness which accompany this, and the rapid formation of a prominent and tender tumour, are all suggestive. The tumour itself, however, is not so intimately connected with the uterus as a tubal pregnancy would be. Whether formed by the tube or the ovary it has rather the character of an ovarian enlargement, and unless adherent to the uterus there is quite generally some unoccupied space to be discovered between the uterus and the tumour. The following cases are illustrative:—

Mrs. M, aged twenty-nine years, had been suckling her second child for six months when she was suddenly seized with severe abdominal pain on the left side. The pain continued. When examined some days later the following note was made: "A soft (cystic) elongated body, probably tubal, is felt behind the uterus." The patient had not menstruated since her confinement. The case was watched

for a time and before operation the diagnosis was entered of adherent tumour of the left ovary and tube. Abdominal section showed a torsion blood-cyst of the left Fallopian tube.

Mrs. N, aged thirty-seven years, menstruated regularly until six weeks ago. On March 24th (five weeks after her last menstruation) she was suddenly seized with severe abdominal pain, fainting, and sickness. This occurred at night and the pain has continued ever since. On examination a globular, tender tumour of about the size of a child's head was felt above the pubes on the right side. The uterus was displaced to the left by the tumour; it was of normal size and appeared to be empty. Although displaced by the tumour no direct connexion could be made out between the uterus and the tumour. The alternative diagnosis was made of right ovarian tumour with twisted pedicle or extra-uterine pregnancy in the right Fallopian tube with hæmatocele. Abdominal section showed a black adherent blood tumour of the right ovary with a three times twisted pedicle.

So far we have been considering the diagnosis of extra-uterine pregnancy as associated with various disturbing influences which usually destroy the life of the fœtus and seriously threaten or destroy that of the mother also.

In tubo-abdominal and in later tubo-ligamentary pregnancy both child and mother have escaped or "weathered" these early dangers, and if the child be living the diagnosis is much less complicated. In most cases there is but little doubt of the pregnancy and the diagnosis then mainly resolves itself into a differential one between intra- and extra-uterine pregnancy. When the child has been a long time dead and the history of the pregnancy is no longer recent, the question of any pregnancy may be very doubtful and the diagnosis again may become perplexing and

FIG. 44.



External configuration of abdomen in Case 3.

obscure. When the child is living the ordinary history, symptoms, and external signs of pregnancy are probably present. There is a history of amenorrhœa corresponding to the period of pregnancy with or without some history of transient pain and discharge about the time when the fœtus escaped beyond the limits of the tube. The

FIG. 45.



External configuration of abdomen in Case 33.

patient herself has possibly passed through the troubles and sensations generally incidental to a normal pregnancy—the morning sickness, unusual cravings of appetite, and the period of quickening. The mammary signs, pigmentation of the areola and follicular development round the nipple (never very reliable), are more likely to be present than wanting. There is turgescence and bluish discolouration of the vulva and vagina. The mother is usually very conscious of the movements of the child and if she have experience of former (normal) pregnancies may perhaps complain of its unusual position.

In tubo-abdominal pregnancy during the latter months the fœtus is immediately recognisable on examining the abdomen, sometimes on simple inspection and always on light palpation (Figs. 44 and 45). The fœtus and placenta are probably lateral or zigzag in position, but the fœtus may permit of passive movement into a more central situation. The ease and clearness with which its various parts can be palpated are quite remarkable; these may be felt to be lying immediately beneath the abdominal walls and the mother may bitterly complain of pain from the fœtal movements. A limb can, perhaps, be taken hold of and the beating of the fœtal heart can be heard with unusual clearness. The parts of the pregnancy most liable to be mistaken for each other are the placenta and the head. The placenta being almost certainly attached to the tube should be lower in position. While the hands of the observer are examining the child there is no clear indication of any containing sac alternately expanding and contracting around the fœtus. On vaginal and bimanual examination the uterus may be found displaced to one side of the pelvis, only slightly enlarged and obviously distinct from the child. If this be so the position of the child is certainly extra-uterine and the apparent absence of any covering argues a tubo-abdominal pregnancy rather than a tubo-ligamentary one.

Is the uterus definitely and decidedly distinct from the pregnancy? This is the all-important question, for nearly everything I have described as characterising the abdominal position of the child may be wonderfully simulated by a normal intra-uterine pregnancy when the walls of the uterus are unusually thin. This extraordinary thinness of the uterine walls occasionally encountered with or without "hydramnios" or excess of the amniotic fluid has been noticed by many observers. One of the first to remark it was Dr. Ingleby, in 1834. In its extreme condition it is very curious and needs to be seen in order to be thoroughly believed. The fundus uteri cannot be found apart from the pregnancy, and this should excite the strongest suspicion *against* an extra-uterine position for the child. If the independent existence of the uterus cannot be demonstrated, especial care and patience should be employed in watching, with the hand on the abdomen, for the slightest indication of a uterine contraction. If the loosely-lying limbs of the child do temporarily disappear and give place to the rounded arch, however feeble, of a containing sac, the presumption is in favour of an intra-uterine pregnancy.

In tubo-ligamentary pregnancy, before the child is sufficiently formed to be detected by palpation there may be an opportunity for diagnosing the condition, as in the two cases I mentioned at the beginning of this lecture. From the experience there described it would appear that in the posterior ligamentary variety the tumour of pregnancy may be so centrally situated and the uterus so united to it—probably so spread out on its anterior surface—that early pregnancy within the uterus is very closely simulated. Rectal examination might materially assist the examiner under such conditions and will, I hope, prove of future service in the early detection of this variety. In the later stages of the tubo-ligamentary pregnancy when the child is living many of its features are very comparable to those described as existing in the abdominal variety but are less marked. The tumour of the pregnancy is probably lateral or eccentric. Though contained in a sac, the latter is very likely not of uniform thickness and in some parts the child may seem to be very near the surface and may be more easily palpated than when *in utero*. This especially applies to the anterior or sub-peritoneo-abdominal variety where part of the sac of pregnancy may be between the peritoneal reflexion and the skin. Abdominal *ballottement* of the fœtus is often very marked and the fœtal heart-beats are well heard. Sometimes the fœtal limbs are lying in the pouch of Douglas and are then palpated with great facility (Winter). As the child has been originally formed below the placenta the latter will probably have a higher position than in tubo-abdominal pregnancy and internal hæmorrhage from displacement (with faintness, blanching, and fatal collapse) may arise. The fœtal movements, active and passive (*ballottement*), and the auscultation of the fœtal heart and of the placental

souffle, will testify to the fact of pregnancy, but dependence must be placed on careful vaginal and bimanual examination for the detection of its abnormality. The cervix is displaced and the rest of the uterus is pushed (generally) to one side and downwards below the sac of pregnancy.

The differential diagnosis at this stage consists in the separation of advanced abdominal and tubo-ligamentary pregnancy from — (1) normal intra-uterine pregnancy, (2) pregnancy in one half of a double uterus, and (3) pregnancy in one horn of a bi-cornuate uterus.

1. In tubo-ligamentary pregnancies the uterus is in much closer relation to the pregnancy than in the tubo-abdominal form. It is often intimately incorporated with one side or aspect of the sac as it so often is in other intra-ligamentary tumours when these form. In spite, however, of this the solid thickness of its body traced upwards from below, the undeveloped state of the cervix, and the palpable emptiness of its cavity, all emphasised more strongly the nearer the pregnancy approaches to term, will hardly fail to guide the observer to a right conclusion. If the sound be used to confirm that opinion it must be remembered that the uterus is often greatly stretched by the growth of the pregnancy, but there will be no free movement of the sound within the cavity of the uterus. As already stated, regular contractions and relaxations of the sac are strongly suggestive of an intra-uterine position. Whether these ever occur in a ligamentary sac containing some muscular structure is doubtful. This is a point which requires further observation.

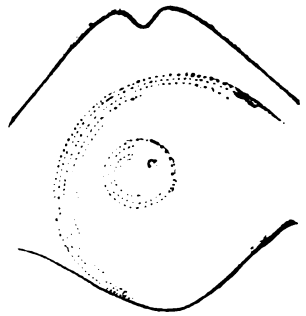
2. Pregnancy in one half of a double uterus is only perplexing to those who have no knowledge of the condition. The double cervix seen through a vaginal speculum will at once suggest the possible explanation of any abnormality and the non-pregnant uterus can be isolated from the pregnant one by passage of the sound.

3. Pregnancy in one horn of a bi-cornuate uterus is more difficult, especially if the non-pregnant horn be considered to be the body and fundus of the uterus. The condition (like the preceding) is a very rare one, but so also is an extra-uterine pregnancy to the ordinary accoucheur. If no serious symptoms are present and labour appears to be proceeding as usual the child in one horn of a bi-cornuate uterus will probably be born without difficulty. In some of these cases, however, there is no perfect communication between the pregnant horn and the cervix, and when this is the case the birth of the child is quite as impossible without operation as it is in true extra-uterine pregnancy.

In all extra-uterine pregnancies which go to term there is a more or less well-marked period of false labour and with this we have certain warnings, opportunities, and signs which should be of special interest to the accoucheur. The latter is usually sent for on the supposition that labour is beginning and it is of very great importance that this opportunity for diagnosis and advice should not be neglected. Whenever the cervix is found to be small and somewhat displaced and to have no proportionate relation to the history and symptoms of a full-term pregnancy the case should be thoroughly investigated and a full examination made. Especially care is necessary that the complaint of the patient be not lightly dismissed as simply a "false alarm." In extra-uterine pregnancy the "pains" are abdominal and are chiefly connected with the movements of the fœtus. They are probably accompanied by some vaginal discharge and sometimes by the expulsion of membrane. The pains last for several days, often preventing sleep. Finally they cease—cease suddenly—and the movements of the child are no longer felt. Soon after the breasts enlarge and temporarily fill with milk, but no encouragement being afforded to its flow the draught soon ceases. All symptoms directly connected with the pregnancy (except the enlargement of the abdomen) permanently subside and the patient either enjoys a moderate amount of health and resumes her usual duties carrying her dead child with her, or septic changes occur within the sac, rigors and fever follow, and the patient drifts into a "typhoid" state from which nothing but the removal of the putrid contents of the sac can rescue her.

This brings us to the consideration of the second division of full-term extra-uterine pregnancy—viz., when the child is dead. In tubo-abdominal pregnancy the child is in all cases so easily distinguished that notwithstanding all movement is lost there is but little real difficulty in the diagnosis. The shape of the abdominal tumour, and especially the detection of the fœtal limbs through the abdominal parietes, combined with the evidence of an empty uterus, will in all cases establish the nature of the case. The differential diagnosis from intra-uterine pregnancy, which before "term" and when the child was living we found to be of first importance, is now (probably) no longer necessary and the diagnosis is correspondingly lightened. But in the tubo-ligamentary pregnancy, and especially in the posterior ligamentary form, the diagnosis is often rendered exceedingly obscure and difficult by the death of the fœtus, the more so when several months have elapsed since its life was ended. Menstruation may have been re-established and the patient does not necessarily volunteer the slightest information which would direct the mind toward the causation of the tumour. There is, of course, no fœtal heart-beat, no fœtal movement, no placental *souffle*, the patient's breasts have lost all indication of a pregnant state, and if septic disturbance has already taken place the patient may be in no condition to answer intelligently the questions of the examining surgeon. There is nothing but the large fixed abdominal tumour, the nature of which may be hidden by the thickness of its walls (Fig. 46). The suspicion of pregnancy,

FIG. 46.



External configuration of the abdomen in Case 4. The inner circle near the umbilicus marks an area of less resistance within which it was possible to palpate the fœtus.

while the tumour was forming, if alluded to, is so common among all women with gradual abdominal enlargement that its significance is very easily unrecognised. No class of case may require more painstaking patience and perserverance in its investigation. Little by little, however, the history of the pregnancy may be gathered. The nine months' slow enlargement of the abdomen, the amenorrhœa, the fœtal movements (?), the spurious labour or something corresponding to it, the history of the breast-signs, all should be inquired after and their presence or absence noted. Sometimes on deep palpation of the tumour one may feel the resisting body of the fœtus after displacement of the fluid which surrounds it—a valuable sign, which can only be simulated by a solid tumour, probably papillomatous or malignant, floating in a cystic cavity. The differential diagnosis under these conditions will be from ovarian tumour—single, suppurating, or malignant. The mimicry of the last condition to extra-uterine pregnancy with retained fœtus may be curiously complete. In one case on which I operated the patient had a large abdominal tumour which had been forming for twelve months. Menstruation had ceased from the first appearance of the tumour. The patient considered herself pregnant and prepared for the birth of the child. The medical man was engaged for the confinement and at the end of nine months some kind of spurious labour (or what was taken for such) undoubtedly took place, but no child was born. When I saw her some three months later she had rapidly emaciated, there was evening pyrexia, and the abdomen was greatly distended by an irregular tumour more marked on one side of the body. On vaginal and bimanual examination the uterus was found to be independent of the tumour and empty, and on palpation in the pouch of Douglas the finger after displacing fluid felt two solid bodies which resembled the feet and ankles of a fœtus at full term. At the operation there was malignant tumour of both ovaries with localised ascites and two movable malignant nodules floating in the pouch of Douglas. In difficult cases the evidence may be insufficient to warrant a certain single diagnosis, but it should be sufficient to offer an alternative selection and to guard the surgeon from any

TABLE OF CASES OF EXTRA UTERINE PREGNANCY.

No.	Age.	Married.	Children	Youngest.	Last menstruation.	Signs.	Symptoms.	Diagnosis.	Remarks.	Medical attendant.	Date of operation.	Place.	Present.	Particulars.	Sequel.
1	38	—	2	12	11 weeks.	Right side tumour.	Pain and emaciation.	—	Marked albuminuria.	Mr. Parratt.	March 7th, 1888.	Women's Hospital, Birmingham.	Dr. S. T. Ricketts (U.S.A.) and Dr. A. Clark.	Large fœtus and placenta (from 3 to 4 months).	Left hospital March 28th; recovery.
2	32	—	4	2	17 weeks.	Tumour on left side and behind uterus.	Pain on left side; irregular bleeding two months, after amenorrhœa two months; in bed four weeks.	Tubal pregnancy.	—	Dr. Lynes.	June 14th, 189 .	Do.	Mr. F. H. Maberly, Dr. Baker, and Dr. Eccles (U.S.A.)	Large unruptured tube containing mole.	Left June 23th; recovery.
3	35	—	4	11	9 months.	Child felt in abdomen; uterus empty; fœtal pulse very audible.	Hæmorrhage and pain after 2 months amenorrhœa (time of rupture).	Abdominal pregnancy.	—	Dr. Lycett.	June 24th, 1890.	Wolverhampton Hospital for Women.	Dr. Lycett, Dr. C. Smith, and Dr. Hubbersty.	Removal of child; removal of placenta.	Left Oct. 4th; recovery.
4	36	6 years.	3	2	12 months.	Large abdominal tumour.	Septic; rigors; pyrexia; in bed for 2 months.	Extra-uterine pregnancy with dead fœtus.	—	Dr. Cook.	Feb. 27th, 1891.	Private hospital.	Dr. L. Phillips and Dr. Robinson (U.S.A.)	Cyst of pregnancy sewn to incision.	Left April 10th, 1891; recovery; subsequent normal pregnancy and good delivery.
5	44	—	4	5	8 weeks.	Tubal tumour behind uterus.	Constant loss for 8 weeks.	Tubal pregnancy.	—	Dr. D. C. Martin.	July 13th, 1891.	Women's Hospital, Birmingham.	Dr. Bull and Dr. Melson.	Right tubal mole, unruptured, in middle portion of tube; abdomen re-opened for obstruction.	Left July 25th; recovery.
6	33	—	1	7	5 weeks.	Boggy mass in pouch of Douglas.	Symptoms of internal bleeding; abdominal pain; pulse 135.	Ruptured tubal pregnancy.	—	Dr. Bernays.	Jan. 29th, 1892.	Patient's home.	Dr. Bernays and Dr. Phillips.	Left tube ruptured, removed; diffuse hæmorrhage.	Recovery.
7	39	Second time for 8 years.	4	13	(?)	Fixed tender cyst behind uterus.	Irregular loss for 3 months.	Ovarian cyst.	—	J. W. T.	April 20th, 1892.	Women's Hospital, Birmingham.	Dr. Melson.	Right tubal pregnancy, with encapsulated hæmatocele (unruptured).	Left May 8th; recovery.
8	26	7 years.	1	6	2 months.	Small painful tumour behind uterus.	Amenorrhœa 5 weeks followed by loss for three weeks; abdominal pain and pain on defecation.	Tubal pregnancy.	—	J. W. T.	July 4th, 1892.	Do.	Dr. Phillips.	Right tubal mole; tube unruptured; hæmatocele partly encapsulated.	Left July 18th; recovery.
9	30	17 years.	6	11	14 weeks.	Tender tumour in pouch of Douglas; uterus retroflexed.	Amenorrhœa 5 weeks followed loss for 9 weeks; abdomen distended and tender; legs drawn up.	Ruptured tubal pregnancy.	Slight albuminuria.	Dr. Holdsworth.	Sept. 15th, 1893.	Do.	Dr. Phillips.	Right tubal pregnancy removed; free hæmorrhage; tube unruptured; rupture of hæmatocele.	Left Oct. 8th; recovery.

10	31	3 years.	2 miscarriages	—	10 weeks.	Mass to right of pubes; pouch of Douglas distended.	Sudden repeated attacks of abdominal pain.	Ruptured tubal pregnancy.	Slight albuminuria.	Mr. H. H. H. Addenbrooke.	Oct. 11th, 1892.	Do.	Dr. Phillips, Dr. Williams, Dr. Edge, Dr. De la Chérois, and Mr. Addenbrooke.	Right broad ligament pregnancy; free bleeding; pulse 156.	Left Nov. 13th; recovery.
11	37	Nearly 11 years.	1	10	9 weeks.	Mass in Douglas's pouch reaching above pubes.	Amenorrhœa 6 weeks followed by irregular loss and pain and latterly pyrexia; temperature from 99° and 101·4° to 104·8° F.	Ruptured tubal pregnancy; hæmatocele.	Took herbs to bring on abortion.	Dr. Fitzpatrick.	Jan. 6th, 1893.	Private hospital.	—	Vaginal section and clearing out; drainage.	Left Jan. 23rd, 1893; recovery.
12	27	4 years.	2; 1 miscarriage.	7½ months.	(?)	Tender hard mass behind uterus.	Sudden abdominal pain 5 weeks before, followed by irregular loss; no amenorrhœa.	Ruptured tubal pregnancy.	—	Mr. Jephcott.	Jan. 19th, 1893.	Do.	Dr. Phillips.	Right tubal pregnancy removed; tube itself unruptured; rupture of hæmatocele.	Left Feb. 3rd; recovery.
13	23	4 years.	0	—	7 weeks.	Fixed tense elongated tumour behind uterus.	Ill 10 weeks with abdominal pain.	Tubal.	—	Dr. T. A. Brown.	June 6th, 1893.	Women's Hospital, Birmingham.	Dr. Phillips, Dr. Martin, Mr. Jordan, and Dr. Collins.	Unruptured mole of left tube removed; hæmatocele.	Left June 27th; recovery.
14	32	14 years (second time for 5 years).	2 (premature).	6	9 weeks.	Mass behind uterus reaching above half way to umbilicus.	Sudden severe abdominal pain 10 days before operation; continuous loss for 9 weeks.	Ruptured tubal pregnancy.	Trace of albuminuria.	Dr. S. S. Dunn.	July 15th, 1893.	Do.	Dr. Phillips, Dr. Martin, Mr. Jordan, and Dr. S. S. Dunn.	Right tubal pregnancy removed; tube itself unruptured, but recent rupture of large hæmatocele about fimbriated end of tube.	Left Aug. 2nd; recovery.
15	25	½ years.	1	5 months.	5 weeks.	Mass to left of pubes and behind uterus, tender, fixed.	Loss for 5 weeks; seized with sudden pain 2 weeks ago; "bent double with it."	Ruptured tubal pregnancy; hæmatocele.	—	Dr. A. Clark.	Jan. 30th, 1894.	Do	Mr. Jordan and Dr. Edge.	Left tubal mole and hæmatocele with peripheral adhesions; mole at outer end of tube; rupture of tube, clot protruding.	Left Feb. 19th, 1894; recovery.
16	32	7 years.	0	0	(?)	Hard mass to right of uterus.	Irregular loss for 3 months.	Myoma.	—	Mr. J. J. Hues.	Feb. 15th, 1894.	Do.	Mr. Jordan and Dr. Martin	Old right tubal pregnancy unruptured.	Left March 1st; recovery.
17	27	5 years.	1	1	5 weeks	Small mass behind uterus; abdomen distended, soft, fluctuating.	Irregular loss for 5 weeks; acute seizure of abdominal pain 6 days before operation; much worse for 12 hours.	Ruptured tubal pregnancy.	Mitral regurgitation; murmur first noticed after operation.	Dr. O. Shaw.	May 12th, 1894 (1.0 A.M.).	Patient's home.	—	Right tube (ruptured) removed; diffuse hæmorrhage.	Recovery; subsequent normal pregnancy; delivery July 8th, 1896.
18	39	6 years	2	3	"Regular."	Large round cyst, reaching above pubes in front of uterus.	"Inflammation 3 years ago"; an acute attack of abdominal pain and sickness 2 weeks ago.	Ovarian cystoma.	—	Dr. Cranstoun.	Sept. 4th, 1894.	Private hospital.	Mr. Jordan.	Right ovarian dermoid; left tubal pregnancy (unsuspected); fœtus well formed.	Left Oct. 5th; recovery.
19	27	½ year.	1 miscarriage 3 months ago.	—	(?)	Large tender mass behind and to left of uterus.	Pain in left side ever since miscarriage; unable to walk or work.	Tubal pregnancy.	—	Mr. Clarkson.	Dec. 1st, 1894.	Do.	Mr. Jordan.	Left tubal pregnancy and hæmatocele; peripheral adhesions; tube probably unruptured; fimbriated end widely opened out.	Left Dec. 19th; recovery.

TABLE OF CASES OF EXTRA-UTERINE PREGNANCY—(*Continued.*)

No.	Age	Married.	Children.	Youngest.	Last menstruation.	Signs.	Symptoms.	Diagnosis.	Remarks.	Medical attendant.	Date of operation.	Place.	Present.	Particulars.	Sequel.
20	27	8 years.	3	4	11 weeks.	Mass left, lateral, *in front of* uterus, extending above left groin.	Violent abdominal pain 9 weeks ago; pain ever since preventing sleep.	Tubal pregnancy and hæmatocele.	—	Dr. Purslow.	Dec. 14th. 1894.	Women's Hospital, Birmingham.	Mr. Jordan.	Left tubal pregnancy; mole, hæmatocele; large tube distended throughout with blood and blood clot; fimbriated end very thin but unruptured; bleeding mainly confined by adherent omentum.	Left Jan. 2nd, 1895; recovery.
21	31	11 years.	1	10	14 weeks.	Mass on right side of lower abdomen and behind uterus, tender, fixed.	Abdominal pain, vomiting, and distension.	Tubal pregnancy; hæmatocele.	Some albuminuria and jaundice.	Mr. Greene.	Jan 27th, 1895.	Stratford Hospital.	Mr. Greene, Dr. Nason, and Mr. Lupton.	Right tubal pregnancy and hæmatocele; removal; tube ruptured; 3 months' fœtus well developed.	Left March 18th; recovery.
22	32	13 years.	1	12	14 weeks.	Large hard mass on left side of abdomen above left groin and in pouch of Douglas.	Abdominal pain; in bed 6 weeks; history of 3 falls (two in street).	Tubal pregnancy; hæmatocele.	—	Mr. Clarkson.	March 23rd, 1895.	Women's Hospital, Birmingham.	Mr. Jordan and Dr. Edge.	Right tubal pregnancy; ruptured, and hæmatocele removed.	Left April 16th; recovery.
23	30	10 years.	1; 1 miscarriage 5 years ago.	9	5 weeks.	Boggy mass in Douglas's pouch. Abdomen distended.	Blanching; pulse 150; symptoms of internal bleeding.	Ruptured tubal pregnancy.	—	Dr. Shillito.	July 15th, 1895.	Patient's home.	Mr. Jordan and Dr. Shillito.	Left tubal pregnancy; early rupture near uterus; large vessels; both appendages removed; right ovary cystic.	Recovery.
24	35	—	1	14	6 weeks.	Mass above pubes and behind uterus.	Abdominal pain for 1 month preventing sleep; loss for 6 weeks.	Tubal pregnancy.	—	Mr. Wood.	July 18th, 1895.	Women's Hospital, Birmingham.	Mr. Jordan.	Ruptured broad ligament; hæmatocele cleared out and drained; big hole in ligament.	Left Aug. 17th; recovery.
25	30	½ year.	0	0	4 weeks.	Boggy mass filling pouch of Douglas; abdomen distended.	Symptoms of internal bleeding; blanching; abdominal pain; pulse 120.	Ruptured tubal pregnancy.	—	Dr. Littelton.	Nov. 30th, 1895.	Patient's home.	Mr. Gamgee and Dr. Littelton.	Left tubal pregnancy; early rupture close to uterus; abdomen full of blood.	*Died Dec. 17th.*
26	35	14 years.	2; 1 miscarriage 8 years ago.	12	8 weeks.	Hard, tender mass behind and to right of uterus.	Abdominal pain, worse on sitting; temperature 100° F.	Tubal.	—	Dr. T. A. Brown.	Dec. 3rd, 1895.	Private hospital.	Dr. T. A. Brown and Mr. Jordan.	Broad ligament pregnancy and hæmatocele; vaginal incision as well as abdominal section.	Left Dec. 26th; recovery.
27	42	18 years.	6	7	3 months.	Mass to right of and behind uterus.	Great pain in lower abdomen and pelvis for 6 weeks.	Tubal pregnancy.	—	Dr. Welsh.	Dec. 31st, 1895.	Women's Hospital, Birmingham.	Mr. Jordan.	Right tubal mole and hæmatocele; tube unruptured; typical specimen with rosette of fimbriæ at bottom of hæmatocele.	Left Jan. 20th, 1896; recovery.

28	28	7 years.	2	4¾	8 weeks.	Mass behind and to right of uterus.	Abdominal pain getting worse for 1 month; unable to do anything.	Tubal pregnancy.	—	Dr. A. Clark.	Feb. 1st, 1896.	Do.	Mr. Jordan and Dr. Martin.	Ruptured broad ligament hæmatocele; free blood in abdomen; big hole in ligament to right of uterus; cleaned out and drained.	Left Feb. 14th; recovery.
29	40	19 years.	6; 3 miscarriages, last 6 years ago.	8	Irregular.	Cystic mass behind and to right of uterus; hard lump below this.	Pain in abdomen, worse on walking or defecation.	Right ovarian cystoma.	—	Mr. Addenbrooke.	Feb. 28th, 1896.	Do.	Mr. Jordan and Mr. Savage.	Cyst of right ovary with ruptured pregnancy of right tube; rupture size of a sixpence quite at uterine end.	Left March 24th; recovery.
30	39	15 years.	7	1½	(?)	Large mass behind uterus, not adherent.	Irregular loss for 7 weeks; 5 or 6 attacks of abdominal pain.	Tubal pregnancy and hæmatocele.	Patient suckling up to time of admission.	Mr. J. D. Price	April 22nd, 1896.	Do.	Mr. Jordan and Mr. Price.	Ruptured right tubal pregnancy; hæmatocele with peripheral adhesions; removal.	Left May 8th; recovery.
31	23	3½ years	2	1	10 weeks.	Cystic mass to left of uterus with hard lump at highest part.	Amenorrhœa 5 weeks followed by irregular loss; pain in left side of abdomen and rectum.	Left ovarian cystoma or tubal pregnancy.	—	Mr. Trout.	May 8th, 1896.	Do.	Mr. Jordan.	Cyst of left ovary with tubal pregnancy perched on top; tube unruptured.	Left May 23rd; recovery.
32	27	7 years.	3	1½	4 months.	Hard mass on left side of lower abdomen, one with uterus.	Continuous loss for 4 months; severe abdominal pain for some weeks; acute pain 4 days.	Tubal pregnancy.	—	J. W. T.	Sept. 10th, 1896.	Do.	Mr. Jordan and Dr. Edge.	Early interstitial pregnancy; left cornu of uterus and tube dilated into large blood-sac; ligatured off from the uterus in four sections.	Left Sept. 28th; recovery.
33	27	9 years.	4	4	12 months.	Child felt in abdomen; uterus empty.	Losing for 7 weeks; passage of decidua 5 weeks ago.	Abdominal pregnancy.	—	Mr. Clarkson	Dec. 11th, 1896.	Do.	Mr. Jordan and Dr. Martin.	Child and placenta removed.	Left Jan. 26th, 1897; recovery.
34	36	—	—	—	10 weeks.	Mass in lower abdomen and behind uterus, very tender; distention.	Symptoms of internal bleeding; vomiting, faintness.	Ruptured tubal pregnancy; hæmatocele.	—	Dr. T. A. Brown.	Jan. 22nd, 1897.	Patient's home.	Mr. Jordan and Dr. T. A. Brown.	Left tubal pregnancy; very large mole at extreme outer end of tube; tube probably unruptured; free hæmorrhage into abdomen.	Recovery.
35	37	8 years; 1 year.	1; 2 miscarriages, last 5 months ago.	7	7 weeks.	Left lateral tumour pushing uterus to right; tender, fixed.	Abdominal pain; temperature from 99° to 100° F.; amenorrhœa 5 weeks, followed by irregular loss.	Tubal pregnancy with hæmatocele.	Married twice; 2nd time one year only.	Mr. Tighe.	Feb. 13th, 1897.	Private hospital.	Mr. Jordan and Mr. Tighe.	Left tubal pregnancy with encapsulated hæmatocele; rupture of tube; pregnancy near uterine end.	Left March 7th; recovery.
36	27	9 years.	2	6	10 weeks.	Ill-defined tumour felt above right groin, pushing uterus to left.	Losing for 4 weeks; symptoms as of ordinary miscarriage at first; cervix dilated by medical attendant; severe abdominal pain afterwards.	Right tubal pregnancy.	No history of decidua.	Mr. Clarkson.	Oct. 25th, 1897.	Women's Hospital, Birmingham.	Mr. Jordan.	Tube ruptured; placenta protruding.	Left Nov. 15th; recovery.
37	37	17 years.	6		(?)	Tumour attached to left side of uterus at fundus.	Losing for 7 weeks; sent into hospital as case of uterine cancer.	Myoma.	Laceration and hypertrophy of cervix.	Mr. H. K. Bradbury.	Dec. 15th, 1897.	Do.	Mr. Jordan.	Vaginal section and vaginal hysterectomy; removal of pregnancy; tube unruptured; bleeding from abdominal ostium.	Left Jan. 1st. 1898; recovery.

unpleasant surprises or difficulty after opening the abdomen. The clinical diagnosis of tubo-uterine or interstitial pregnancy is an impossibility. The nearest approach to it which can be made is to recognise that in this form rupture takes place from the second to the fourth month, that this is signalised by diffuse internal bleeding as in the worst cases of early rupture, and that hitherto this has always proved fatal. There is an inter-operative diagnosis—the quick recognition of the pathological condition present—which may be assisted by the consideration already given to the affection itself and by the study of all known specimens. The recognition of the special form of distortion or asymmetry produced in the uterus by its presence is the only point of practical importance. Its bearing on quick operative action will be considered under "Treatment."

(To be concluded.)

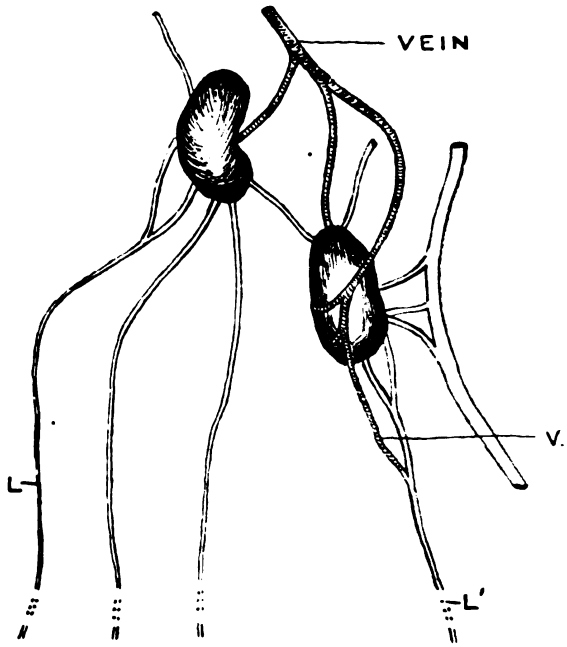
A METHOD OF INJECTING THE LYMPHATIC VESSELS.

BY CECIL H. LEAF, M.A., M.B. CANTAB., F.R.C.S. ENG.,
DEMONSTRATOR OF ANATOMY AT THE LONDON HOSPITAL.

IN this paper I wish to suggest a method by which the lymphatic vessels of the human subject may be rendered so distinct that they may be dissected out like the arteries and veins. Hitherto nearly all the experiments which have been performed with this object have been made with either mercury or various colouring matters. The great objection to the former, as Sappey long ago pointed out, consists in the fact that if a vessel is accidentally pricked the mercury leaks out and all trace of the vessel quickly disappears. The method by subcutaneous injection of colouring matters cannot be relied upon because it is most difficult to insure the point of even the finest injection syringe passing into a lymphatic vessel; this method, moreover, presupposes an exact knowledge of the course taken by these vessels; but this is just the point which the experimenter wishes to determine. Colouring matters, moreover, are unsatisfactory because they stain the surrounding tissues as well as the vessels. Formalin is the fluid which I have lately used almost exclusively. This was introduced into the London Hospital by Keith as a means of hardening and preserving the relations of the viscera in the human subject. Formalin is the commercial name of a saturated aqueous solution of 40 per cent. of formic aldehyde. For the objects for which it was introduced and for rendering the dissection of the lymphatic vessels possible it is undoubtedly of very great value. The first experiment made with this object was performed nearly two years ago on a collie dog which, on account of its poaching habits, had to be shot. An incision was made into the dorsum of the tongue, into which the rounded nozzle of a syringe was passed; the nozzle was perforated by six or seven small holes; round the nozzle the lips of the wound were secured as tightly as possible. The syringe was filled with Stephens's ordinary blue-black ink, which was then injected. To effect this, however, very considerable pressure had to be used on the piston. On dissecting the sub-maxillary region of this dog several of the lymphatic vessels were found to be well stained and appeared quite distinct as bluish-black threads; some of the sub-maxillary glands were also partially stained. In the next experiment the superficial epidermis of the balls of several of the toes was scraped off and the open mouth of a syringe filled with the ink pressed firmly against the subjacent tissues. The piston was then forced down and the ink slowly disappeared. On dissection two lymphatic vessels were easily traced up to one of the deep inguinal glands which was well stained. From this the lymphatic vessels were further traced to the lumbar glands, three of which were found to be deeply stained. From the toes also two other vessels were traced up to a gland which was found to be lying underneath the gluteus maximus. This, too, was deeply stained by the ink. In both these experiments, therefore, it was found that by using great pressure the lymphatic vessels could be rendered quite distinct. After some time, however, it was noticed that the ink stained the surrounding tissues as well as the vessels. It had apparently percolated through the latter into the former.

Experiments similar to those made on the dog were made on the human subject, but they ended in a complete failure: This was probably due to the fact that the subjects operated on were not perfectly fresh. The idea was nevertheless entertained that it would be quite possible to inject the lymphatic vessels in a cadaver, even if not absolutely fresh, by passing through the vascular system an excessive quantity of formalin under a very high pressure; therefore into both the internal jugular vein and common carotid artery of a subject aged forty-five years 11 gallons of the formalin solution (one part of formalin to seven parts of water) and about 2 pints of spirit were injected from March 24th to April 24th, the object being to use so much pressure that some of the excessive amount of fluid would be bound to find its way into the lymphatic vessels. The right inguinal region of this subject was dissected on April 25th. The glands here were found to be large and very hard and on pulling them from their bed the vessels passing to and from them could be distinctly seen as somewhat semi-transparent whitish cords. Fig. 1 represents some of the superficial

FIG. 1.



Dissection showing two of the superficial inguinal glands with their lymphatic vessels and veins.

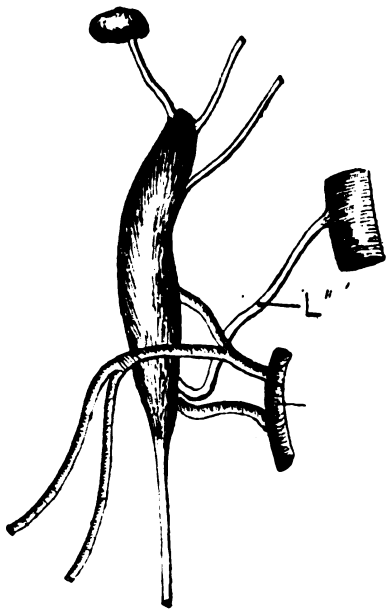
inguinal glands and their vessels as seen in dissection. A vessel (L) passing to one of the vertical set of superficial inguinal glands is there shown. This was traced down the thigh for 9 in. Had it been possible to thoroughly dissect out all the other vessels, some of which were larger than this one, they could undoubtedly have been traced very much further down the limb. All the vessels shown in the diagram passing to the superficial inguinal glands were traced down for at least 6 in. The only other parts of this subject which I have yet had an opportunity of dissecting are: (1) the mesentery; and (2) a small portion of the pelvic region. In the former the vessels could fairly easily be traced from the intestinal wall to the nearest set of lymphatic glands. In the latter lymphatic vessels could be seen passing from a gland which lies transversely over the termination of the external iliac artery to end in a group of glands situated close to the bifurcation of the common iliac artery. By this method of injection the lymphatic vessels are probably rendered distinct by two processes. In the first some of the formalin solution undoubtedly passes straight into the lymphatic vessels, the greater part, however, does not, for had it done so these vessels would be found fully distended and the beaded appearance due to the presence of valves quite distinct; this, however, except in the thoracic duct, was not noticeable. In the second process what takes

place is probably as follows. The greater part of the formalin solution escapes into the surrounding subcutaneous tissues. This is proved by finding these tissues bathed in the fluid; this fluid by hardening and drying up the fat in which the vessels are embedded and by hardening the vessels themselves from the outside thus renders them distinct.

Fig. 1 brings out an important fact, and that is, that a communication exists in the inguinal region—at any rate, between some of the lymphatic trunks and the smaller veins. In this dissection the vessel L′ was traced down the thigh for six inches. It had no naked-eye resemblance to a vein; its walls, like the other lymphatic vessels, were white. This vessel terminated by three branches, two of which passed straight into the gland while the other terminated in a small vein which on dissection was found to be a tributary passing into the circumflex iliac vein. Sections were taken of the vein at V and of the vessel L′. In the former the walls were found to be very thick, the various coats distinct and sharply marked off from each other. The vessel on transverse section was quite round while blood was seen in the interior. The thickness of the walls giving the vessel the appearance of an artery was undoubtedly caused by the excessive amount of formalin used for the injection. On examining the vessel L′ under the microscope it was found that the walls were much thinner, that the lumen was oblong (not round), and that the various coats were not nearly so distinct or so well marked off from each other as they were in the vein.

Fig. 2 represents a preparation taken from another sub-

FIG. 2.



Dissection of an inguinal gland showing a lymphatic vessel terminating in a vein.

ject which had been injected with the usual amount of formalin solution (four pints). For preserving this gland with the lymphatic vessels I am much indebted to Mr. E. J. Wylen of the London Hospital. In this case some of the lymphatic vessels were found unusually distinct. In the diagram the two veins which came from the lymphatic gland were traced to one of the tributaries of the deep external pudic vein. Besides this there was a vessel (L″) also coming from the gland which was found to end in the long saphenous vein. This vessel presented the same naked-eye appearance as the vessel L′ of Fig. 1. It exactly resembled a small thoracic duct. Though the lumen was larger than that of either of the veins, yet the thickness of its walls was only about a third. Several microscopical sections were made. They showed that the various coats were neither so thick nor so sharply defined as was the case in the veins.

The two vessels L′ (in Fig. 1) and L″ (in Fig. 2) are undoubtedly lymphatic vessels. Fig. 1 shows an afferent lymphatic vessel partly terminating in a lymphatic gland and partly terminating in a vein. Fig. 2 shows an efferent lymphatic vessel emptying straight into the long saphenous vein. It is well known that a microscopical distinction is not always possible between a vein and a lymphatic. Hence it might reasonably be inferred that both the vessels shown in this figure were not lymphatics, but veins. In subjects, however, which have been hardened in formalin, especially if this has been injected in large quantities through the veins, a distinction between any but the smallest veins and lymphatics may be made by noticing the following points of difference:—

Naked-eye Appearance.

Veins.	*Lymphatic Vessels.*
1. Veins look blue.	1. Lymphatic vessels look white.
2. On section the walls remain apart; hence	2. The walls collapse quickly on section; hence
3. The lumen is round.	3. The lumen becomes obliterated unless a pin is inserted to keep the walls apart.
4. The walls are thick.	4. The walls are much thinner.

Under the Microscope.

1. Veins usually contain blood.	1. Lymphatic vessels usually do not contain blood.
2. The lumen is round.	2. The lumen is oblong
3. The various coats are well marked.	3. The coats are not so thick or so sharply marked off from each other.

In both figures these distinctions were well marked. For lymphatic vessels which communicate in this way with the veins the term "lymphatic vein" might be used. Whether such communications will be found in other parts of the body subsequent dissections will show. In that part of the mesentery which was dissected there was no trace of it and even in the inguinal region it was not observed to be at all frequent. Sappey long ago came to the conclusion that there was a direct communication between the finest lymphatic capillaries and the vascular system, but that a communication takes place between the larger lymphatic trunks and the veins other than at the termination of the right lymphatic and thoracic duct respectively has not, I believe, yet been observed. If such a communication is shown to be general throughout the body it may help to explain a good many otherwise obscure clinical phenomena.

In conclusion, then, it is (1) quite possible to render the lymphatic vessels sufficiently plain for dissection purposes by the injection of a large quantity of formalin solution; (2) the fresher the subject the greater the probability of success; (3) as much pressure as possible (short of rupturing the heart or any large vessel) must be used; and (4) in the inguinal region, at any rate, and possibly in other parts of the body, a communication exists between the veins and lymphatic vessels.

Wimpole-street, W.

THE PRODUCTION OF CHLOROFORM ANÆSTHESIA.

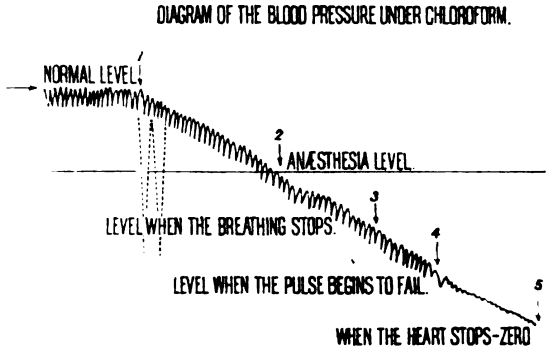
BY EDWARD LAWRIE, M.B. EDIN.,
SURGEON-LIEUTENANT-COLONEL, I.M.S.; RESIDENCY SURGEON, HYDERABAD, DECCAN.

THE following are the notes of chloroform administration at the Afzulgunj Hospital during April, 1898. The chloroformist for the month was Olivia Correa, a third-year student at the Hyderabad Medical School:—

1. Total number of cases chloroformed during the month, 221.
2. Cases of partial anæsthesia only for brief minor operations, 88.
3. Average age of patients chloroformed, 24 years.
4. Children below the age of five chloroformed, 48.
5. Average time to produce anæsthesia, 3 min. 2 sec.
6. Average time to produce anæsthesia in children under five, 1 min 15 sec.
7. Average time to produce anæsthesia in adults, 3 min. 36 sec.
8. Morphine administered beforehand in cases, 3.
9. Average quantity of chloroform required to produce full anæsthesia, 2·95 drachms.
10. Rate in minims of chloroform applied to the cap per second, 0·96 minim per second.

11. Average total amount of chloroform employed per case, 3 4 drachms.
12. Average duration of operations, 12 min. 13 sec.
13. Cases in which struggling occurred, 50.
14. After effects, vomited, 3.

The chloroformist at the Hyderabad hospitals is as a rule a fourth-year student, but this session we have been obliged to entrust the anæsthesia to third-year students as all our senior students are out on plague duty in the districts. The plan of chloroformisation we employ is that of Syme. Syme's method of giving chloroform consists in keeping the patient's breathing regular under all circumstances; in entirely disregarding the heart and circulation as factors in the administration; in never pushing the inhalation beyond the point where anæsthesia is complete; and in maintaining the narcosis as long as the operation lasts at the "anæsthesia level" (*vide* diagram). The following diagram of the blood-pressure under chloroform shows (1) precisely how Syme's method works in practice; and (2) the effects of abnormal anæsthesia and of overdosing.



EXPLANATION OF THE DIAGRAM OF THE BLOOD-PRESSURE UNDER CHLOROFORM: THE DIAGRAM READS FROM LEFT TO RIGHT.

Part I.—Normal Anæsthesia.

1. The first part of the tracing as far as arrow 1 indicates the normal level of the blood-pressure before the inhalation of chloroform is begun.
2. At arrow 1 the inhalation of chloroform is commenced.
3. Provided there is continuous regular breathing the blood-pressure falls gradually until anæsthesia is complete at 2. The fall of blood-pressure up to this point is due to vaso-motor dilatation and is perfectly harmless.
4. When the point indicated by arrow 2 is reached and anæsthesia is complete, which is known clinically by the cornea becoming insensitive or the breathing stertorous, the inhalation is stopped and only sufficient chloroform is given afterwards to maintain the blood-pressure as nearly as possible at the "anæsthesia level."

Part II.—Abnormal Anæsthesia and Overdosing.

5. The dotted lines in the diagram show what happens when chloroform is given with too little air or in such a manner that the patient's breathing is interfered with. The blood pressure falls irregularly and with sudden deep drops which used to be thought by the Glasgow Committee to be caused by sudden heart failure. Dr. Bomford discovered that these sudden falls are due to nervous agency through the vagus which, when overdosing is threatened, temporarily stops or slows the heart as a safeguard against the over rapid conveyance of the anæsthetic to the brain. Whether they are safeguards or not these irregular falls ought never to be brought about, as they carry the blood-pressure below the "anæsthesia level" and are abnormal. The danger of irregular respiration is that it may lead to the inhalation, or gasping in, of irregular quantities of chloroform and render overdosing imminent.
6. If chloroform is pushed beyond the point where anæsthesia is complete the respiration becomes impeded and the heart begins to fail. At arrow 3 the breathing ceases; the pulse fails at 4; recovery is then almost impossible, and the heart stops at 5.

(The more the air is excluded when chloroform is pushed the more rapid and irregular will be the failure of the heart and circulation. Undoubtedly the pulse will show signs of this, but it can never convey more than second-hand information that the breathing has been interfered with or that the patient has been overdosed, for both of which, clinically or experimentally, the chloroformist is alone responsible.)

Proceeding on Syme's plan the administration of chloroform is never pushed below the "anæsthesia level." It is obvious that the region of danger is not entered or even seriously approached, and that unless Syme's rules are accidentally disregarded no risk whatever from chloroform anæsthesia can ever arise. On the other hand, those who believe that chloroform has a direct action upon the heart must be guided *more or less* by the pulse, which is to them an index of unavoidable danger and necessarily one to be anxiously watched. But the experiments of the Hyderabad Commission and my cross-circulation experiments[1] have long ago proved that chloroform has no direct action on the heart. Accordingly, the moment the circulation is made a principal factor in the inhalation and is watched for effects which can only be produced indirectly through the respiration an appreciable element of peril is introduced which makes the method of administration itself *more or less* homicidal. This must be clearly understood. It is not only that "watching the pulse" distracts some of the chloroformist's attention from the all-important breathing, but it is manifestly useless to watch it at all except as a danger signal and as a danger signal it can only be brought into action by conditions for which the chloroformist is himself responsible, such as abnormal administration with too little air, or overdosing. The measure of heart failure under chloroform is demonstrably the exact measure of the amount of the chloroformist's attention which is withdrawn from the breathing and bestowed upon the pulse; and the diagram proves that if the pulse were to be taken as the sole guide to dosage the administration of chloroform would not only never be free from risk, but would of necessity be uniformly fatal. What is shown so definitely and admirably in the diagram is fully borne out in clinical practice. In Hyderabad chloroform is given by students in strict accordance with Syme's principles, the heart is ignored, and we have no deaths. In England the teaching of anæsthetics is in the hands of professional anæsthetists who "funk" the heart and deaths from chloroform take place, according to Leonard Hill, by the dozen and, according to Roger Williams, no less than once in every 1236 inhalations. The deaths under anæsthetics in England represent an appalling picture of the incapacity of the medical profession as regards the administration of these drugs. This incapacity is altogether due to the absolute want of training of English students in the art of chloroform administration on Syme's principles, which have been established on a scientific basis by the Hyderabad Commission. We at Hyderabad have always said that if students in India can be taught to give chloroform with guaranteed safety, *a fortiori* the splendid men who study in the London medical schools with all their superior advantages can be taught to do the same.

Hyderabad.

A CASE OF RECOVERY AFTER THE INGESTION OF A LARGE DOSE OF STRYCHNINE.

BY CHARLES D. GREEN, M.D. LOND., F.R.C.S. ENG.

SHORTLY before 8 A.M. on Jan. 1st, 1895, I was called to see a man fifty years of age. On my asking him what was the matter he merely replied "poverty" and as some twitching of the hands with a backward jerk of the neck immediately occurred I asked him what he had taken and he said "Battle." I was obliged to return home to get what was necessary, nothing having been said by the messenger who had been sent for me to intimate the probability of poisoning. This occupied about twenty minutes and on my return there were well-marked rigidity of the limbs and retraction of the head and the patient was evidently in considerable distress. He, however, submitted to treatment and apomorphia was at once injected and 20 gr. of zinc sulphate were given by the mouth, followed by 2 dr. of tannic acid in ½ pint of hot water. In about ten minutes he vomited a little. An attempt to pass an œsophagus

[1] Vide THE LANCET, Feb. 11th and July 1st, 1893.

tube provoked such violent spasms that it had to be abandoned. It so happened that Mr. C. A. Ballance and Dr. H. Low had arranged to be at my house that morning at 9 o'clock for the purposes of an operation and on learning the difficulty in which I was placed they both very kindly came to my assistance and Dr. Low soon got the patient fully under the influence of chloroform; severe tetanic spasms occurred during the process, opisthotonos being well marked when the administration was commenced. The œsophagus tube was then passed and the stomach was washed with warm water until no more Prussian blue came away; this process occupied nearly an hour and several gallons of water were required. The stomach was next washed with a quart of warm water into which the juice of a lemon had been squeezed, then with a solution of tannic acid, and finally with plain water. 30 grs. of chloral hydrate dissolved in a little water were then introduced into the stomach and the tube was withdrawn; 0·01 gr. of atropine sulphate was injected subcutaneously. The patient was then left in charge of my colleague Mr. Francis Murphy, who administered a little chloroform at intervals during the next five hours as the tetanic spasms became severe. By 9.30 P.M. the patient was evidently recovering, no severe spasms having occurred for three or four hours though there were twitchings at intervals with general rigidity and retraction of the head. He was slightly delirious. As he became able to swallow, a mixture of ammonium bromide and tincture of belladonna was given. The rigidity of the limbs and the retraction of the head persisted during the next two days, gradually diminishing, and on the morning of Jan. 4th they were no longer noticeable. The patient complained of considerable soreness of the limbs and had some weakness of the right leg, which, however, did not persist, and at the end of a fortnight he was practically well.

It transpired that the patient had taken the entire contents of a sixpenny packet of Battle's vermin-killer, stirred up in a little water, on an empty stomach about two hours before I saw him. The purchase was verified by inspection of the poison sales book at the druggist's shop where it had been made and a similar packet was obtained from the same consignment. An analysis made by Messrs. Corbyn, Stacey, and Co. showed that this packet contained 3 437 grains of strychnine.

I think the above may be taken as fairly representing the dose taken, as, although different samples of Battle's vermin-killer have been found to vary, the difference in composition between two packets in the same consignment is not likely to be great. In any case, the dose taken was large, for a small sample taken from the stomach washings yielded abundant evidence of the presence of strychnine. The recovery after the ingestion of so large a dose, especially as the symptoms of absorption were already pronounced before treatment was commenced, seems to be remarkable. The case appeared almost hopeless. The successful result is entirely due to the valuable help and guidance which happened to be at hand.

Upper Edmonton.

LATENT TUBERCULOSIS OF THE TONSIL.[1]

BY HUGH WALSHAM, M.A., M.D. CANTAB., M.R.C.P. LOND.,

ASSISTANT PHYSICIAN, FORMERLY PATHOLOGIST, TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST; CLINICAL ASSISTANT TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

MY attention was first directed to this subject by an address of Dr. G. Sims Woodhead entitled "The Channels of Infection in Tuberculosis." In this very thoughtful and suggestive paper Dr. Woodhead, after reviewing the various ways in which the tubercle bacillus might conceivably gain entrance into the living organism, sums up as follows: "I am driven to the conclusion that this method of infection of the glands of the neck through the tonsils must be of a comparatively frequent occurrence, especially in children living under insanitary conditions and subjected to various devitalising influences."

On a subject so important I determined to make use of my opportunity as pathologist to the City of London Hospital for Diseases of the Chest to investigate, as far as possible, if this mode of infection of the glands of the neck through the tonsils really took place. I proposed to make a careful histological examination of the tonsils and follicular glands at the base of the tongue of every case of tuberculosis which came before me for post-mortem examination, in the hope that such examination might possibly throw some light on this subject. My investigations, however, were soon directed into a wider channel by a communication of M. Dieulafoy[2] to the Academy of Medicine of Paris, entitled "Latent Tuberculosis of the Three Tonsils." M. Dieulafoy made an experimental investigation to ascertain whether hypertrophy of the tonsils and adenoid vegetations of the pharynx are in any cases of tuberculous nature and, if so, in what proportion. He obtained a number of portions of tonsils and adenoid vegetations which had been removed on account of overgrowth. Hypertrophied tonsils from 21 cases were inoculated into guinea-pigs and 8 of the animals became tuberculous. Adenoid vegetations from 35 cases were inoculated and 7 of the guinea-pigs became tuberculous; thus 1 in 8 of the cases of apparently simple hypertrophy of the tonsils and 1 in 5 of the cases of adenoid vegetations were in reality tuberculous. M. Dieulafoy's communication met with much adverse criticism at the hands of his colleagues in the Academy as he had made no histological examination of the portions of tonsils so injected. It was pointed out that inoculation experiments were open to this objection; that virulent tubercle bacilli might be entangled in the mucus of the tonsillar crypts without these organs being necessarily tuberculous. So in addition to the histological examination of the tonsils removed from the dead subject I set myself the task of examining histologically portions of tonsils removed from the living patient, and here I wish to thank Mr. Bowlby, assistant surgeon to St. Bartholomew's Hospital, for his kind permission for me to examine portions of tonsils and adenoid vegetations removed by him in the throat department of the hospital.

At the outset of an investigation such as this I naturally turned first of all to the classical works of pathology in this country, and here I must admit I met with nothing but disappointment; in fact, the tonsils seem almost to have escaped the scrutiny of English pathologists. Dr. Wilks and Dr. Moxon in their well-known work write as follows: "Occasionally tubercles may be found isolated on the palate, tonsils, and other parts of the mouth, commencing as white spots and then softening until ulcers are formed." Dr. Coats in his "Text-book of Pathology" says tuberculosis of the tonsils occurs chiefly in connexion with that of the epiglottis and tongue. Dr. Osler in his "Text-book of Medicine" says tuberculosis of the tonsils has been recorded in a few cases. Professor Hamilton is the only British pathologist who makes any mention of a possible connexion between tuberculosis of the tonsils and cervical gland enlargement. He says: "It has even been alleged that tuberculous enlargement of the glands of the neck may be caused by absorption of the tubercle bacillus through the tonsils and analogous structures in the neighbourhood." By analogous structures in the neighbourhood I take Professor Hamilton to mean the follicular glands at the base of the tongue and generally the whole adenoid ring surrounding the entrance to the respiratory and digestive tracts. From the text-books of pathology I turned to the post-mortem records of the City of London Hospital for Diseases of the Chest. On carefully going through the post-mortem books from 1854 to the present time I find no mention of the tonsils being affected with tubercle, and yet, as my investigations will show, how often must these organs have been tuberculous. Dr. J. Purves Stewart[3] has published a short paper on the occurrence of giant cells in the tonsils. The case described by Dr. Stewart appeared to be merely one of ordinary chronic enlargement of the tonsils with pharyngeal adenoids associated with post-scarlatinal otorrhœa and enlargement of the cervical glands in a child aged ten years. The tonsils were removed. On a naked-eye examination they differed in no way in their appearance from ordinary chronically

[1] Thesis for the degree of Doctor of Medicine in the University of Cambridge.

[2] Bulletin de l'Académie de Médecine, Série 3, tome xxxiii, 1895.

[3] Brit. Med. Jour., May 4th, 1895.

enlarged tonsil. On microscopical examination, however, the following appearances were found. Scattered through the substance of the lymphoid tissue were large numbers of tuberculous giant-cell systems, apparently most numerous close beneath the epithelial surface of the tonsil. The giant cells were of the typical multinuclear form characteristic of tubercle surrounded by the usual epitheloid and lymphoid cells. Staining with Niellson and Gram's method failed to demonstrate bacilli in the sections. The pharyngeal adenoids on section were found free from tubercles. Some enlarged cervical glands were subsequently removed from the same patient and these, on microscopical examination, showed definite tuberculosis in various stages of advance, from simple enlargement to caseation.

My subject naturally falls into two principal divisions. Firstly, I shall give the results of my examination of the tonsils, cervical glands, and follicular glands of the tongue in certain cases of tuberculosis which came before me for post-mortem examination and, secondly, I shall give the results of my examination of portions of hypertrophied tonsils and adenoid vegetations removed from the living patient.

Post-mortem cases.—In all the cases I am about to describe, with two exceptions, there was nothing during the life of the patient to call attention to the tonsils. In the majority of the patients the tonsils were atrophied; in only one or two was there anything approaching hypertrophy. There was no complaint of pain or difficulty in swallowing; the cervical glands were not enlarged; in short, there was nothing to call attention to the organ. This being so, I have ventured, following M. Dieulafoy to call this variety of tonsillar tuberculosis "latent." Out of 34 consecutive post-mortem cases I found the tonsils to be more or less tuberculous in 20. I will now give short notes of the cases.

CASE 1.—Post-mortem examination held on Sept. 19th, 1895. A male, aged fifty-two years, had suffered from morbus cordis—aortic and mitral. There was miliary tuberculosis of the lungs and also tuberculous ulceration of the base of the tongue, pharynx, and larynx. Both lungs were stuffed with grey miliary tubercle from the apex to the base. The cervical glands were enlarged and tuberculous. There was extensive ulceration of the ileum. The left tonsil was completely free from any trace of tubercle; the right tonsil was unfortunately lost; expectoration was *nil*.

CASE 2.—Post-mortem examination held on Oct. 10th, 1895. A male, aged thirty-eight years, had suffered from acute miliary tuberculosis. There were caseous suprarenals; no pigmentation was present. Both lungs were stuffed with miliary tubercle from the apex to the base. The larynx and trachea were normal. The cervical glands *nil*. There was tubercle in the kidney and the liver. There was a small deposit of tubercle in one tonsil; the giant cells were ill marked; expectoration was very slight.

CASE 3.—Post-mortem examination held on Oct. 24th, 1895. A female, aged thirteen years, had been affected with chronic pulmonary tuberculosis. The larynx, trachea, and bronchi were normal. The bronchial, cervical, and anterior mediastinal glands were tuberculous. There were numerous old cavities in both lungs. There was a small tuberculous ulcer on the dorsum of the tongue. Caseous tubercle was scattered through the lower ileum. There were half-a-dozen small tuberculous ulcers in the ascending colon. The tonsils were normal in size; the crypts were very wide; the epithelial lining to the crypts was normal; there was epithelial tubercle in both; the giant cells were not marked; expectoration was slight.

CASE 4.—Post-mortem examination held on Oct. 29th, 1895. A male, aged forty-four years, had suffered from pulmonary tuberculosis. There were tuberculous peritonitis and tuberculous ulceration of the pharynx and soft palate. There was much superficial ulceration of the epiglottis. There was a small tuberculous ulcer about 1 in. from the tip of the tongue. Ulceration of the larynx was present. The bronchial and cervical glands were tuberculous. There was a small recent cavity of about the size of a cob-nut at the apex of the right upper lobe of the lung; miliary and caseous tubercle were scattered through the middle and lower lobes; the left lung showed no cavitation; there was fresh grey tubercle scattered through the upper lobe. Both tonsils were almost completely destroyed by tuberculous ulceration; in fact, there was hardly any of the proper adenoid tissue of the organ left; the follicular glands at the base of the tongue were tuberculous; expectoration was slight.

CASE 5.—Post-mortem examination on a male, aged thirty years, who had suffered from acute miliary tuberculosis. The old cavity was surrounded by dense fibrous tissue at the apex of the right upper lobe. The rest of the right lung, as also the left lung, was simply stuffed with grey miliary tubercle. As to the larynx, the right vocal cord was almost completely destroyed by ulceration and the under surface of the epiglottis was extensively ulcerated. The spleen, kidneys, and intestine contained many miliary tubercles. The tonsils were hypertrophied; tubercle was scattered through both.

I think the results of my post-mortem examinations are sufficient to disprove, what is generally held to be true, that the tonsils are very rarely affected by tubercle, for in 20 out of 34 cases examined these glands were found to be tuberculous. Now what is the significance of these miliary tubercles in the tonsils? Is the tonsil primarily affected? Are we to suppose that the tuberculous virus may first gain entrance to the human organism by the way of the tonsil, spreading thence to the cervical and mediastinal glands and so to the thoracic duct, right side of heart, and lung? Or are we to look upon this tonsillar tuberculosis as altogether secondary and, in short, auto-infection from the sputum passing over them? I think both suppositions are true. In support of the first I will take the results of the post-mortem examinations of Cases 1 and 4. In the former case the primary cause of death was the aortic and mitral insufficiency. The tuberculosis was altogether secondary. The tuberculous ulcer at the back of the pharynx was very chronic in its course; in fact, there were appearances of healing at some parts. Microscopically also the sections show the fibroid character of the tubercle. The infection starting thence from the pharynx gradually spread to the cervical glands, which are found post mortem to be tuberculous. From here we may conceive that the bacilli may reach the thoracic duct and the right side of the heart, the pulmonary artery and the lungs. Now what do we find? Exactly what one would expect, a general shower of miliary tubercle all over both lungs. My post-mortem note on the lungs is as follows: "Both lungs are stuffed from the apex to the base with grey miliary tubercle." This case is, I think, clear and conclusive. The old tuberculous ulceration in the fauces and the fresh grey miliary tubercle in the cervical glands and lungs lead one irresistibly to the conclusion that the primary source of infection was in the pharynx. There could be no question here of the pharynx being infected by the passage over it of sputa laden with bacilli, for, as usually happens in these cases of miliary tuberculosis of the lungs, there was no sputum. In the latter case (Case 4) we find tuberculous ulceration of the tonsils and soft palate. The follicular glands at the base of the tongue are tuberculous although no ulceration is present. Cervical and bronchial glands contain tubercle. The condition of the lungs is much the same as in the former case. We find grey miliary tubercle scattered through both lobes of the left lung, a small recent cavity of about the size of a small cob-nut at the apex of the right upper lobe and the middle and lower lobes containing miliary tubercle, some beginning to caseate. Here also I think the evidence that the tonsil was the primary source of infection is conclusive. The faucial ulceration was much older than the tubercle in the lung. True, we have a small recent cavity at the right apex and the tubercle in the right upper lobe had begun to caseate, but I do not think this is evidence against the tonsillar origin of the infection. These are the only two cases in my series in which the tonsil could be regarded as the primary source of infection.

The next of my cases are two of acute miliary tuberculosis (Cases 2 and 5). Both of these cases contained miliary tubercle in the tonsils. In Case 2 both lungs were stuffed with miliary tubercle throughout. The only caseous focus was in the suprarenal capsules. Here at first I was at a complete loss to account for the tonsillar tuberculosis. On reflection I think it can only be explained by supposing the infection to have been conveyed to the tonsil, as it is to the other organs, by the blood-stream; that is, that the tonsil does not receive the infection from the outside but from the blood-current. In this case the tubercles were very sparsely scattered in the organ. Case 5 is a little different. Here the primary source of infection was no doubt the apparently old so-called quiescent cavity at the apex of the right upper lobe. The history appeared to be this: for some unexplained reason this old cavity gave rise to the general dissemination of grey tubercle to tonsils, spleen,

kidneys, and intestines, the tonsils being infected as the other viscera through the blood-stream.

The remaining cases appeared to be instances of auto-infection from the passage of bacilli-laden sputum passing over the tonsils. The adenoid tissue of these organs becomes affected in the same way as the adenoid tissue of the Peyer's patches in the intestine and the lymphoid accumulations in the larynx and tongue.

Tubercle, as it occurs in the tonsil, is generally miliary in character. In some cases the tubercles were very rich in giant cells resembling those found in lymphatic glands; in other cases these cells were absent (epithelioid tubercle). The tubercles vary extremely in number; they may be thickly scattered all through the substance of the tonsil, or one or two may be all that are found after diligent search through many microscopical sections. Bacilli are generally scanty in number, but may be found if diligently searched for.

How do the bacilli gain entrance to the substance of the tonsil? Can they penetrate the normal intact epithelium lining the tonsillar crypts? In some of my cases the epithelial lining was in parts desquamated. But this does not appear to be necessary for the penetration of the bacillus. If the tonsillar crypts be carefully examined, search being made over hundreds of sections, places will be found where there are conical lymphoid accumulations. These lymphoid accumulations completely obscure the epithelium lining the crypts at these points, but the epithelial cells on careful observation are found to be intact. There is no doubt that the lymphoid corpuscles wander from the deeper adenoid tissue of the tonsil to the surface. The bacilli perhaps enter the adenoid tissue of the tonsil at these spots. Here, being destroyed by the phagocytes, their life-history may abruptly come to an end. But if too numerous victory may be theirs and the partially destroyed phagocyte may actually form the nourishing material on which they may live.

What is the connexion between the so-called strumous cervical glands and the tonsils? Are the tonsils the primary place of infection in these cases? Is it possible for the tubercle bacillus to be absorbed through the tonsils and so reach the lymphatic glands of the neck without leaving a trace behind them in the tonsil? I think from my investigations above we are justified in answering the first question in the affirmative and the second in the negative. I think my investigations show that the tonsil is an organ very easily infected with tubercle. It was found to be so 20 times out of 31 cases of acute and chronic tuberculosis.

I come now to the second division of my thesis. I have to state the result of my examination of the tonsils and adenoid vegetations removed from the living patients. Here my investigations have been entirely negative. I have examined microscopically many portions of hypertrophied tonsils and adenoid vegetations without finding any trace of tubercle; other observers, however, have been more fortunate. In addition to the observation of Dr. Purves Stewart referred to above, M. A. Pilliet in 1892 contributed a short note to the Société Anatomique of Paris upon the presence of giant cells in adenoid vegetations of the pharynx, and a very interesting paper was communicated by Dr. M. Lennoyez in 1894 to the Société Médicale des Hôpitaux entitled Tuberculous Adenoid Vegetations of the Naso-Pharynx. The following case appears to me to be so important that I quote it at length. It is from Dr. M. Lennoyez's paper.

A woman, aged thirty-eight years, married, suffered from chronic nasal obstruction since childhood but was otherwise in good health. She came to the hospital complaining of a purulent discharge from the left ear with deafness; apart from this there was nothing pathological. The husband was healthy and there were three healthy children. She presented a characteristic adenoid facies. Adenoid vegetations were diagnosed and removed. One month after the operation her general condition was found to be very unsatisfactory. She had a cough and there were night sweats, loss of appetite, and wasting. On examination there was dulness with prolonged expiration under the right clavicle, and six months later the diagnosis of pulmonary tuberculosis was confirmed. No chest disease was discoverable at the time of the operation.

Now in this case three suppositions are possible—(1) the patient may have been infected at the time of the operation, or (2) there was latent tuberculous disease of the right lung at the time of the operation which developed after, or (3) the adenoids were tuberculous from the first, the operation letting the bacilli into the general circulation. Unfortunately no histological examination of the removed adenoids seems to have been made. The first hypothesis in these latter days of aseptic surgery is not, I think, likely. The second is possible but not probable. The third is most likely. Dr. M. Lennoyez gives a second similar case in a child aged six years. Adenoids were removed. Microscopical examination revealed the presence of giant cells and tubercle bacilli. A third case came under my notice in March, 1896, in a young woman aged seventeen years. There was no family history of tubercle. Adenoid vegetations were removed a year ago. The chest was carefully examined at that time and no physical sign of disease was discovered. The patient's mother was living and was healthy. Her father had died from morbus cordis; she was the only child. She never quite recovered after the operation. Cough, wasting, and night-sweats were marked six months after the operation. On examination the physical signs of a cavity were found at the apex of the right upper lobe. It is possible, of course, that latent chest disease existed at the time of the operation, but there was no evidence of this. Unfortunately no microscopical or bacteriological examination was made of the adenoid vegetations removed. The following conclusions, I think, are justifiable:—(1) that the tonsils instead of being almost immune from tuberculous disease are very frequently affected; (2) that tubercle may be primary in the tonsil; (3) that the tonsils are very frequently affected secondarily in persons suffering from chronic pulmonary tuberculosis; (4) that when the tonsils are tuberculous the cervical glands receiving the lymphatics from these organs are also frequently affected with tubercle; (5) that the follicular glands at the base of the tongue are rarely found tuberculous; and (6) that the tonsils may be affected from without or through the blood stream in acute miliary tuberculosis.

The post-mortem examinations were with one exception made by myself. The tonsils on removal were at once placed in absolute alcohol to harden. When sufficiently hard they were cut with Williams's ether freezing microtome and stained in hæmatoxylin and eosin. In examination for bacilli carbol fuchsine and methylene blue were used.

[On account of the pressure on our space we have been reluctantly compelled to omit such of Dr. Walsham's illustrative cases as are not specifically referred to in the text.]

Bibliography.—Barth: De la Tuberculose du Pharynx et de l'Angine Tuberculeuse; Paris, 1880. Buss: Ueber die Beziehungen zwischen Angina und acutem Gelenk-rheumatismus; Archiv für Klinische Medicin, Band liv., 1895. Couvreur: De l'Adénopathie Cervicale Tuberculeuse considérée surtout dans ses rapports avec la Tuberculose Pulmonaire; Paris, 1892. Dieulafoy: De la Tuberculose Larvée des trois Amygdales; Bulletin de l'Académie de Médecine, tome xxxiii., pp. 17-20. Dmochowsky: Ueber secundäre Erkrankungen der Mandeln und der Balgdrüsen an der Zungenwurzel bei Schwindsüchtigen; Ziegler's Beiträge zur Pathologischen Anatomie, Band x., 1891. Gee: On Tuberculous Angina Faucium; St. Bartholomew's Hospital Reports, vol. xi. and vol. vii. Kruckmann: Ueber die Beziehungen der Tuberculose der Halslymphdrüsen zu der Tonsillen; Virchow's Archiv, Band cxxxviii. Lennyez: Des Végétations Adénoides [Tuberculeuses du Pharynx Nasal; Bulletin et Mémoire de la Société Médicale des Hôpitaux de Paris, tome xi., série 3. M'Bride and Turner: Edinburgh Medical Journal, May, 1897. Good abstracts of Ruge and Dieulafoy's papers will be found in the British Medical Journal of Aug. 1st, 1896, and June 1st, 1895, respectively. A. Pillich: Note sur la présence de Cellules Géantes dans les Végétations Adénoides du Pharynx; Bulletin de la Société Anatomique de Paris, tome vi., fascicule 8. Ruge: Die Tuberculose der Tonsillen vom klinischen Standpunkte; Virchow's Archiv, Band cxliv., Heft 3. Schlenker: Beiträge zur Lehre von der Menschlichen Tuberculose; Virchow's Archiv, Band cxxxiv. Starck: Tuberculöse Drüsen im Zusammenhang mit cariösen Zähnen; Münchener Medicinische Wochenschrift, 1896, No. 7. Purves Stewart: Tuberculosis of the Tonsil, British Medical Journal, May 4th, 1895, No. 1792. Stöhr: Ueber Mandeln und Balgdrüsen; Virchow's Archiv, Band xcvii. Strassmann: Ueber Tuberculose der Tonsillen; Virchow's Archiv, Band xcvi. M. J. Straus: Sur la présence du Bacille de la Tuberculose dans les Cavités Nasales de l'Homme sain; Bulletin de l'Académie de Médecine, No. 27, tome xxxii. R. Virchow: Die Krankhaften Geschwülste, Band ii., p. 674, 1864. Woodhead: The Channels of Infection in Tuberculosis, THE LANCET, Oct. 27th, 1894.

LITERARY INTELLIGENCE.—Mr. Frank A. Rogers, of 327, Oxford-street, has published an abridged list of important alterations in the British Pharmacopœia, 1898, as compared with the British Pharmacopœia, 1885. It is in a very convenient form, being printed on a card which folds in three, and a copy will be sent to any medical man who may wish to have it.

MEDICAL MAGISTRATE.—Mr. A. E. Davies, M.R.C.S. Eng., of St. Asaph, has been appointed a Justice of the Peace for the county of Flint.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF RAPID COLLAPSE AND REDEVELOPMENT OF AN OVARIAN CYST.

BY JOHN D. MALCOLM, C.M., F.R.C.S. EDIN.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

THE subject of the following note suffered from severe attacks of pain in the abdomen at intervals from Aug. 29th, 1895, onwards. On March 1st, 1896, Dr. William Thyne of High Barnet diagnosed an ovarian tumour with occasional twisting of its pedicle. Six days later, before arrangements had been made for the removal of the tumour, the patient had a very severe attack of pain accompanied by uncontrollable vomiting and great increase in the size of the tumour. On the 8th she was removed to the Barnet Cottage Hospital and Dr. W. Thyne removed a tumour of the right ovary which was almost black from occlusion of its vessels caused by twisting of the pedicle. The left ovary appeared healthy. The uterus was enlarged, the patient being in about the sixth week of pregnancy. Convalescence was uninterrupted and a full-time healthy child was delivered by forceps on Oct. 27th, 1896. On Oct. 2nd, 1897, the patient was again seized by pain in the abdomen and she said that she felt exactly as she had done in her previous illness. Dr. W. Thyne and Dr. Andrew Elliot examined her on the 3rd and there was then no doubt that another tumour existed. The Barnet Hospital was closed at that time and the patient was sent to me for treatment at the Samaritan Free Hospital. I saw her with Dr. Elliot on the 12th and there was at that time no palpable tumour. There was a tender place in the pelvis and the seat of the tenderness could be moved about freely. Taking the history of the first tumour into consideration and relying, as I knew I could, on the observations reported to me by Dr. Thyne and Dr. Elliot, I diagnosed a ruptured ovarian tumour and arranged for the patient's admission to hospital a few weeks later. On Nov. 8th I found a pelvic tumour extending nearly half way up to the level of the navel. On the 17th I removed a tumour of the left ovary as large as a cocoanut, consisting of two thin-walled cysts with an hour-glass constriction at their junction and numerous very small cysts close to the attachment of the tumour to the broad ligament. There was no twist of the pedicle. I did not observe anything to show whether the larger cysts which I removed had been ruptured or whether they had developed since my first examination. The facts are, however, that on Oct. 3rd, 1897, there was a considerable tumour and on Oct. 12th there was no palpable tumour and on Nov. 8th there was a pelvic tumour extending nearly half way up to the umbilicus.

The rapid changes in the physical signs in this case seem sufficiently interesting to be noted. It is obvious that such changes might give rise to unjust reflections on the diagnostic skill of the practitioner and perhaps to most serious damage to the professional prospects of a young man.

Portman-street, W.

NOTE ON A CASE OF INTESTINAL OBSTRUCTION DUE TO INDURATION OF THE GREAT OMENTUM.

BY T. ARMSTRONG BOWAS, M.A., M.D., B.C. CANTAB.

A MAN, aged sixty-six years, came under my observation in June, 1895. At that time he was the subject of ulceration of the left leg. The lower half in nearly the whole circumference was a discharging ulcer with three sinuses leading to a thickened tibia. In addition to this lesion he had a scar on the forehead very suggestive of a healed gumma with exfoliation of the outer table of the frontal bone. A nasal intonation of the voice was present without apparent cause in the soft palate or nose. In addition there was a marked condition of knock-knee on the left side with considerable enlargement of the internal condyle of the femur. The case was regarded as one of tertiary syphilis. During the succeeding two years he had occasional attacks of vomiting which easily yielded to treatment, and his leg condition improved but never entirely healed up till just previously to his last illness, when the ulcer was replaced by a firm white scar with cessation of discharge from the sinuses. For some months previously to his death he was subject to constipation. On Dec. 17th, 1897, he commenced to vomit with concomitant pain in the epigastric region. His bowels were relieved by an enema, and nothing was retained by the mouth. Under treatment, however, the stomach became less irritable, and some amount of nourishment was subsequently retained with occasional vomiting. The vomit was not fæcal. On inspection of the abdomen there was nothing abnormal to be noted, but on palpation there was discovered lying across the abdomen from the right lower to the left upper regions an ill-defined fixed resistance, best felt on the left side just above the umbilicus, at which spot the fingers below and to the left could define an edge on a level with a transverse division of the rectus muscle, giving the impression of a tumour, while at no other point could the limits of it be differentiated. There was no fluid in, or distension of, the abdomen. On Dec. 25th, in spite of his illness, he obtained a small portion of currant cake which he retained. No change in condition occurred till ten days later when with renewed vomiting the currants were returned undigested, the vomit having a faintly fæcal odour. As there had been no relief from the bowels for seven days an enema was administered with practically no result. From this date the vomiting was distressing, everything by the mouth being immediately returned, and although fed by nutrient enemata his condition did not improve. On Jan. 11th, 1898, it was obvious that he had peritonitis and death ensued on the following day.

A post-mortem examination revealed the presence of free non-fæcal fluid in the peritoneal cavity, with a few flakes of lymph here and there. The large intestine was empty, the small one contained a little fæcal matter. The ill-defined resistance proved to be the great omentum very much indurated surrounding the transverse colon, the resulting contraction having occurred to such an extent that the lumen of the gut for a length of six inches or more would just admit a fine penholder. The stomach was closely attached to this, but there was no abnormality or disease of it. The pylorus, pancreas, and liver appeared to be natural.

I am indebted to Dr. C. P. White, pathologist to the General Hospital, Birmingham, for examination of the specimen, and he reports: "Microscopical examination shows great increase of fibrous tissue which stains extremely badly, and here and there a few nodules of granulation tissue; the colon wall contains a large excess of fibrous tissue, and there is some hypertrophy of the muscular coat." The absence of evidence of malignant disease after death and the lesions present during life would suggest a syphilitic origin of the induration of the omentum.

Herne Bay.

A CASE OF CHLORODYNE POISONING; RECOVERY

BY D. J. FREEMAN, L.R.C.P., L.R.C.S. IREL.

ON June 1st, 1898, I was called at 2 A.M. to attend a married woman, aged fifty-three years. On entering the room I found that the patient was lying on her back in bed in a comatose condition and breathing stertorously. The pupils were normal but insensible to light. The pulse was hard and wiry, being 80 per minute, and the skin was burning hot, the temperature being 102° F. The teeth were clenched. I was told that she had just had two fits in quick succession and whilst my informant was speaking the patient gave a deep, forced expiration, something like an aura epileptica seemed to pass over her frame, and for a minute or more the body writhed in a convulsive seizure, grinding of the teeth, distortion of the face, and bending of the body to the left side (pleurosthotonos) occurring. Then she relapsed into a state of profound coma, the respirations were inaudible, the pulse was imperceptible at the wrist and for a moment we thought that she was dead. Artificial respiration was tried with partial success. Just then her sister rushed in to say that she had been told that the patient had taken nearly the

whole contents of a ninepenny bottle of chlorodyne—an ounce in quantity—that night on going to bed between 10 and 11 P.M. Cold affusion and other active measures were then employed, with the result that consciousness was restored, though with difficulty, and the patient was enabled to swallow the mustard emetics given. Vomiting soon took place and she slowly recovered, greatly exhausted by her perilous experience.

There is no previous history of fits or epilepsy in this patient's medical record, nor can I find in looking up the literature of chlorodyne poisoning—which is rather meagre, by the way—that convulsions are mentioned as a symptom; stertor, coma, &c., are the usual features. It is also noticeable that so long a period—four hours—should have elapsed between the absorption of the poison in such a large dose and the all but fatal effects. With reference to the amount taken, nearly an ounce, Dr. Stevenson relates a case from THE LANCET (1871) of a young lady who was poisoned by two divided doses—one drachm each—taken at short intervals. He also mentions that Dr. Dowse records an instance of a man who was found insensible on the pavement with an ounce bottle of chlorodyne empty by his side and who subsequently recovered; the poison had no doubt been swallowed but a little time before he was found. No two samples of chlorodyne obtained from separate sources are alike; hence, perhaps, the difference of results, &c., from poisoning by chlorodyne.

Brighton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

A CASE OF ADDISON'S DISEASE, WITH MILIARY TUBERCULOSIS AND OLD PULMONARY TUBERCULOSIS; SYNCOPE; NECROPSY.

(Under the care of Dr. J. ANDERSON.)

THOUGH much recent work has been done on the subject of the suprarenal bodies we are not even yet in a position to explain satisfactorily the symptoms of Addison's disease. The theory that these capsules normally elaborate an internal secretion is supported by many observers, among whom may be mentioned Rolleston in his valuable Goulstonian Lectures at the Royal College of Physicians of London in 1895[1] and Schäfer and Oliver.[2] Schäfer and Oliver have conclusively shown that the internal secretion of the suprarenals has a very powerful action on blood-pressure, causing contraction of all the peripheral arteries. It also acts directly on the heart. It is therefore extremely probable that the great weakness so noticeable in Addison's disease is due to a lack of this secretion. It is more difficult to explain the pigmentation which is generally present, though absent in the case related below. For the notes of the case we are indebted to Mr. A. E. Griffin, house physician.

A boy, aged fourteen years, was admitted into the Seamen's Hospital on Jan. 7th, 1898 It was stated that he was suffering from a pleuritic effusion, possibly an empyema. On admission he was collapsed; the pulse was 130 and barely perceptible and the temperature was 97·6° F. The patient said that he had been laid up in bed for three weeks with cough and expectoration; for the whole of this time he had had gradually increasing pain in the abdomen, with constipation; and daily vomiting had occurred independently of food. He was fair, the skin being clear and pale; he was emaciated and his lips were dry. The tongue was slightly furred, but was red at the edges and at the tip. The chest was of a rickety type, with some "beading." He lay on the right side and was apparently in continual pain, which was referred to the abdomen above the umbilicus; he also complained of pain in the right iliac fossa. The chest was thinly covered, the movements were impaired, and there was retraction at both apices; the percussion note over the lungs was impaired on both sides, front and back. The breath sounds were weak all over. No adventitious sounds were to be heard except over the middle lobe and over the lower part of the right lower lobe where a few fine râles with inspiration were audible; expiration was not prolonged. Vocal resonance and vocal fremitus were indifferent on both sides, but there was no notable difference between the two. The apex beat of the heart was seen and felt in the fifth space in the nipple line, but cardiac dulness was not enlarged upwards or to the right; the sounds were weak but normal; the second sound was accentuated over the pulmonary cartilage. The abdomen was retracted; there was general tenderness especially in the left hypochondrial region. The liver and spleen were not felt; there was no distension, sense of resistance, or dulness. On Jan. 8th the pulse was 120 and very small, the respiration was normal, and the temperature was 99°. The patient complained of great pain under the left costal margin. He had a constipated stool after the enema which was given on admission, but he did not retain the enema on the 8th and there was incontinence of fæces. On the 8th, 9th, and 10th the patient vomited after food, but the abdominal pain gradually ceased and the bowels became constipated; his general condition improved, but his appetite was always poor. On the 15th he vomited twice after breakfast. On that date the tongue was clean and there was no abdominal pain or tenderness. The pulse was still 120 and weak; the physical signs in the lungs had not altered. The bowels were kept open by small doses of castor-oil. On the 18th some abdominal pain referred to the epigastric region was again complained of and he refused food. The temperature continued to be normal. On the evening of the 19th the patient while lying in bed suddenly became cyanosed and dyspnœic. When seen he was in great fear of impending death. The pulse was hardly perceptible and was 144 per minute. He did not react to stimulants (injections of ether and strychnine) and died from cardiac failure ten minutes after the commencement of the attack.

Necropsy.—A post-mortem examination was held on Jan. 20th. Both lungs were found to be firmly bound down by old adhesions with the exception of the right middle and lower lobes, where there were a few recent adhesions which were easily broken down. Over the whole of the left side the pleura was greatly thickened and contained masses of cartilaginous hardness. On section both lungs were seen to be thickly dotted with miliary tubercle, this condition being most marked in the upper lobes. At the base of the left upper lobe, which was somewhat collapsed, there were two small thick-walled cavities, each of the size of a hazel-nut and one containing a cretaceous nodule. The right middle and both lower lobes were congested and œdematous. The bronchial glands were enlarged and pigmented, but there was no caseation. The heart was small; all the cavities were dilated and filled with dark clot. The muscle substance was poor; the valves were normal and there was no pericarditis. There was no excess of fluid in the abdomen and no adhesions were present. The mesenteric glands were enlarged and firm in consistence, but they were not caseated. The liver, kidneys, and spleen were congested. The intestines were injected, but with no signs of tubercle. The capsules of the suprarenal bodies were thickened and bound down firmly to the underlying structure. Each was four times the normal size; they were caseous and contained cretaceous nodules. The brain was normal. On microscopic examination the mesenteric glands showed infiltration of small cells without any giant cells. Sections of the suprarenals showed that the periphery was rich in typical small tubercles, many containing large multi-nucleated giant cells. The medulla of the suprarenal bodies contained caseous material, showing no definite structure under the microscope.

Remarks by Mr. A. E. GRIFFIN.—Dr. Anderson has kindly given me permission to report the above case, which is interesting on account of the fact that there was not the slightest sign of pigmentation on the skin, though the buccal mucous membrane was not examined. I find that Dr. Bramwell[3] points out the value of routine examination of

[1] THE LANCET, March 23rd and 30th, 1895.
[2] The Practitioner, September, 1895.
[3] Two Clinical Lectures on Addison's Disease, Brit. Med. Jour., Jan. 2nd and 9th, 1897.

the mouth in these cases. The physical signs in the lungs gave no evidence of the condition found post-mortem. The important diagnostic signs were extreme asthenia, emaciation, loss of appetite, vomiting with abdominal pain, and small rapid pulse.

ROYAL BUCKINGHAMSHIRE HOSPITAL.

A CASE OF PERFORATION OF THE ILEUM; NECROPSY.

(Under the care of Mr. E. G. WOOLLERTON.)

IT is difficult to give an explanation of the occurrence of the perforation in the following case which would be perfectly satisfactory. It is not quite clear from the report whether the whole intestine was examined at the necropsy. The situation of the perforations is in favour of their being due to the ulceration occurring in typhoid fever, but there seem to have been no other symptoms which would justify such a diagnosis. The previous attacks of abdominal pain and vomiting may have been due to a partial obstruction caused by a peritoneal band, and it is possible that the pressure was sufficient to cause local necrosis of the bowel wall, and so perforation, but though this explanation is possible it is by no means probable. We consider the case worthy of being put on record on account of this great obscurity as to the mode of origin of the perforation. For the notes of the case we are indebted to Mr. Horace Rose, house surgeon.

A woman, aged thirty years, was admitted into the Royal Buckinghamshire Hospital early in the evening of Feb. 25th, 1898, complaining of severe pain in the epigastrium. For several months past the patient had had attacks of "indigestion." Five weeks before admission she had a sharp attack of abdominal pain accompanied by symptoms of indigestion, vomiting, &c. The vomiting continued at intervals up to Feb. 24th, on which day feeling better she ate a hearty meat meal and did her work as usual. Towards the evening the pain in the abdomen returned with severity and the vomiting increased. The bowels were well opened during the day. There was no history of hæmatemesis or melæna.

On admission the patient was obviously in acute pain, the countenance being pale, pinched, and anxious. The pulse was 120, small and wiry but hard. The temperature was 98° F. but soon rose to 100°; she lay on her back with the knees drawn up, the abdomen being swollen and very rigid. There was no superficial tenderness but severe pain ensued on deep pressure being made. The abdomen was tympanitic on percussion and the liver dulness was almost absent, the respiratory movements being short, quick, and costal. Soon after admission the patient was very sick, bringing up greenish bilious fluid. An enema was given and slight fæcal evacuation resulted; a rectal tube was inserted and some flatus passed; she was given a mixture containing bismuth, hydrocyanic acid, and morphia. Although fairly under the influence of morphia she had occasional very severe attacks of pain; she was put on nutrient enemata, but they were not well retained. Two hours later the pulse was 130, the respirations were 40, and the temperature was 97°, her general condition being worse. Turpentine stupes were now applied over the abdomen. She was seen by one of the visiting staff, but her condition was considered to be too bad for operation. Towards night she was becoming more collapsed. Hiccough was frequent and troublesome. Early the next morning the temperature ran up to 108° and the patient died collapsed.

Necropsy.—With the assistance of Dr. Randal Smyth a post-mortem examination was made. The body was well nourished, the heart and lungs being normal. Intense peritonitis was present all over the abdomen; the abdominal cavity contained free gas and about 10 oz. of thick, curdy pus; the intestines were covered with inflammatory lymph in places ⅛ in. thick. The stomach was removed and opened, but was found to be quite normal. On examining the ileum a perforation was found of the size of a threepenny-piece which from without admitted the tip of the little finger; near it but separated by a narrow band of normal tissue was another perforation of about the size of a pin's head. The intestine around the perforations was dark but not gangrenous. When the perforation was first observed the intestinal contents were passing through it into the general peritoneal cavity. The perforations were situated at the edge of the gut farthest from the mesenteric attachment and about 12 in. from the ileo-cæcal valve. There were several old and very tough peritoneal inflammatory bands in the abdomen; the rest of the small intestine was free from ulcers of any kind. The portion of intestine was excised and opened; there were no signs of ulceration at the site of perforation, but there appeared to be some slight constriction of the lumen of the bowel. The uterus and tubes were healthy.

Remarks by Mr. ROSE.—I do not know whether I am right in considering the perforation due to friction from an inflammatory band. It may have been due to embolus, but there was no sign of such condition observable and absolutely no trace of any foreign body. The case is interesting because of its acute onset (the patient being at her usual work the day before admission) and also because of the rapid development of dangerous symptoms no doubt due to the very large size of the perforation. The position of the perforation is peculiar and as far as I can find the literature on isolated perforations of the intestine is decidedly scanty.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Acute Leukæmia.—Influence on Gout of the Mineral Constituents of Vegetables.

A MEETING of the above society was held on June 14th, Mr. BRYANT, the President, being in the chair.

Dr. ROSE BRADFORD and Dr. BATTY SHAW read a paper on Five Cases of Acute Leukæmia. Two cases were observed in 1890, the remaining 3 in 1897. All the patients came under observation for anæmia, causing excessive pallor, weakness, swelling and ulceration of the mucous membrane of the gums, cheeks, or lips, and fever. The anæmia and weakness preceded the affection of the mouth. Most of the cases also presented purpuric hæmorrhages in the skin and in two cases there was some melæna. The cases all ran an acute and fatal course, the maximum duration of the illness being eight weeks. The lymphatic glands were enlarged in all cases, slightly in 4, and considerably in 1. The spleen was slightly enlarged in two cases. The blood showed a great excess of white corpuscles, varying from 1 white to 4 red in Case 1 to 1 white to 43 red in Case 4. Stained films of the blood were made in 3 out of the 5 cases and showed that the excess of white corpuscles was almost entirely due to the presence of great numbers of large lymphocytes. In 2 cases these formed over 90 per cent. of all the white cells present, and in the third case these formed 61·8 per cent., and the small lymphocytes 12·2 per cent, of the total number of white cells. In 2 cases a few myelocytes were present, and in all the polymorpho-nuclear cells were remarkably scanty. Post-mortem examinations were made in 4 cases. Similar cases had been described by Fraenkel, in 1895, as cases of acute leukæmia and called by some writers acute lymphatic leukæmia.—Dr. H. G. TURNEY quoted a similar case which he had had the opportunity of observing in a man, aged forty years, in whom the total duration of the disease was three months. The onset was insidious, attended with shortness of breath; one month after the onset purpuric spots were noticed on the skin and shortly before death the gums became tender and swollen. The examination of the blood showed a proportion of white to red as 1 to 15, the white cells were large lymphocytes, the myelocytes and the polymorpho-nuclear cells being few in number; there were, however, a considerable number of nucleated red cells. The necropsy revealed no enlargement of the lymphatic glands; there were numerous purpuric spots over the serous membranes; the bone marrow was of a plum-red colour; the liver was enlarged and fatty and gave the iron reaction in an extreme degree. Dr. Turney thought that no hard-and-fast line could be drawn between the various types of the disease.—Dr. ROLLESTON considered that it might be difficult to distinguish between acute Hodgkin's disease with a terminal lymphocytosis and some of the cases like Dr. Bradford's; one of the authors' cases might perhaps bear this interpretation. He referred to a case published in conjunction with Dr. Latham in which a case of Hodgkin's disease simulated a mixed leukæmia.—Dr. NORMAN MOORE asked Dr. Bradford

and Dr. Shaw if they could give any explanation of the rapid course of the disease. He had seen two cases following malaria and syphilis acquired in South Africa which had terminated within a year, but had seen no case so rapid as those quoted by Dr. Bradford.—Dr. BRADFORD, in reply, said that he agreed with Dr. Turney as to the difficulty of deciding the nature of these cases from the examination of the blood alone and pointed out that the disease had a characteristic appearance and when once seen was easily recognised and did not resemble acute Hodgkin's disease.

Dr. ARTHUR P. LUFF read a paper on the Influence on Gout of the Mineral Constituents of various Vegetables. He said that in the Goulstonian lectures of last year, whilst discussing the relative effects on the gouty process of animal and vegetable diets, he had stated that, in his opinion, it was of little importance as regards the production of uric acid from proteid matter whether the proteid be of animal or vegetable origin and that the same harm may result from an excessive consumption of either form of proteid. But although animal and vegetable proteids may react alike with regard to the production of uric acid, yet it is well known that different articles of diet exercise a different influence on the precipitation of sodium biurate and on the solution of uratic deposits. In connexion with this subject he had been able to demonstrate that the saline constituents of animal and vegetable foods exercise very different solvent effects on sodium biurate. From the results of these experiments it had appeared probable that if the mineral constituents of vegetables were present in sufficient quantities in the fluids of a gouty person they would not only delay the advent of an attack of gout by increasing the solubility of the biurate present in these fluids but would also, by their increased solvent effects on uratic deposits, facilitate the removal of the latter. Since the delivery of the Goulstonian Lectures he had carried out a long series of experiments on the mineral constituents of all the vegetables in ordinary use and the results of these experiments were embodied in this paper. The objects of this experimental inquiry were: (1) to ascertain the relative efforts exerted by the mineral constituents of various vegetables on the solubility of sodium biurate at the temperature of the human body, and therefore presumably on uratic deposits; and (2) to ascertain the influence, if any, exerted by these constituents in retarding the conversion of the sodium quadriurate contained in the fluids of the body in gout into the biurate. Obviously the elucidation of these points would have a material bearing on the treatment of gout. The method of carrying out the experiments to ascertain the solvent effects exerted by the mineral constituents of vegetables on sodium biurate was the same as that described by him in the Goulstonian lectures last year. The vegetables employed in the experiments were spinach, Brussels-sprouts, potato, asparagus, Savoy cabbage, French beans, lettuce, beet-root, winter cabbage, celery, turnip-tops, turnip, carrot, cauliflower, seakale and green peas. From the results obtained it appears that 0·05 per cent. and over of the mineral constituents of nearly all the vegetables very appreciably increase the solubility of sodium biurate. The solitary exception is in the case of the mineral constituents of green peas, which practically exert no influence whatever on the solubility of the biurate. He next endeavoured to ascertain whether these effects were due to the alkalinity of the vegetable ashes or whether they could be referred to any one saline constituent of the vegetables. The series of tables embodying the results of this part of the investigation demonstrated conclusively that the solvent effect of a vegetable ash on sodium biurate bears no relationship either of a direct or an inverse ratio to the alkalinity of the ash or to the proportions of potassium, sodium, calcium, magnesium, and iron salts present or to the proportions of phosphates, sulphates, and chlorides present. The following examples demonstrated this. The solvent effect on the biurate of the ash of Brussels-sprouts is high while its alkalinity is low; on the other hand, the solvent effect of the ash of celery is low, while its alkalinity is high. The solvent effect of the ash of spinach is high, while the proportion of potassium salts is low; on the other hand, the solvent effect of the ash of turnips is low, while the proportion of potassium salts is high. The solvent effect of the ash of potato is high, while the proportion of sodium salts is low; on the other hand, the solvent effect of the ash of seakale is low, while the proportion of sodium salts is high. Corresponding results were obtained with the calcium, magnesium, and iron salts, and with the phosphates, sulphates, and chlorides present in the vegetable ashes. These results, therefore, show that the solvent effect exerted on sodium biurate by the mineral constituents of vegetables is not due to any one constituent. He next proceeded to ascertain whether an artificially prepared ash of the same composition as the natural ash of one of the vegetables would exercise a similar effect in increasing the solubility of sodium biurate to that possessed by the natural ash. For this method of experimentation he selected the spinach ash, which has the greatest solvent effect on the biurate. An artificial ash was prepared, which was made with the same proportions of potassium, sodium, and calcium, and of sulphates, phosphates, and chlorides as those present in the natural spinach ash, and also of precisely the same degree of alkalinity. The results of the experiments with this artificial product on the biurate showed that it exercised in all proportions a deterrent effect on the solubility of the biurate, whereas the natural ash exercised a marked solvent effect. The only explanation which he could offer of these remarkable results was that in the natural ash there is some combination of the mineral constituents which cannot be artificially imitated, and that upon this natural combination of the salts is dependent the increased solvent effect exerted on the biurate by the mineral constituents of most vegetables. If this view be correct then modern science is but confirming the correctness of the practice of those ancients who employed vegetable ashes in the treatment of gout. Experiments were next undertaken in order to ascertain the effect exerted by the mineral constituents of the various vegetables on the conversion of sodium quadriurate into the biurate. It was well known from the researches of Dr. Bence Jones and of Sir William Roberts that sodium quadriurate, which is the form in which uric acid first appears in the blood in gout, is an unstable body and is gradually converted by combination with the sodium carbonate of the blood into sodium biurate, which latter body, on account of its comparative insolubility, deposits in the tissues and then constitutes the gouty uratic deposit. It is obviously of therapeutical importance to know whether the mineral constituents of any of the vegetables, in addition to exerting an increased solvent effect on the biurate, possess the power of delaying the conversion of the quadriurate into the biurate. The results of the experiments undertaken with this object showed that the mineral constituents of some of the vegetables, notably spinach, Brussels-sprouts, French beans, cabbage, turnip-tops, and turnips, very considerably delayed the conversion of the quadriurate into the biurate. The inference is that if such mineral constituents were present in suitable proportions in the blood of gouty subjects, and if at the same time proper measures were adopted for promoting the excretion of the quadriurate by the kidneys, the elimination of that body might be secured without the occurrence of any precipitation of the biurate into the tissues. The net results of all the experiments indicated that the mineral constituents of most vegetables increase the solubility of sodium biurate, and also in several cases delayed for considerable periods the conversion of the sodium quadriurate into the biurate. On the other hand, the mineral constituents of meat diminish the solubility of the biurate and, as Dr. Luff had shown elsewhere, exercise but little effect in delaying the conversion of the quadriurate into the biurate. He wished it to be clearly understood that he did not attribute the different effects of animal and vegetable diets on gouty subjects to the saline constituents alone. He thought, however, that the results of the experiments clearly showed that it is to the different mineral constituents of animal and vegetable foods and to the different physical effects they exercise on the quadriurate and biurate that one must look for a partial and perhaps a main explanation of the known facts that an excessive diet of the one tends to produce gout and of the other tends to retard it. From the results of these experiments it appeared that certain vegetables stand out prominently with regard to the effect exercised by their mineral constituents in both retarding the conversion of the sodium quadriurate into the biurate and in increasing the solubility of the latter. These vegetables were spinach, Brussels-sprouts, French beans, winter cabbage, Savoy cabbage, turnip-tops, turnips, and celery, and these he considered likely to prove most beneficial to gouty subjects. Of these, in so far as the effects produced by their mineral constituents are concerned, spinach occupies the foremost place,

both as regards inhibiting the decomposition of the quadriurate and increasing the solubility of the biurate. On account of this double beneficial action possessed by vegetable ashes on the chemical portion of the gouty process, it had occurred to him that the free use of a table salt composed of the ashes of certain of the vegetables in place of common salt might prove advantageous to the gouty. He was therefore having different mixtures of the mineral constituents of various vegetables prepared, with which he proposed to experiment in order to ascertain which combination was likely to prove the most efficacious to gouty subjects. He hoped to be able shortly to publish the results of his experiments with these vegetable table salts.—Dr. EWART congratulated Dr. Luff on the excellent results which he had obtained and thought that the practice of using a vegetable diet would prove to be scientifically correct by his researches.—Dr. HAIG thought that Dr. Luff had hardly shown what the salts were which produced this greater solubility of biurate of soda nor had he shown how they acted; he viewed the facts brought forward by Dr. Luff in a somewhat different way; in the ash of the various vegetables examined the constituents might be divided into two groups, those which "make" for solubility and those which "make" for insolubility, and if one takes certain vegetables from the table arranged by Dr. Luff one finds that in spinach the "soluble" preponderate over the "insoluble," whereas in seakale the "insoluble" preponderate over the "soluble"; in cabbage, which occupies an intermediate position, the "soluble" and "insoluble" constituents are more equally balanced. The result obtained is not that of one constituent, but the balance of the whole. He further pointed out that gout was due to the admission of uric acid to the body and not to its solubility in the blood and that although a table salt, as suggested by Dr. Luff, might be used with some advantage he thought it would be no remedy for gout.—Dr. LUFF, in reply, said that he thought Dr. Haig had misunderstood the object of the paper, since he had been dealing with the solubility of sodium biurate and not with that of uric acid.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Dysmenorrhœa.

A MEETING of this society was held on June 9th, the President, Dr. MACNAUGHTON-JONES, being in the chair.

Mr. SKENE KEITH showed Ovaries illustrating a Cause of Failure of Apostoli's treatment.

Mr. CHARLES RYALL showed a specimen of Uterine Fibromyoma removed by Abdominal Hysterectomy.

In the discussion on these specimens the PRESIDENT, Dr. GILES, Dr. ROUTH, Dr. BANTOCK, Dr. BEDFORD FENWICK, Dr. HEYWOOD SMITH, Dr. BURLEIGH-ROBINSON, Dr. PURCELL, and Dr. SNOW took part.

Dr. GRANVILLE BANTOCK read a paper resuming the discussion on a former paper on Dysmenorrhœa by Mr. Skene Keith. He recognised three typical forms of anteflexion as follows: (1) that in which the flexion occurs at the junction of the body and cervix, in which the body and cervix are both directed forwards, the former lying upon the bladder and the latter in the axis of the vagina; (2) that in which the body of the uterus may be in fairly normal position, but the cervix is bent forwards, the flexion occurring in the cervical portion; and (3) that in which the anteflexed uterus, the bend being at the internal os, lies on its back in the bottom of Douglas's pouch. He quite agreed with Mr. Keith in the view that in a case of dysmenorrhœa with anteflexion the bend *per se* was not alone the cause of the pain. It was only when congestion, with its resultant thickening of the mucous membrane from simple turgescence, or that change which goes by the name of hyperplasia, supervened, and they were face to face with a potential or actual organic stricture, that pain became a prominent symptom. Mr. Skene Keith, in his paper, had said, "The patient will tell you that she has suffered from pain since she first begun to menstruate." On the contrary, his experience told him that even in an extreme case there was no pain at the beginning of menstruation beyond the backache which is so common in the majority of apparently healthy women, and it was not until one or more years had elapsed that the special pain began, at first in a minor degree, but gradually increasing up to the age of maturity. The exception to this would be found in the case in which the patient happened to be the subject of catarrh when the menses first made their appearance. His explanation of the course of events was as follows. From the very beginning—assuming that there was no catarrh and consequently no congestion—the flexion caused some retardation of the flow with no more pain than the ordinary backache or a sense of weight in the pelvis; the frequent repetition led by degrees to stasis of blood in the organ, in other words to congestion, and pain of special character gradually came on, yet varying from time to time, probably according to variations in the degree of congestion. That there was a retardation of the menstrual flow was clearly shown by the character of the discharged blood—as in all cases of obstructive dysmenorrhœa from stricture, organic or otherwise—and by the fact that in every well-marked case of the kind under discussion the cavity of the uterus was more or less enlarged, half an inch or more. The presence of leucorrhœa was the outward sign of congestion and the menorrhagia often assumed the form of protracted menstruation rather than actual excess, the discharge being usually dark coloured, often treacly, and changing to a dirty brown colour. On four occasions Mr. Keith made use of the term dysmenorrhœa qualified by the adjective "uterine." He would like to know what precise meaning he attached to this qualification. Did he mean that there was a form of dysmenorrhœa other than uterine? Did he accept the doctrine of ovarian dysmenorrhœa, for instance, to say nothing of the various forms enumerated by one of the speakers who had taken part in this discussion? If so he joined issue with him on a very important point and boldly affirmed that there was no such thing as ovarian dysmenorrhœa. It was true that patients often referred much of their pain to the region of one or both ovaries. But if care were taken to analyse these cases it would be found that the seat of the trouble was the uterus, the pain being referred to the ovary, as in hip-joint disease the pain may be referred to the knee. As to treatment he recognised only three rational methods: (1) division of the cervix; (2) the stem pessary; and (3) dilatation. No operation upon the external os could avail anything when the condition to be remedied had its site at the internal os. In regard to pessaries he believed that no vaginal pessary was of any value in the treatment of anteflexion. For dilatation he regarded the method by graduated bougies as being the best. It generally required to be repeated several times at intervals.—Dr. ARTHUR GILES said that his experience was that in many cases of anteflexion dysmenorrhœa existed from the onset of menstruation; but two forms were to be distinguished, that in which the pain had a congestive origin—here it might come on later—and that in which it was associated with neurosis—here it was generally present from the first. In the latter class of case all local treatment was likely to prove unsuccessful. He took exception to the term "obstructive dysmenorrhœa." In these cases the flow was generally scanty, so that the blood could find its way through even a narrowed channel; moreover, if "obstruction" were present an accumulation of blood would occur behind the seat of obstruction and this was never found. He believed the pain to be due partly to painful contractions and partly to compression of the swollen and hypersensitive mucosa. Dudley's operation seemed to him to fulfil the two main indications required: first, permanent abolition of the flexion; and secondly, permanent widening of the canal; but there were cases, probably the neurotic class above mentioned, in which it would not be successful. He believed there were cases of dysmenorrhœa other than those of uterine origin, notably those due to inflammatory pelvic conditions, such as salpingitis, oöphoritis, and cellulitis.—Dr. C. H. F. ROUTH said that dysmenorrhœa might be due to spasmodic contraction situated at the os internum: this could be demonstrated by the constriction of a tent placed in the uterine cavity. The condition might be remedied by anti-spasmodic drugs and by depletory measures such as leeches and division of the os externum; in other cases Greenhalgh's hysterotome answered well, but it had to be carefully used. His own practice was the introduction of a tangle tent wrapped round with cotton wool soaked in carbolic acid. This acted both as an anæsthetic and as an antiseptic. After some dilatation had been secured by this means he introduced the pessary which he had devised for the purpose; this could be worn from six to twelve months.—Dr. BUTLER HOGAN agreed with Dr. Bantock that division of the external os alone was not sufficient. For dilatation he

preferred graduated bougies. He had also had good results from cocaine irrigations.—Dr. HEYWOOD SMITH thought that Dr. Bantock was a little too sweeping in his statements as to the pathology of dysmenorrhœa, for it seemed to him that ovarian dysmenorrhœa was a well-established condition associated especially with cirrhotic ovaries. For treatment dilatation alone often failed; it should be followed by slight bilateral incisions carried through the mucosa and muscularis at the internal os. After dilatation he employed a glass stem pessary, which was clean and non-irritating. Duke's spiral stem also answered very well.

KIDDERMINSTER MEDICAL SOCIETY.

Exhibition of Specimens.—Peritonitis.

A MEETING of this society was held on May 27th, Mr. W. HODGSON MOORE being in the chair.

Mr. J. LIONEL STRETTON showed the following specimens. 1. A Dermoid Tumour of the Ovary removed from a woman aged forty-two years. She had been an in-patient two months previously with caries of the jaw and had never had any abdominal trouble. On opening the abdomen there was a considerable escape of clear amber-coloured fluid—a gallon or more—and the tumour was found adherent to the great omentum, which required ligaturing before removal. The solid portion of the tumour weighed 2 lb. and there was an opening about its centre as if a large cyst had been ruptured. The patient made a satisfactory recovery. Mr. Stretton commented upon the small amount of discomfort associated with the development of the growth. It seemed probable that the escape of fluid into the abdominal cavity first caused sufficient symptoms to attract her attention. 2. A portion of the Stomach and Great Omentum removed from a woman aged fifty-seven years. There was a considerable amount of adhesion and the transverse colon was wounded in removing the growth; this and the large gap in the stomach were closed with Lembert sutures. The amount of stomach removed was about one-third. The patient was very much collapsed. She never recovered from the shock and died eighteen hours afterwards. 3. Fifty-nine Gallstones removed from a woman aged fifty-seven years. She had been ill for four months, the last six weeks in bed, and had lost flesh rapidly. There had been many attacks of colic and she had been deeply jaundiced. The case exemplified the advantage of an exploratory incision. She had lost so much flesh that her attendant thought she had malignant disease, but after the operation she very rapidly improved and was up and about within three weeks. 4. A row of Ingrowing Eyelashes with their Roots removed from a woman aged fifty-two years. She had suffered for many years and had on several occasions had the lashes pulled out at various institutions. A flap of the conjunctiva was dissected up and the whole of the roots and adjacent tissue dissected out in one piece, a couple of catgut sutures bringing the flap into position.

Mr. OLIPHANT read notes of a case of Peritonitis treated with anti-streptococcic serum. The woman was twenty-eight years of age and was admitted with metrorrhagia following an abortion four years previously for which the uterus was curetted on April 20th. Although every precaution was taken she developed an attack of acute peritonitis and became exceedingly ill. Her condition was far too serious for any operative interference and as all other treatment had been tried without benefit and as she seemed to be dying it was decided to give her some of the serum. On May 3rd at 11.30 A.M. 10 c.c. (Institute Pasteur) were injected into her left flank. There was no change in the temperature or pulse but she felt better in the afternoon. On the 4th the dose was repeated. The temperature fell gradually to normal but rose again in the evening; the abdomen was less tender and less distended. On the 5th the dose was repeated. The temperature fell to normal, the abdomen was free from distension, the patient was taking nourishment well and was much brighter. She continued to improve and her temperature remained normal, but there was still pain and tenderness in the left iliac region, so on the 20th an exploratory incision was made. There were a considerable amount of adhesions around the left tube and ovary and a small collection of pus was in the left broad ligament. This was swabbed out and a drain inserted. The patient was now convalescent. Whether the serum saved her life it was impossible to say, but it appeared probable that it caused a cessation of the peritonitic mischief, for these symptoms commenced to abate as soon as it was administered.

Mr. OLIPHANT also related the case of a man, aged fifty-six years, with a Sloughing Gummatous Mass involving the Left Tonsil and Soft Palate. He was admitted under the care of Mr. Hodgson Moore a month previously. The case presented all the appearances of malignant disease and the man denied a specific history, but under large doses of iodide of potassium it was rapidly improving.

Mr. OLIPHANT showed two enlarged Bursæ Patellæ removed from a girl aged eighteen years.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Rheumatic Myositis in its Acute and Chronic Form.—Operative Treatment of Enlarged Prostate.

THE ninth ordinary meeting of this society was held on June 1st, Dr. JAMES CARMICHAEL being in the chair.

Dr. ALEXANDER BRUCE showed a patient, a woman, aged twenty-five years, who suffered from a Congenital Displacement of the Right Scapula. The condition is very rare. The scapula was much elevated and there was partial ankylosis of the right shoulder-joint, the movements of the arm being very restricted. The right clavicle was much raised and concave forwards throughout its whole length. The trapezius was present and the electrical reactions were normal. The condition came on within a period of three months after birth.

Dr. BRUCE next showed a plaster cast of the entire figure of a man suffering from Achondroplasia. His total height was only a little above 4 ft. and there was marked shortening of the legs, thighs, arms, and forearms. The trunk was also short, but not nearly so shortened in proportion as the limbs. The head was well formed and the intelligence was good and except for the distortion of the limbs he was normal in every other way. The ends of the bones were very much enlarged, especially those of the ankle-joint. The hands were short and broad and the fingers were in the characteristic condition, spread out on either side from a line passing down the division between the third and fourth fingers. A skiagram showed that the bones of the phalanges were very short and that the first phalanges were extraordinarily broadened. The lower end of the radius was very large and the scaphoid was peculiar in shape. The patient was the father of two perfectly healthy children and no other member of his family had any similar complaint.

Dr. NORMAN WALKER showed a child suffering from Lichen Scrofulosorum. Dr. Crocker says that the disease is much more common than is usually believed and is often overlooked. In this case the eruption was chiefly marked on the back. The disease had greatly improved under the local application of cod-liver oil. The second case exhibited was that of a girl under treatment for Frontal Sinus Disease. She also possessed a bald spot on the anterior part of the scalp. This resembled alopecia areata, but the edges were red, raised, and granular. A second spot had formed just above the first, and, beginning as a vesicle, was following a similar course. It seemed to be a case of folliculitis decalvans and a hair from the vicinity showed the presence of cocci.

Dr. ALEXANDER BRUCE showed the following specimens: 1. A case of large Aneurysm of the size of a bean of the Anterior communicating Artery of the Brain. It gave rise to anomalous symptoms during life: intense headache and hysteroid fits, optic neuritis, and slight paresis of the third nerve due to some meningitis. It exerted pressure under the anterior tip of the lateral ventricle and latterly burst into it. The patient died with symptoms pointing to such hæmorrhage. 2. Another Aneurysm on a small branch of the internal carotid which had pressed on the third nerve and led to a sub-dural hæmorrhage. The patient was an old woman who showed signs of an imperfectly developed crossed hemiplegia. The paralysis of the arm remained, while that of the face was transient. There was a variable paralysis of the arm and leg. The pressure had caused oculo-motor paralysis. The aneurysm had then ruptured and blood had escaped over the whole extent of the left hemisphere and hence the paresis. The sub-dural hæmorrhage presented all

the appearances of pachymeningitis hæmorrhagica, but it was adherent to the dura mater and only depressed the brain tissue. The case, Dr. Bruce considered, was almost unique. 3. Specimen from a case of Diabète Bronzé—a condition rare in this country. The skin was darkened and bronzed in character. There was enlargement and cirrhosis of the liver and a great deposit of the aluminate of iron in the nerve cells and fibrous tissue bundles. This deposit was found largely as granules in the spleen and heart. 4. A series of specimens were shown under the microscope illustrating the important part played by Arterial Sclerosis in causing hæmorrhage. Dr. Bruce thought that the occurrence of miliary aneurysm was over-estimated as a cause of hæmorrhage, while the part played by arterio-sclerosis was underestimated. 5. A specimen from a man over seventy years of age admitted to hospital suffering from stupidity and complete right-sided hemiplegia. The symptoms resembled those of an ordinary severe hæmorrhage into the basal ganglia. At the necropsy, however, under the dura mater a cystic semifluid mass was found compressing the brain tissue over the motor areas. It was only slightly adherent to the dura mater and was a partially organised thrombus the origin of which was not apparent as it had no communication with any vessel. It was stripped off quite easily from the brain and dura mater. The symptoms had lasted about three weeks.

Dr. NORMAN WALKER exhibited under the microscope sections of Lupus Erythematosus and of Acne.

Dr. HARVEY LITTLEJOHN showed: 1. The Heart of a Woman who died suddenly while in bed. She had suffered for two years from rather indefinite symptoms. The post-mortem examination showed a large organised clot on the anterior wall of the left ventricle. It was probably an aneurysm of the heart wall due to infarction. The clot was firmly organised and the cardiac muscular wall was gone, leaving only the epicardium and the adherent clot. 2. Specimen of Suicidal Cut Throat from a woman found dead on her kitchen floor by her husband when he came downstairs in the morning; a table-knife lay near her. It resembled a homicidal injury in that the injury was mostly on the right side and the incision was low down in the neck below the thyroid. Both the carotid artery and vein were cut on the right side. 3. Specimen from Ruptured Interstitial Pregnancy. The symptoms resembled those of acute irritant poisoning. 4. Old case of Cut Throat where the man recovered after dividing his epiglottis near the base. The cicatrix of this wound was clearly seen as was also that of the tracheotomy performed lower down. At a later date, however, he was more successful in committing suicide. 5. A specimen showing Cicatrix of an old Tracheotomy Wound. The trachea presented evident signs of constriction.

Mr. A. G. MILLER read a paper entitled Rheumatic Myositis in its Acute and Chronic Form. He noted that the causes of rheumatism were cold, damp, heredity, and barometric influence. The affection was often mistaken for articular rheumatism, especially when the affected muscle overlay a joint. There was pain, swelling, fever and constitutional disturbance to be noted along with this affection. The situation of the pain and swelling was chiefly at the origin and insertion of the muscle. The pain was increased usually by muscular action but not every movement of the muscles caused pain. The swelling, which was little in myositis, was well-marked in arthritis on account of the effusion into the joint. In myositis the effusion into the skin and subcutaneous tissue over the muscle caused a crackling. This was specially well-marked in pleurodynia. The affection usually subsided in a few days. In the chronic form of the disease the stiffness was more or less constant and with this there was muscular wasting. The points to note were (1) that the pain comes on in advance of the weather; (2) that the pain was often associated with a falling barometer but may be with a rising barometer if the wind be from the north or east; (3) the pain may subside when the rain had fairly set in; (4) mists caused advent of attack; (5) the onset of east winds may have the same effect even if there be no mist perceptible; and (6) pain may be conspicuously absent in cold, frosty weather if the air be dry. This was seen well by explorers in the Arctic regions. As regards the treatment nothing could be dogmatised. Of internal remedies the alkalies were good, as were also salicine and its salts. Iodide of potassium was useful in nerve affections, and Mr. Miller had found that a few drops of actea racemosa did great good in lumbago and stiff neck. Local treatment.—Dry heat always relieved the pain. Counter irritation in the shape of rubefaction was useful. The use of blisters was not to be commended, as on account of their pain the joint had to be kept at rest, and a stiff joint might result. Liniments were good if oily or rubefacient, as were also medicated (e.g., alkaline) fomentations. In chronic cases massage had great value, but the movements must be both passive and active. Mr. Miller had no faith in dietetic treatment. If any relief was obtained from the latter he thought there must have been a gouty element in the case. A dry, warm climate was the best for cases of chronic myositis. Mr. Miller was a sufferer from the latter affection and he fully described his own symptoms and the successful treatment adopted. His left shoulder became apparently ankylosed, but this was found to be due merely to muscular action. The hot douche rendered the arm freely moveable for the time, but the effect was transient. Much more benefit was obtained from the practice of movements which caused pain. Mr. Miller found voluntary muscular exercise to be even more useful than passive ones and specially those which caused pain. Any excessive movement was harmful, however. He noted a point not previously mentioned and that was that the affected joint felt cold to the touch. The conclusions he arrived at were: (1) that cases of myositis may be mistaken for arthritis and treated by rest, and this was harmful to cases of true joint inflammation as tending to ankylosis; (2) cases of apparent ankylosis from adhesions may be due to muscular contraction; and (3) cimicifuga racemosa was beneficial in rheumatic myositis.—Mr. JOSEPH BELL and Dr. CRAIG made some remarks on the paper.

Mr. ALEXIS THOMSON read a paper on Operative Treatment of Enlarged Prostate. He excluded from consideration those cases of successful catheter life where the term of life was not appreciably shortened. It was the critical cases with which surgeons had to deal, where catheter life had failed and complications had arisen which might end in fatal illness. The old procedure was to tide over the critical period by tying in a catheter or performing careful catheterisation twice or thrice daily; or, again, the bladder might be drained from the perineum or from above the pubis. The latter was not, however, always practicable, and a bladder fistula was not at any rate an ideal result. The methods available then were: 1. Either the destroying or dividing the prostatic tissue by means of a galvano-cautery. Bottini had used this method in about 80 cases with only 2 deaths. Much experience was, however, required to work with such an instrument in the dark and the method had not found favour in that country. 2. Suprapubic prostatectomy (McGill). This was feasible and advisable where there was a middle lobe projecting into the bladder. In certain cases the result was ideal. In one case operated on by Mr. Thomson two and a half years ago the patient was now well and had normal micturition. He had been enabled to pass several small calculi since the operation. 3. Double castration. Mr. Thomson had performed this operation in four cases of men advanced in life (from sixty-seven to seventy-six years of age); nearly all had retention. Every one had improved since the castration. The first case was done two and a half years ago and he had now normal micturition and the prostate was below the normal size. The second patient, operated on about the same time, used the catheter only once in the twenty-four hours. The third case was done about two years since and he only required now to use a catheter when he had retained his urine for a long time. In this case also the prostate had atrophied until it was below the normal in size. The last was the worst case and happened in a man aged seventy-six years. The operation was performed seven months ago and now he used the catheter twice a day only and painlessly. In several cases the contractile power of the bladder had greatly improved and instead of there being only a dribbling stream the flow was good. In all cases the general health had improved. One man had flushings and sweatings (like those of the climacteric) but in none was there any diminution in their mental or bodily vigour. All now enjoyed good rest at night and none regretted the loss of their testicles. 4. Vasectomy. Mr. Thomson had performed this operation once when he resected part of the vas deferens on one side. The patient was a man, aged seventy-five years, who had suffered for several years. Suprapubic drainage had to be performed later and the patient relied on this now. The conclusions arrived at were that in critical cases prostatectomy was to be

performed as it is comparatively safe. In other and unsuitable cases, however, castration seemed to be the best.—Mr. JOSEPH BELL agreed entirely with what Mr. Thomson had said. He had had no experience in vasectomy, however. Patients cannot always be persuaded to undergo a double castration and will as a rule only submit to this operation when very ill. Mr. Bell had found that rest in bed, careful diet, and regular catheterisation were very useful in improving matters in many cases and so tiding over the crisis. He had also found large doses of ergot and strychnine (as originated by Mr. A. G. Miller) to do great good, especially when the prostate was soft and boggy. He had noted the peculiar mental condition, melancholia and irritability, seen after castration.—Mr. A. G. MILLER, Mr. COTTERILL, Mr. SHAW MCLAREN, and Mr. WALLACE also took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Gastric Ulcer.

A MEETING of this section was held on May 13th, Sir WILLIAM THOMSON, the President, being in the chair.

Mr. JOHN CAMPBELL gave the history of a case of Perforating Gastric Ulcer successfully treated by operation. The patient was a widow, aged thirty-five years. The thickness of the abdominal walls rendered a long incision necessary and it was accordingly extended from 1½ in. below the ensiform process to 1 in. below the navel. The perforation was as large as a threepenny-piece and was near the lesser curvature of the stomach, about 1 in. from the pylorus. The opening was plugged with gauze and the stomach area was packed round with towels which had been recently boiled. The edges of the opening were then trimmed with scissors and the raw edges were brought together by a continuous suture of fine silk, including the whole thickness of the stomach wall. Over this about a dozen interrupted Lembert sutures were placed and over all a piece of small omentum was tacked down by a continuous suture. The abdomen was cleaned by gauze sponges. A gauze drain was inserted in the upper angle of the wound, reaching well over towards the spleen, where the gastric contents had spread most freely. The lower three-fourths of the wound was closed by interrupted silkworm-gut sutures. Owing to the distension great difficulty was experienced in getting the abdominal walls to meet over the bowels. Iodoform dressings were applied. A copious enema given after operation proved very effective in relieving thirst. Nutrition was kept up for five days by enemata. Then feeding by the mouth was cautiously commenced, water being given first, then animal extracts, and then milk. The gauze drain was removed on the fifth day and the stitches on the fourteenth day. The abdomen was not flushed out because it was thought that the stomach contents had not spread far beyond the gastric region and that flushing might only disseminate them still further. Therefore sponging and drainage were relied on. The patient is now well and has been free from pain since the operation.—Dr. CRAIG, Mr. MYLES, Mr. FRAZER, and others discussed the case.

SECTION OF MEDICINE.

Membranous Colitis.—Dissecting Aneurysm.

A MEETING of this section was held on May 20th, Sir G. F. DUFFEY, the President, being in the chair.

Dr. W. R. DAWSON read notes on a case of Membranous Colitis. A man, about forty-two years of age, some three years ago became subject to habitual constipation which has since persisted. About a year later he began to observe shreds and patches of membrane in the fæces, and these appearances have been present ever since, but with aggravations at intervals of two or three months. At such times pieces of membrane came away in rather large quantities, mostly after the fæces, and there are some dyspeptic symptoms also, but no pain in defecation or on abdominal pressure. There is little or no general discomfort and the patient's health, spirits, and nutrition are excellent. The membranes are of varying size and appear to consist entirely of mucus, embedding large numbers of degenerated cells, mostly epithelial. The treatment is purely general, the bowels being kept open by enemata rather than purgatives, and there has been, on the whole, some improvement.—Dr. WALLACE BEATTY said that he had met with a somewhat similar case. The patient was a man in good health except that he was continually passing large quantities of membranous material from the bowels, associated with very obstinate constipation. He was twenty-seven years of age and had been under observation for many years. All kinds of remedies were tried without benefit. He was then placed on milk diet and cod-liver oil and he still continues the diet and is doing very well and able to continue his work and passes very little membrane. Such cases were very intractable and prolonged unirritating diet was the best treatment.—The PRESIDENT and Mr. DOYLE also discussed the case.

Dr. J. B. COLEMAN read the notes of a case of Dissecting Aneurysm. The patient was a man, sixty-five years of age, who whilst at work was suddenly seized with a violent pain extending from his lumbar region into his chest and felt faint, but did not lose consciousness. Within a quarter of an hour his lower extremities were completely paralysed. He had a "lead line" on his gums, well-marked arcus senilis, atheromatous arteries, hypertrophied heart, high-tensioned pulse, and the aortic second sound accentuated; his urine contained 2 per cent. albumin and a few hyaline and granular casts. Next day he was able to move his legs freely. On the following morning he was able to walk a few steps. He died suddenly, about fifty-two hours after the onset of the symptoms. The post-mortem examination showed the right pleural cavity to be filled with blood; the heart was large, there being hypertrophy of the left ventricle. A dissecting aneurysm extended from the arch at the level of the innominate artery and terminated in the left femoral artery an inch below Poupart's ligament. A large mass of freshly coagulated blood was effused between the tissues at the level of the arch and in the upper part of the descending thoracic aorta. From the abdominal aorta through the left common iliac, external iliac, and femoral artery the coats of the vessels were separated by a thin layer of coagulum, but no palpable thickening of the arteries was so produced. The intense pain at the onset was due to the primary rupture and separation of the coats of the aorta by the blood. The paraplegia was caused by the interference with the arterial supply to the lumbar cord, partly from thrombosis, partly from rupture of the origin of the lumbar arteries. The sudden death ensued on the rupture of the external wall of the aneurysm and the consequent escape of blood into the right pleura.—Dr. FINNY and Dr. KNOTT made some remarks on the case.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Plague in Cutch Mandvi and Hubli.—A Plague Congress.

AN adjourned meeting of this society was held in the University Hall on April 15th, Dr. EDULJI NASHIRVANJI being in the chair.

Brigade-Surgeon-Lieutenant-Colonel J. S. WILKINS gave a concise account of the work done during the epidemic at Cutch Mandvi last year. Plague broke out there about February, 1897. The town is walled and about a mile square in area. It contains 40,000 inhabitants in ordinary times, but only about half that number when the speaker arrived there on April 27th. Six hospitals were formed for the various sects and the work of disinfecting and cleaning was carried out by 200 coolies sent from Bombay. The only exits from the town were gateways in the high walls, and of these all except two were kept closed, so that it was easy to trace the houses where deaths had occurred, as the bodies had to be taken through one of these gates. The daily average mortality for the first week in May, when the work commenced, was 121, and a weekly decrease in the mortality of 20 took place till the normal death-rate of 5 was reached in the last week in June. As many persons as possible were removed outside the city and in course of time most of the inhabitants were camped outside. The gates were again opened to all the people and the city allowed to be reoccupied about the end of June.

Surgeon-Captain M. A. T. COLLIS gave an account of the Plague History of Hubli, in continuation of the one formerly

read by Surgeon-Captain C. H. L. Meyer, an abstract of which appeared in THE LANCET of April 2nd, page 936. There were only 3 deaths from plague in the town in February and 7 in March. He called attention to the difficulty of diagnosing the disease with certainty and said that at least 60 per cent. of plague cases cannot be diagnosed without post-mortem and bacteriological examination.

Dr. THOMAS BLANEY then made the following motion, which was seconded by Dr. N. N. KATRAK, and adopted after a discussion:—

That a congress of the profession be held in Bombay in December next under the patronage of Government to consider the most appropriate means of dealing with plague epidemics in Indian cities, towns and villages.

Reviews and Notices of Books.

Tropical Diseases: A Manual of the Diseases of Warm Climates. By PATRICK MANSON, M.D., LL D. Aberd., F.R C.P. Lond.; Lecturer on Tropical Diseases at St. George's Hospital and Charing-cross Hospital Medical Schools; Medical Adviser to the Colonial Office and Crown Agents for the Colonies. With 2 Coloured Plates and 88 Illustrations. London, Paris, New York, and Melbourne: Cassell and Co., Limited. 1898. Price 10*s.* 6*d.*

BROADLY speaking, there are two ways of studying tropical diseases. One is that of the epidemiologist, who deals with them on a large scale, considers their geographical ranges, collates all the facts, the natural phenomena and sequence of events in relation to any given epidemic, and compares them with those of similar epidemics which have prevailed at other times or elsewhere or with other epidemics of a different nature in order to trace out their points of similarity or dissimilarity and to discover, if possible, whether any harmonious relation exists between them, in other words, the existence of any natural law to which they can be relegated. The other method is that of the clinical and local inquirer whose observations consist in the exhaustive and intelligent study of details mainly conducted along inductive and experimental roads of inquiry and aided by the microscope, test tube, and all the instruments and appliances which modern science can lend to his investigations. These methods are the supplement and complement of one another and both are necessary. But as the latter is obviously the more exact and sure, inasmuch as the observations can be concentrated on any and every given point in detail and subjected to physical science tests, so it has proved the most fruitful of results. Bacteriological researches have of late, as everyone knows, been keenly pursued in the investigation of disease in addition to those of a clinical and pathological nature, and the student of medicine has nowadays to be something of a naturalist in order to qualify him for inquiring into the nature of disease-causes. The more or less vague medical hypotheses about the existence and influence of vitalised agents as disease germs, which were the product of the speculative philosophy of some of our more sagacious and keen-sighted predecessors, have given way to, and been replaced by, doctrines founded upon the securer basis of scientific investigation. Notwithstanding that a certain amount of hasty generalisation and false inference was inevitable under the circumstances, there can be no doubt about the remarkable advances which have been made by recent discoveries in this respect, or about the trend of scientific opinion in regard to the very important part which biological investigations are bound to play in the future progress of medical and sanitary science.

Fresh from the perusal of Dr. Patrick Manson's Manual we have no difficulty in giving our opinion in regard to it. It is a good book, conceived and written in a scientific spirit and well up to date, and—not to omit in these utilitarian days a practical view of its merits—it strikes us as sound and judicious in regard to the general dietetic and therapeutical treatment of the maladies which it describes. The volume, which is of handy size and admirably illustrated, consists of upwards of 600 pages. The author tells us in his preface that it makes no pretension to being a complete treatise or anything more than an introduction to the important department of medicine of which it treats, but seeing that Dr. Manson has had long practical experience of the diseases of hot climates and has himself very successfully contributed to the elucidation of some of them we have no doubt that the hope he expresses that the work may prove of practical service will be realised. We have given our opinion in general terms of the impression derived from our perusal of this work because it would be impossible within reasonable limits of space to analyse and pass in review its contents. The introductory chapter deals with the Etiology of Tropical Diseases and is well worth reading as indicating the nature and spirit as well as the standpoint from which the subjects are regarded and handled. Section I. deals with fevers and very naturally Chapter I. starts with Malaria and the Malarial Parasite discovered by Laveran in 1880—the Plasmodium Malariæ, to the presence and proliferation of which parasite in the blood the condition which is known as malarial disease is ascribed. The principal reasons for this belief are briefly set forth, followed by an excellent descriptive account of the morphology and histology of the parasite considered in connexion with the intra-corporeal or human, its extra-corporeal, and its latent phases. So much has been written of late years on this subject that those of our readers who are interested in it are probably well acquainted with the facts, and there is therefore no need to dwell, even were it possible, at any length upon them. The subject is very carefully worked out by the author and the ingenious view suggested by him regarding the part played by the mosquito as the extra-corporeal host of the plasmodium, together with the various morphological changes which have been microscopically observed in the parasite, are clearly described and explained with the aid of excellent illustrations. The book is, as we have already pointed out, capitally illustrated throughout. The author, while setting forth the grounds on which he regards the mosquito hypothesis as a plausible and probable explanation of many facts connected with the history of malarial infection, is careful to state that he does not maintain that it has yet been thoroughly proved, but he nevertheless thinks that every effort should be made to establish or confute it. It will meanwhile prove a source of great satisfaction to Dr. Manson to find that Professor Koch in the interesting address he has just delivered at Berlin has taken up the same view and attributes the spread of malaria to the propagation of blood parasites by mosquitoes. The two will not, however, we think, be found to be conterminous, for although there may possibly be no malarious places or stations where there are not mosquitoes, there are mosquitoes in places where there is no malaria—no ague. Chapters II., III., IV., and V. deal with the classification and description of the malarial parasites and their associated fevers, to which is appended a useful tabular statement, modified from Mannaberg, of the characteristics of the various parasites; the morbid anatomy and pathology, in which the course of fever and periodicity in malaria and the theory of periodicity are considered; malarial cachexia and a brief chapter on the Etiology of Malaria. Chapter VI. discusses diagnosis and treatment in a way which seems to us to be clear and judicious. Yellow fever, bubonic plague, dengue, Mediterranean fever, kala-azar, tropical typhoid, heat stroke, and unclassed fevers are also considered in this section of the volume. The chapters on heat-stroke (heat exhaustion, sun-traumatism and siriasis) and on unclassed fevers in the tropics are interesting. There still remains

a good deal to be achieved in these directions, especially in regard to unclassed climatic fevers, before we can be said to have any precise scientific knowledge concerning them. In his remarks on siriasis—a term adopted by Dr. Sambon—Dr. Manson alludes to Dr. Sambon's assertion that the disease is a germ disease, like yellow fever or dengue, and, like these, is caused by some organism which demands for its development a high atmospheric temperature and certain, as yet unknown, local conditions. The chapter on Cholera enters fully into its bacteriology and discusses it very impartially and well. Dysentery, Sprue (Psilosis), Abscess of the Liver, Leprosy, are also carefully considered. The chapters on Beri-beri and Filariasis are especially full and good.

Ethnological Studies among the North-West Central Queensland Aborigines. By WALTER E. ROTH, B.A. Oxon., M.R.C.S. Eng., L.R.C.P. Lond. With 438 Illustrations. Brisbane: by Authority, Edmund Gregory, Government Printer, William-street. London: Queensland Agent-General's Office, Westminster Chambers, 1, Victoria-street. 1897.

THIS work, issued under the authority of the Government of Queensland, is one of the most remarkable which has issued from the press. Its author, who has since 1894 held the office of surgeon to the Boulia, Cloncurry, and Normanton Hospitals, has spared no pains or trouble to make himself intimately conversant with the language, manners, and customs of the aboriginal tribes which still exist in no small number in the North-West Central districts of Queensland. He has performed his task with a completeness which is worthy of all praise, and by pen and pencil has contrived to present an account which may well be taken as a model of well-ordered and profound ethnological research. We confess to be amazed at the wealth of detail which is to be found in these pages, and no small merit of the work is the thoroughly scientific manner in which it has been planned and executed. The first four chapters are devoted to language, first the spoken language, which is remarkably fully expounded and its grammar as elaborately discussed as in the most classical treatise of modern tongues. Mr. Roth has achieved much in mastering these tongues, and the examples which he gives of various grammatical phrases and expressions together with the vocabularies fill many pages. Of more general interest perhaps is the description of sign-language, which has apparently attained a pitch of perfection which could hardly have been imagined. This chapter is illustrated by several plates comprising no fewer than 213 separate illustrations, each conveying graphically the distinctive signs and their meanings. This section alone would form a monograph and might well have occupied all the time at Mr. Roth's disposal. However, these chapters are but introductory to the real subject matter of the book, which includes, as the titles of the ensuing chapters indicate, all the customs of the tribes. Thus we find first, in the "Search for Food," full descriptions of the edible vegetables and crops in the districts of Boulia, Cloncurry, and Leichardt-Selwyn; then the various animal foods, from ants and crayfish and molluscs to fish, emus and other birds of all kinds, the opossum, kangaroo, &c.—descriptions being given of the means adopted to catch or snare these animals. "Pituri" is the product of a shrub which is prepared in "quids" for chewing and is as much desired by the aboriginals as alcohol is by Europeans. Domestic implements and utensils, "dilly-bags," grindstones, fire-sticks, &c., are then described, and the huts and shelters. The subject of personal ornamentation and decoration is concerned mainly with modes of dressing the hair, the wearing of head fillets or feathers, piercing the nose and ears, evulsion of the teeth—the two central upper incisors—a practice which is dying out, in connexion with which is the interesting fact that in none of the languages of the district are there any *th*, *v*, *f*, or *s* sounds which require these teeth for their proper enunciation. Necklaces, armlets, chest ornaments, waist-girdles, and aprons made of human hair or "opossum string," phallocrypts of pearl-shells or "opossum string," are only worn on occasions of festivity and at "corroborees"—the ordinary custom being absolute nudity. Painting and feathering of the body are also in the main restricted to festive occasions or warfare. Here is described the practice of mutilations on the trunk and limbs, or "flash-marks," the raised cicatrices of incisions made transversely across the chest and abdomen, and occasionally on the back. Mr. Roth describes how these scars are formed. An interesting account follows of the "corroborees," or dancing and singing festivals, which usually last from sunset to sunrise and may be repeated for three or four nights. They constitute the primitive form of dramatic art and are prepared for by elaborate "dressing" and "decoration." The audience join in the singing and a full account is given by the author of one such performance of the "Molonga set" of corroborees which lasted over five nights, each night's performance being different. "Molonga" is apparently an evil spirit who would revenge himself in characteristic fashion were the corroboree not properly executed. Mr. Roth gives examples of some of the current fables in the Boulia district, the first of which we may quote.

The Water-hen and the Emu.

"An emu was hatching her eggs in close proximity to a small water-hen who was also engaged in the same interesting occupation. By-and-by both birds proceeded to walk along the grass for something to eat and in the evening returned to their respective nests. The same thing happened next day. But on the following morning the water-hen got up somewhat earlier than usual and went her way. The emu happening to see her neighbour's eggs said, 'Hullo! Big fellow eggs all same like mine; me take him,' and, shifting from her own nest, sat upon them. As the afternoon drew on the water-hen returned home, and when she saw the emu appropriating her eggs began growling, but being so much smaller a bird could not use force to turn her away. So she built a large fire and threw all the ashes over her opponent, who thus got all her feathers burned. In retaliation the emu threw her antagonist into the flames and burnt her legs for her, which resulted in their turning red.'

The games in which these natives indulge comprise the "return" boomerang, the "throwing-stick," the "whirler," games of ball and skipping-rope, "hunt the eye" (the primitive form of "hunt the slipper" of civilisation), which with "hide and seek" prove that in their pastimes these aborigines have much in common with our children. Travel for the object of barter introduces us to simple commerce and the curious custom of message-sticks, which take the place of letters and are used to carry orders at a distance for articles required. A chapter is devoted to fighting and weapons, and another to disease, accident, and death. Here we find superstition in full play, the pointing of the "death-bone" by the doctor or medicine man being held to be the common cause for calamities of this sort. It would be impossible to do justice to this chapter by any attempted summary of its contents which embrace the remedies and practices employed in treatment of diseases and accidents, some of the remedies being sufficiently disgusting. There would seem to be but few plants used for medicinal purposes, whilst a favourite remedy for diarrhœa is "clay pills." The rites of burial are described and the chapter closes with reference to the practice of cannibalism—not yet, although gradually becoming, obsolete. Rain-making is still in vogue in some districts, when special "corroborees" for the purpose are held.

The final chapter of the work, entitled "Ethnopornography," is not suitable for perusal by the general lay reader. It contains full details of the barbarous ceremonials

by which the youth of both sexes are in the separate tribes initiated into sexual life. The chapter contains other details concerning marriage, pregnancy, and labour, which may be contrasted with the customs obtaining amongst other aboriginal tribes. In conclusion, we may say that we think that Mr. Roth's researches will remain as a faithful record of savage life and an important addition to ethnological science.

JOURNALS AND REVIEWS.

The Veterinary Journal and Annals of Comparative Pathology. Edited by Principal WILLIAMS, F.R.S.E., F.R.C.V.S. April and May, 1898. London: Baillière, Tindall, and Cox.—The *Veterinary Journal* for April consists chiefly of proceedings of veterinary medical societies, and some of the papers contributed to these societies are of considerable interest. The original papers comprise articles on Infectious Pneumonia of Sheep, by W. R. Davis, New Veterinary College; A Case of Malignant Adenoma of the Stomach of the Horse, by R. B. Freeman, F.R.C.V.S.; Tumours in the Lateral Ventricles of a Horse, by A. M. Munro, M.R.C.V.S.; and a couple of cases of Tetanus—one in a cow recorded by R. Connochie, and two in horses by W. L. Gascoyne. An exceedingly interesting discussion at the Central Veterinary Medical Society on Mallein Reaction is here reported in full and is well worth careful perusal. The meetings of the other societies are fully reported, but their principal interest is for veterinary surgeons. A number of reprinted articles on Rinderpest, Bacteriological Researches on Certain Diseases connected with Public Health Work by Professor Delépine, Notes of News, and extracts from foreign journals complete this number. In the May number are several special articles—On Diseases of the Ear in Cats, by Henry Gray, M.R.C.V.S., a number of cases of Impaction, of Rupture of the Œsophagus in a Horse, of Dermoid Cyst of the Testicle, a case of Fractured Pastern, and one of Vomiting in the Horse due to a Mesenteric Embolus. An interesting discussion on the question—Is Tuberculosis Hereditary?—was opened at the Scottish Metropolitan Veterinary Medical Society by Professor Lauchlan Young, who comes to the conclusion that tuberculosis is disseminated in this country more through infection than hereditarily. Professor Young certainly brings forward a number of statistics collected from various sources to show that heredity plays very little part in the dissemination of tuberculosis amongst cattle. Principal Williams agreed that a sharp distinction should be drawn between what was hereditary and what was congenital, and he pointed out that the tubercle bacillus is comparatively rarely found in young animals, and especially in young cattle, and when it is found it is usually associated with tuberculosis of the brain.

The Veterinarian: A Monthly Journal of Veterinary Science. Edited by Professor METTAM. London: Adlard and Son.—In the April and May numbers of the *Veterinarian* Professor Cossar Ewart continues his articles on Hybrids with an account of Zebra Hybrids with Observations on the Relationships of the Zebras. He has now collected a very large amount of most important evidence which should be of very great value not only to those who take an interest in horses but to those who study telegony in any of its branches. In the April number Mr. Walter Heape of Trinity College, Cambridge, contributes an article on Artificial Insemination of Mares which will be of some interest to horse breeders. An article on Tuberculosis and Tuberculin, by Geo. R. Kinnell, M.R.C.V.S. Medfield, Mass., U.S.A., gives the results of a considerable number of experiments, from which it is concluded that by the judicious use of tuberculin tuberculosis can be eradicated from any herd of cows. It is here maintained that tuberculosis is not an hereditary disease and that so far as calves are concerned the danger to them from the use of the milk from tuberculous cows, though slight, is by far the most important. It is also held that, given an infected building, it is possible at comparatively small cost to render it entirely free from infection and a safe place in which to keep stock, so far, at any rate, as tuberculosis is concerned. In the May number the original communications are Notes on the Madrid Congress of Hygiene and Demography, by Mr. J. A. W. Dollar; a continuation of Professor Cossar Ewart's paper; a Note on Ghotiva or Ghotu in Buffaloes, by Veterinary-Captain H. T. Pease, F.Z.S., Principal Veterinary College, Lahore; on Picric Acid as a Wound Dressing, by the same author; and a note on the Presence in the Blood of Free Granules derived from Leucocytes, by A. E. Mettam, B.Sc., M.R.C.V.S. In both of these numbers there are in addition a number of clinical cases, editorial observations, and exceedingly good reviews of the veterinary literature for the month; notes on current topics, including observations on tuberculin and mallein, and reports of veterinary medical societies. The reviews and abstracts in these numbers are of more than average interest and fully maintain the high character of the *Veterinarian* for this class of work.

The Phonographic Record for June contains one of Sir W. R. Gowers's lucid unravellings of a problem in the diagnosis of cerebral disease showing how the presence of paralysis of the sixth nerve, amid signs of a general morbid process, enabled the existence of growth near the middle line in the upper two-thirds of the pons to be established. A useful paper on Extra-genital Chancres in Children by Dr. Deanesley, notes of a case of Spina Bifida by Dr. A. Hill Joseph, an account of a Neurotic Woman by Dr. Atchley, a concluding instalment of the humorous papers headed the Light Side of Medicine, and a reference to the health of the *doyen* of reporters (Mr. T. A. Reed) complete the number.

The English Illustrated Magazine for June contains a most interesting paper by Mrs. (Janet) Ross upon the Confraternity of the Misericordia at Florence. The confraternity, as is well known, is an ambulance guild the members of which work from pure love. In the words of their regulations, "they shall practise works of mercy and charity; especially shall they bury the poor and miserable dead without retribution or guerdon, doing this solely for the love of Jesus Christ, who suffered death and passion for the love of us." Nearly every class of society is represented in this noble body of workers, from the highest almost to the lowest, and their services in the various epidemics of plague and, to come down to later times, in the cholera epidemic of 1855 were beyond praise. Something of the sort is badly wanted in our overgrown London, more especially as regards the burial of the "poor and miserable dead." The horror with which a "parish funeral" is regarded, and rightly so, by the poor is well known. Differences of nationality, of climate, and of social customs will have to be allowed for, but surely it would be possible to start some kind of body, call it a guild, or a brotherhood, or a society, or anything, so long as its members would and could do the same merciful deeds as the Brethren of the Misericordia.

THE MARSHALL MEMORIAL FUND.—It has been decided that the memorial to the late Dr. Henry Marshall shall take the form of an exhibition or substantial money prize to be given yearly for the encouragement of medical students at the Bristol General Hospital and also that a tablet shall be placed in the Bristol Cathedral in his memory. Messrs. Stuckey's Banking Company, Bristol, will receive subscriptions for the fund.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) SANOSE; AND (2) SANOSE BISCUITS.
(A. AND M. ZIMMERMANN, 9 AND 10, ST. MARY-AT-HILL, E.C.)

THE fact that albumose occurs in milk and exerts a favourable influence in regard to the digestibility of the milk-proteids has led to the preparation of "sanose," which consists of 80 per cent. casein and 20 per cent. albumose. According to our analysis this statement is calculated upon the total amount of organic matter, since we found 9·96 per cent. moisture and 3 10 per cent. mineral matter. Sanose is a white powder without perceptible taste. With water it forms a milky fluid which on careful filtration gives the characteristic reactions of albumose but not peptone. Sanose must therefore rank high in the scale of nutrients and, being practically neutral in character, it affords a means of administering a powerful, because easily digested, food without drawbacks in regard either to taste or smell or other physical peculiarity. The compound is evidently prepared with the greatest care and may be regarded as a valuable milk derivative of an easily assimilable kind in accordance with physiological inquiry. Sanose may obviously be added to other foods with advantage. We have also examined Sanose biscuits. They are crisp and of good flavour, but rather sweet. Sanose biscuits will be valuable in the event of a specially rich nitrogenous food being indicated.

TURTLE SOUP.
(V. BENOIST, 36, PICCADILLY, W.)

The turtle is said to combine the nutritive properties and qualities of fish, flesh, and fowl, and doubtless the soup is a powerful nutrient because its gelatinous contents are easy of digestion and therefore of assimilation. Two preparations have been submitted to us by Mr. Benoist: (1) a soup containing pieces of turtle, and (2) a consommé (clear). We found that both preparations were free from preservatives and on further examination the results were quite satisfactory. The soup evinced an excellent and delicate flavour, due in a large measure to the fact that the turtles are specially selected and killed for the purpose. The fresh soup can be supplied at any time, arrangements having been specially made with this end in view.

SPECIAL BRANDIES ("GRANDE FINE CHAMPAGNE").
(B. LEON CROIZET, ST. MÊME, COGNAC. AGENTS, COSSART, GORDON AND CO., 75, MARK-LANE, E.C.)

We have examined four types of the brandies shipped by the above "viticulteur" (Croizet, Cognac) and the following are the results:—Cognac (one star): alcohol by weight 38·50 per cent., by volume 45·71 per cent., equal to proof spirit 80·11 per cent.; extractives, 1·26 per cent.; mineral matter, 0·11 per cent., acidity reckoned as acetic acid, 0·32 per cent.; alcohol in volatile ethers, 0·06 per litre. Cognac (two star): alcohol by weight 39·30 per cent., by volume 46·59 per cent., equal to proof spirit 81 64 per cent.; mineral matter, *nil;* extractives, 1·29 per cent.; acidity reckoned as acetic acid, 0 032 per cent.; alcohol in volatile ethers, 0·064 per litre. Cognac (three star): alcohol by weight 38·78 per cent., by volume 46·02 per cent., equal to proof spirit 80·64 per cent.; extractives, 1 58 per cent.; mineral matter, *nil;* acidity reckoned as acetic acid, 0·038 per cent.; alcohol in volatile ethers, 0 082 per litre. Cognac (V.S.O.P.): alcohol by weight 38·78 per cent., by volume 46·02 per cent., equal to proof spirit 80 64 per cent.; extractives, 1·58 per cent.; mineral matter, *nil;* acidity reckoned as acetic acid, 0·038 per cent.; alcohol in volatile ethers, 0 152 per litre. The interesting feature in these results is the increasing amount of volatile ethers *pari passu* with, as we think, the age of the spirit. The last on the list, V.S.O.P., is a pure mellow spirit with an unquestionable history. It is a well-matured grape spirit, smooth to the taste and possessing a fragrant ethereal aroma characteristic of real Cognac. In regard to alcoholic strength there was very little difference between the samples examined. Of extractives the V.S.O.P. contained the highest proportion—a fact which corroborates the opinion that it is the oldest and longest matured specimen. The other samples were good and genuine and free from rawness or crudity of character. For medicinal purposes only that spirit presenting such satisfactory characteristics should be employed.

OATMEAL COCOA.
(THE "SERVUS" CO., 65 AND 66, BASINGHALL-STREET, E.C.)

From the dietetic point of view we are inclined to regard the addition of oatmeal in a special way to cocoa as a suitable and satisfactory expedient, since the oatmeal supplies what cocoa lacks and *vice versâ*. Cocoa, for example, is essentially, though not exclusively, a stimulant on account of the presence of definite alkaloids. Oatmeal, on the other hand, contains no stimulating principle but is highly nutritive, not only on account of its richness in nitrogenous constituents but also by reason of the excellent proportion of carbohydrates, fat, and mineral matters which it contains. The preparation before us consists of pure cocoa with no admixture of any kind except that of specially-selected oatmeal. The mineral matter amounted to 5 per cent. and gave abundant evidence of the presence of phosphates, derived in great measure from the oatmeal. In accordance with the indications of analysis the preparation should possess a peculiar food value, not belonging to the constituents separately but embodied in the combination described.

TROPON.
(THE TROPON AGENCY, 2, FOWKES-BUILDINGS, E.C.)

Tropon is a form of albumin and albumin is regarded by physiologists as being able alone to support the vital processes and the only alimentary substance which can do so. Albumin, however, is not suitable for administration alone, since probably in excessive quantities it would escape assimilation and lead to waste. It is therefore best presented as an alimentary substance diluted, so to speak, with carbohydrates and fat. Tropon is a brittle brown powder which on analysis gives the following results: albumin, 88·04 per cent.; moisture, 10·66 per cent.; mineral matter, 1·3 per cent. Calculating on the proportion of nitrogen which it contains it should prove the cheapest food possible, but it should be borne in mind that the actual value of foods is a question not only of chemistry but more particularly of physiology. The price of tropon is two shillings per pound. It is practically tasteless and almost insoluble in cold water. On preparing a solution in boiling water and cooling the resulting liquid it was found readily to dissolve under the digestive action of pepsin extract.

(1) SPECIAL INVALID PORT; AND (2) OLD LIQUEUR WHISKY
(J. KEITH, 84 AND 86, CADZOW-STREET, HAMILTON, N.B.)

The sample of port wine gave on analysis the following results: extractives, 8 65 per cent.; sugar, 6 25 per cent.; mineral matter, 0 18 per cent.; alcohol, by weight 18·54 per cent., by volume 22 73 per cent., proof spirit 39·84 per cent. The wine was of excellent character, having a pleasant fruity taste and aroma. It is a genuine and generous wine well adapted for use by invalids. It is derived from the 1884 and 1888 vintages and has therefore matured for over ten years. The wine certainly possesses quality and is moderately priced at 36*s*. The whisky gave the following results on analysis: alcohol, by weight 40·90 per cent., by volume 48·32 per cent., equal to proof spirit

84 68 per cent.; extractives, 0 36 per cent.; and acidity reckoned as acetic acid, 0 03 per cent. The whisky is said to have been kept in bond from ten to thirteen years and its character in regard especially to taste and aroma is quite consistent with this statement. It is a thoroughly matured spirit and free from any suggestion of the presence of the more complex and harmful alcohols. From the complete results of our examination we believe the spirit to be derived only from malt and which is subsequently matured by storage.

BONNIE BABY FOOD.

(MOSELEY AND CO., HEELEY MILL, SHEFFIELD.)

On examination this proved to be a highly cooked cereal food yielding a large proportion of soluble carbohydrates on treatment with cold water. Its composition does not call for any particular remark except that in the course of preparation it is rendered more soluble and more digestible. Under the microscope the cereal selected was plainly indicated. The mineral contents are somewhat low, amounting to 0 77 per cent.

TABLE JELLIES.

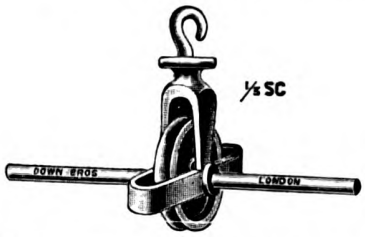
(S. CHIVERS AND SONS, HISTON, CAMBRIDGE.)

The convenience of being able to prepare jellies quickly from slabs of pure prepared gelatin is obvious. What is now a matter of a few minutes in culinary preparations was at one time a matter of hours. We have examined the specimens of table jellies before us both practically and analytically. Following the directions given an excellent jelly is quickly obtained possessing a flavour of a quite natural character. The composition of the preparations was obvious on analysis. A small proportion of mineral matter was yielded on complete incineration of the specimens. The residue consisted of phosphates. We could find no objectionable ingredients in the composition of the jellies, the materials, inclusive of colouring and flavouring agents, being free from reproach.

New Inventions.

A PULLEY FOR CASES OF EXTENSION.

I HAVE devised a pulley, shown in the accompanying illustration, for making weight extension on children lying in cots in cases of hip disease, fractured femur, osteotomy, &c. The pulley is suspended by a chain attached to the hook on it and passing over the top bar of the foot of the cot. In this way the height can be exactly adjusted. The transverse



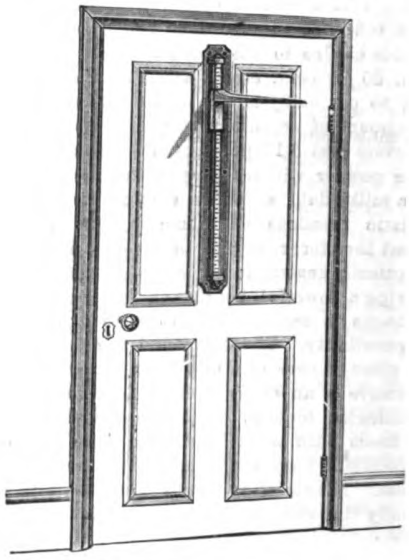
rod on which the pulley revolves rests against two adjacent vertical bars of the cot and is kept very steady when the weight is hung on the cord passing over the pulley. I find the pulley simple and easily adjusted; there are no screws or other parts about it which can possibly get out of order. Several of them are in constant use here and they prove satisfactory. The pulley has been made for me by Messrs. Down Brothers of London.

A. J. RODOCANACHI, M.D. Lond.

District Infirmary, Ashton-under-Lyne.

A NEW APPARATUS FOR MEASURING THE HEIGHT OF PATIENTS.

THE accompanying illustration represents a new apparatus for measuring the height of patients, introduced by Messrs. Maw, Son, and Thompson of Aldersgate-street, and already described in THE LANCET of April 23rd (p. 1125). The horizontal bar which rests on the person's head indicates his height on a scale of feet and inches attached to a polished



walnut-wood panel about 3 ft. 6 in. in length. This panel may be fastened by screws or otherwise to the consulting room door, as shown in the illustration. The vertical rod on which the horizontal bar slides is mounted on revolving brackets, so that the bar when not in use may be turned to one side out of the way flat against the door. The heights which may be measured extend from 4 ft. to 7 ft. The price is one guinea.

A POCKET MEDICINE CASE.

MESSRS. JOHN BELL AND CO. of Oxford-street send us a specimen of a small medicine case which they are supplying for the use of patients travelling under the orders of a medical man and who are out of reach of ordinary sources of drug supply. The cases are made of white metal, and they contain five metal-capped bottles of tablets and measure about 4 in. by 3½ in. The sample before us is fitted with phenacetin, diarrhœa, antibilious, quinine, and antacid tablets. The bottles, however, can be filled with drugs according to the selection of any medical man.

DENTAL HOSPITAL OF LONDON, LEICESTER-SQUARE.—A donation of £250 has been contributed to this hospital by the trustees of Smith's (Kensington estate) charity.

BRISTOL BOARD OF GUARDIANS.—At the meeting of the Bristol Board of Guardians held on June 10th it was decided to increase the nursing staff at the Stapleton Workhouse. This will give each day nurse 30 patients and each night nurse 90 patients; at present each nurse is responsible for nearly double this number of cases.—At the same meeting Mr. George Metcalfe, M.D., B.S. (Durham), L.R.C.P. Lond., M.R.C.S Eng., surgeon to the Newcastle Throat and Ear Hospital, was selected by the guardians for the new appointment as resident medical officer to the Eastville Workhouse. There were 39 candidates for the post. The salary is £250 per annum, with an allowance of £30 for a residence.

THE LANCET.

LONDON: SATURDAY, JUNE 18, 1898.

THE value of trustworthy vital statistics as an incentive to sanitary well-being and progress is now increasingly appreciated, and the necessity of approximately accurate estimates of population as a basis for these statistics is also fully recognised. Unfortunately, however, there are almost insuperable difficulties in satisfactorily estimating town populations in intercensal years under the present conditions of a decennial Census. As we are now again approaching the close of another Census decennium it is most desirable that this statistical difficulty should be fully and carefully considered by all those who have the sanitary progress of the country at heart, in order that measures may be taken when the next Census Act is passed to provide for a more frequent enumeration of town populations, at any rate, and for more trustworthy estimates of population in intercensal years. Towards the close of each Census decennium the Registrar-General is the object of more or less opprobrium on account of the obvious failure in a large number of cases of the hypothetical method of estimating populations on the assumption that the rate of increase observed between the last two censuses has been maintained since the last Census. It is easy to denounce this method as unsatisfactory, but it is not so easy to suggest one which would on the average give more trustworthy results without provision for more frequent enumerations of the population, which unfortunately the Registrar-General has no power to enact.

Fully recognising, as we do, the importance of this matter, we are glad to observe that Dr. HOPE, the medical officer of health of Liverpool, has devoted considerable attention to it in his report for 1897, although we do not entirely agree with him as to the conclusiveness of his arguments in support of the assertion that the present population of Liverpool is largely in excess of the Registrar-General's hypothetical estimate. The movement of population within the city of Liverpool is, however, full of statistical interest and is most usefully illustrative of the difficulties which the Registrar-General experiences in his necessary attempt to construct intercensal estimates of population, without which his calculation and publication of marriage-, birth-, and death-rates would necessarily have to be abandoned. The population enumerated within the area of the city of Liverpool previously to its recent extension increased from 82,295 in 1801 to 517,987 in 1891. The most rapid rate of increase within this area occurred in the two Census decennia 1821–31 and 1831–41, when it was respectively equal to 45·8 and 42·0 per cent.; the rate of increase steadily declined in subsequent decennia to 11·1 and 12·0 per cent. in 1861–71 and 1871–81, while between 1881 and 1891 the population actually declined by 6·2 per cent. This recorded decrease of population in Liverpool was, however, somewhat deceptive and was due to that centrifugal diffusion of population which is in operation in all large towns. The population of Liverpool did not really decline between 1881 and 1891, but a large portion of that population migrated outside the artificial municipal boundaries. The result of this change from an increase of 12 per cent. in 1871–81 to a decrease of 6 per cent. in 1881–91 was an over-estimate by the Registrar-General of the population of the city which at the end of the Census period amounted in round numbers to 100 000! It should, however, be stated that the Registrar-General, fully aware of the failure of the hypothetical method in this case, applied to the municipal authorities of the city for assistance in the revision of his estimate, suggesting that he should be furnished with a return showing the number of inhabited houses on the rate-books of the city in 1881 and in 1886, in order that an estimate of population based upon the number of inhabited houses might be substituted for that estimated upon the hypothesis of a constant rate of increase during twenty years. The town council of Liverpool did not respond, however, to this suggestion and the Registrar-General's estimate of population could not therefore be amended. Now, however, the medical officer of health and the town council consider that the Registrar-General's hypothesis understates the present population of Liverpool and desire a revision of the estimate, and it will be useful to consider the trustworthiness of the grounds on which this conclusion is based, and also what means exist for the calculation of a more approximate estimate.

We have referred to the fact that the enumerated population of Liverpool city showed an actual decline of 34,521 between 1881 and 1891; the boundaries of the city were, however, extended in 1894 and within the extended area the enumerated population, instead of declining, showed an increase of 5608, or rather less than 1 per cent., during the intercensal period 1881–91. Thus, even in Greater Liverpool the population was practically stationary during these ten years, but Dr. HOPE advises his sanitary authority that a far more rapid rate of increase of population has set in since 1891. It will be well to refer to some of the grounds on which Dr. HOPE bases his assertion that the present population of the city is under-estimated and that "the growth of the city from this cause (house-building) appears to be as rapid as that of the other great cities." A table is given in Dr. HOPE'S report which shows the *estimated* number of houses in Greater Liverpool in each of the seven years 1891–97. Without discussing the varied forms of estimate adopted in different parts of the city for the purpose of this table, we may point out that if we accept these estimates as approximately accurate and assume that the population of the city has increased at the same rate as the houses, the estimate of population for the middle of 1897 would, it is true, be somewhat raised, but so slightly raised as to reduce the calculated birth- and death-rates by only one-eightieth part. In fact, this table of estimated total houses suggests no serious error in the Registrar-General's estimate. Then it is stated, on the evidence of a return made by the city police, that the number of "unoccupied" houses, which was recorded at the Census in 1891 as 17,399, does not now exceed 5327. It is clear that if 12,000 houses

in Liverpool which were uninhabited in 1891 are each now inhabited by an average of 5·7 persons, which was the average at the last Census, this would signify an increase of between 60,000 and 70,000 to the population. Such a change, however, is simply incredible, and the fallacy is probably due to the different interpretation of the term "unoccupied" house by the Census and police enumerators respectively. The Census term is "uninhabited," and under this heading are classed all houses in which no person slept on the Census night, and thus necessarily are included a very large number of "occupied" and duly rated houses. Now it would be absolutely impossible for a policeman on his beat to decide accurately by outside inspection whether a house had or had not anyone sleeping in it on any given night. Any comparison of this police return of "unoccupied houses" with the Census return of "uninhabited house" must therefore necessarily yield fallacious results which would not be eliminated by Dr. HOPE'S assertion that the Census return is as liable to error as the police return, the point being that the basis of the two inquiries appears to have been radically different. Dr. HOPE'S third point is that the calculated birth-rate in Liverpool is higher than that of any other city of the United Kingdom at all approaching it in size, and therefore suggests an under-estimate of population. He sees no reason why the birth-rate of Liverpool should be higher, for example, than the birth-rate in London, Birmingham, Bristol, or Leeds, and adds, "most likely it is not." Dr. HOPE appears to have lost sight of the fact that this excess in the Liverpool birth-rate is nothing new and that it has been maintained during a long series of years, as is shown in a table in his recent report. It may be noted that the birth-rate in the old city during the three years 1890-91-92, taking the Census year as the middle of the period, was equal to 34·4 per 1000, and the rate in 1897 in Greater Liverpool, calculated on the estimate of which Dr. HOPE complains, is 34 6, which scarcely supports the assertion of the inaccuracy of the official estimate. Lastly, it is pointed out that the excess of births over deaths in Liverpool since the last Census in 1891 amounts to about 39,000, or nearly 6000 per annum, while on the basis of the rate of increase between 1881 and 1891 the Registrar-General assumes that the annual increase of the population of Greater Liverpool does not exceed 600. It should, however, be remembered that between 1881 and 1891 the recorded births in the old city of Liverpool exceeded the recorded deaths by more than 50,000, whereas the enumerated population of the city showed an actual decline of 34,500, signifying that during the ten years more than 80,000 persons overflowed the artificial boundaries of the city. Greater Liverpool is probably far more self-contained than the old city, but every year the workers in towns, under the influence of improving and cheapened travelling facilities, live farther afield, and Dr. HOPE would hardly assert that there is not even now a considerable migration of Liverpool residents beyond its extended boundaries still in progress.

While we find ourselves unable to agree with Dr. HOPE that his statistics afford conclusive evidence that the present population of Liverpool is to any considerable extent under-estimated, we most entirely endorse his claim of urgency for a quinquennial Census, at any rate in all large towns. Liverpool statistics were, it is true, seriously vitiated during the last half of the intercensal period 1881-91 by a fallacious estimate of its population, but Dr. HOPE seems disposed to exaggerate the probable error of estimate at the present time. London, through what is a political accident, now has the advantage of a quinquennial Census combined with a statutory annual return of inhabited houses on the local rate-books made upon an increasingly uniform basis. The sanitary authorities of all large towns should bring combined Parliamentary influence to bear upon the Government to secure the extension of this advantage to other urban districts when the Census Bill for 1901 is under discussion. This is a matter of most serious import to the health-progress of the nation.

UNDER the heading "Public Schools and Food" there appeared a year or two ago in a weekly journal (now extinct) a somewhat severe indictment of the manner in which boys are fed at many of the English public schools. The article, as was to be expected, drew forth more than one strong disclaimer from public school-masters, but our own view is that there was a good deal of ground for the strictures it contained. No one can deny that in many directions our public schools have improved enormously during the past twenty years. The brutalities of the old *régime* have largely passed away, and, indeed, there are some people who fear that there is a danger of our falling into the opposite extreme and of tempering the wind somewhat indiscreetly to lambs that are not shorn. Still, the move was in the right direction. Again, in all matters connected with sanitation the great advance which has been made throughout England during this generation has left its mark even upon such conservative institutions as our great schools. In the planning of new buildings more consideration is paid to matters of health, while old buildings have in many cases been largely remodelled internally so as to bring them more into accord with what is now considered desirable. This is all as it should be and we are glad to be able to admit that our great public schools have done their duty in these respects. It is somewhat remarkable, then, that while so many important improvements have been carried out the system on which public school boys are fed remains in many important respects almost barbarous.

The "tuck-shop" and the "hamper" remain a source on which our sons while at school rely for their food, and the boy who, through the mistaken policy of his parents, finds himself cut off from these methods of supplementing his regular diet may suffer from insufficient nourishment. We are very far from saying that this is the case in all our public schools or even universally in any one of them. Much will depend upon the particular boarding-house in which a boy finds himself, and in some schools—not necessarily the most expensive schools, we may add—the general level among all the houses in this respect is higher than in others. But our view is decidedly that in certain of our great schools the food supplied to the boys is, if sufficient in quantity, often sadly lacking in nourishing quality, and we believe that most

old public school boys will agree with us on this point. And as long as the "tuck-shop" and the "hamper from home" may be relied upon to make up for any deficiencies in the fare provided it is hardly wonderful if house-masters at times do not pay sufficient attention to the food supplied to their pupils. The system, in fact, is a vicious one and until it is modified it is hard to see how any permanent improvement can be secured. It is curious that in this respect English private schools are, as a whole, considerably in advance of the great public schools. No doubt this is partly due to the fact that their numbers are more manageable. No public school head-master can be expected to keep a watchful eye upon the food supplied to 500 boys scattered through a score of boarding houses, whereas in a private school of 50 boys or less a single responsible head can easily control even these details. It is, perhaps, because of this that many private school-masters have taken the obvious step of forbidding all supplementary supplies of food from the boys' homes whatsoever, whereas at our public schools such a reform is, we believe, not yet dreamed of. A private school head-master realises that his income depends upon his pupils being properly fed as well as properly taught, whereas a public school head-master, with his multitude of pupils, some of whom he hardly knows by sight, is apt to have his attention engrossed with larger matters of administration and leaves his house-masters to feed their boarders as they please. The house-master, not being a professional caterer but merely an average University graduate with a large family, allows the "hamper" system to go on because it saves him trouble and money or because it does not occur to him to think about it one way or the other. And, indeed, he would be more than human if he set his face against a system which prevailed in all the houses round about him in the face of the opposition which would assuredly meet him from the unthinking youths whom he designed to benefit. But it may be urged that there is no particular harm in boys being supplied with food from home to supplement the ordinary school fare so long as the parents, who, after all, pay the school bills, do not protest; but this is a shallow view. In the first place, it takes no account of the boys—and there must always be some two or three in every house—whose parents are unable or unwilling to provide this supplementary food. And, far more important than this, there is the objection that this supplementary food is often of an unsatisfactory character from the point of view of nourishment and is necessarily a very imperfect substitute for a wholesome regimen properly thought out by the house-master and his housekeeper and regularly supplied. The biscuits of Reading and the jam and potted meat of the Charing-cross-road, though excellent in their way, do not represent the last word that may be said on hygienic feeding for growing boys, and even plum cake, the *pièce de résistance* of hampers, makes a poor substitute for dinner. And, unhappily, such is the nature of youth, the plum cake is apt to be eaten and the dinner left so long as the hamper lasts out, even though little serious fault might be found with the dinner by a reasonably hungry adult.

The great fault of the "hamper" system is that it tends to relieve school-masters of the necessity of providing sufficient nourishing and palatable food for their pupils. And there is really no reason, judging by the scale of fees at public schools, why they should be so relieved. Nor, indeed, judging from these, is there any fair reason why the eternal bread-and-butter of the public school tea-table should not be supplemented on certain days of the week with the jam or the cake to which schoolboys are so devoted. The extra expense to the house-master would be small. Boys only indulge to excess in these dainties because they so seldom have a chance of indulging in them at all. But if this be a counsel of perfection it should at least be possible for masters to make sure that the bread-and-butter itself is of good quality and not unpalatable. We are under the impression that this is not always the case. It is possible to support life on bread-and-butter at breakfast and at tea even for growing youths provided the bread and the butter are good.

AT a time such as the present, when with the advent of summer vegetation is bursting forth and clothing the earth with its rich green mantle, there is a temptation to speculate as to what may be happening in nature to those minute forms of vegetable life which are so intimately associated with certain diseases; to wonder whether they, too, like the vegetation which we see around us, are undergoing growth and development in their natural habitats, wherever these may be. What the behaviour outside the animal body of these micro-organisms may be at any given time is a question which we are not in a position to answer. Our knowledge as to these matters is but slight and we can for the most part only guess at what has been the activity of any given micro-organisms by the effect which at any given time of the year they manifest upon the human species. If, however, we accept provisionally the seasonal mortality of certain diseases as an index of the activity in this country of those lowly forms of vegetable life with which the diseases in question are probably associated, we find ourselves, after an examination of the seasonal curves of disease mortality, guided to the conclusion that there is but little evidence to support a view that the summer growth of vegetation as it manifests itself to us is accompanied by any great multiplication on the part of pathogenic micro-organisms. Indeed, if for the moment we may measure by mortality the seasonal prevalence in London of such diseases as small-pox, whooping-cough, enteric fever, diphtheria, scarlet fever, and measles, we shall find that it is only in the two last-named that there is at the present time any sign of increased activity.

Are we, however, justified in assuming that enhanced reproductiveness of micro-organisms is the only factor concerned with seasonal prevalence of disease? and are we not bound to take into consideration questions of increased power of receptivity or of diminished resistance on the part of the human host? As to these powers of receptivity or resistance apart from questions of acquired immunity and of the age distribution of any given disease we know but little, and it may be that we shall in the future have to unlearn something of that which we think we already know. The popular and very commonly accepted opinion that a person in a low state of general health is more likely to contract infection than is one in robust health can hardly be held to rest upon a very sure foundation, although there are certain

experiments which would seem to point in that direction. There is, too, probably but little doubt that the reception of the virus of enteric fever or of diphtheria is more likely in presence of a disturbed condition of the intestinal or faucial walls than in those in whom these structures are quite sound; but, on the other hand, due consideration must be given to instances, sufficiently numerous, where persons, after a long holiday and apparently in the best of health, fall victims to conditions which they resisted successfully when much run down. Unfortunately the sciences of meteorology and bacteriology cannot be said to assist us very much in our endeavours to explain the seasonal prevalence of disease. Major H. E. RAWSON has lately shown, as described in our columns,[1] that the anticyclonic systems of the atmosphere over Europe regularly undergo extensive changes of position according to the time of year, but the statistics of disease incidence do not appear to exhibit corresponding variations. The teachings of BUCHAN and MITCHELL as well as of others have clearly demonstrated the fact that the mortality from certain diseases varies more or less markedly with seasonal changes, and we know, too, how, apart from actual changes in the seasons, excessive cold, heat, or dampness may augment the mortality in certain directions. Still, from the standpoint of meteorology we are as yet little beyond the threshold, and bacteriology cannot be held to have cast much light upon this question of disease prevalence. In this latter connexion, however, reference has to be made to certain experiments conducted last year by Dr. JOHN ROBERTSON, the present medical officer of health of Sheffield. They are of considerable interest partly by virtue of the fact that they were conducted under conditions which were as far as possible natural, and partly because the results of the experiments were valuable in themselves and suggest lines for future workers in the same subjects. Three patches of soil situated in a field near St. Helen's were sown with dilute broth culture of enteric fever organisms and the growth of the organisms was carefully observed from time to time. It was found that during June, July, and August, while the weather was dry and there was abundant sunshine, the organisms grew and flourished, and similarly during September and October, when the weather was wet and dull, the organisms were plentiful. In November, however, they began rapidly to diminish and by the 20th of that month their presence was not detectable. These very interesting experiments point so far as they go to the probability that the prevalence of enteric fever in this country may be preceded and partly accompanied by an active multiplication of the bacillus in the soil. There is, of course, need that the experiments should be repeated and confirmed by other observers, but the results so far obtained would seem to be in accordance with reasonable expectations. They are, too, somewhat parallel to the provisional conclusions at which the late Dr. BALLARD arrived as the result of his historical researches into the behaviour of autumnal diarrhœa. Indeed, these two diseases—enteric fever and diarrhœa—may well be studied in conjunction with one another, more especially as it seems in the highest degree probable that at certain times prevalence of both these diseases may be due to the growth in the soil of the organisms which may be held to be peculiar to each. With regard, however, to diarrhœa and to such diseases as have not yet been definitely established to be due to any specific organism the outlook from an experimental standpoint is less favourable than is the case with enteric fever; and furthermore, when a new specific organism is discovered and isolated we have still to find the medium in which it will flourish in a condition akin to that which obtains in nature. In the meantime we may doubtless learn much by a continued study of such diseases as enteric fever, cholera, and diphtheria.

[1] THE LANCET, May 14th, 1898, p. 1340.

Annotations.

"Ne quid nimis."

HOSPITAL HERESIES IN BIRMINGHAM.

A YEAR or so ago we commented on some remarkable views which prevail among the workmen of Birmingham and which have their origin in the substantial contributions which they make towards the support of the hospitals. These contributions are supposed to be voluntary, but, according to a speaker in a recent discussion on the subject by the Trades Council, "in many of the factories and workshops the subscriptions are not made voluntarily but are stopped out of the wages." This is not satisfactory—such gifts should be entirely voluntary. We are, it is to be hoped, a long way off the municipalisation of hospitals. Meantime let us preserve the hospitals from the gifts of all who do not give gracefully and willingly—we must not say charitably, for in the advanced views of Birmingham this word is taboo. The one and only thing which, according to the Scripture, is never to fail is to be dismissed in the city of Birmingham as something discredited, and when the proud workman of that place goes to the hospital to have a fracture set, or an obscure disease diagnosed, or a strangulated hernia dealt with, he is to go as one who has paid for all which can be done for him in the way of skill or comfort, the said payment consisting in the payment of a few shillings a year. The services which we specially associate with a hospital, whether medical or nursing—to say nothing of boarding—are such as are to be adequately paid for only in large sums of money, in fees of anything up to a thousand guineas. We need not say that in these remarks we are meaning no disrespect to the substantial contributions of the workmen of Birmingham. We have no such feeling, but quite the contrary. What we are surprised at and disapprove is the theory that they claim the hospital treatment as a matter of right, and to exercise a predominant influence in the administration of the hospitals on the score of such donations. We do not believe that the honest unsophisticated workman of Birmingham or Leeds really holds any such absurd views or thinks that he has discharged a mere commercial debt when for such services he contributes a few shillings a year, not a farthing of which goes to the profession, to which perhaps he owes his life or limb or eye, or that of his wife or child. Such views are manufactured for him by others who ought to know better and who do know that the voluntary hospital system of this country has been created and maintained in the past chiefly by the wealth of those who have had no direct benefits from it and who only share the indirect benefits with the working classes, who practically monopolise the direct advantages. Let it be admitted that in Birmingham the case is altered

by the handsome contributions of the workmen. We agree that these entitle the contributors to a voice in the administration. But we deny that such contributions entitle them to alter the whole conception of the hospital system as essentially a charitable one, in which the chief workers are not paid. If such an alteration is to be made it must be with the consent of the medical profession whose work at present is practically gratuitous. Moreover, the portion of the profession which does hospital work is a mere fraction of the whole. The *doctrinaires* of Birmingham who lead or mislead the working men speak of the claim of working men who subscribe to hospitals and dispensaries to be attended in such institutions as *of right*, without reference to the nature of their diseases. The claim is absurd and would, if pushed, bring the hospitals to bankruptcy and those who use them into a sort of pauperism.

LONDON UNIVERSITY COMMISSION BILL.

THE promoters of the movement for the formation of a Teaching University in London are to be congratulated on having scored a distinct success on Tuesday last. The Bill for the appointment of a statutory Commission passed the second reading without a division, notwithstanding the opposition of Sir John Lubbock and some graduates of the University. The opposition to the Bill was of the most trifling nature and no new argument was brought forward, so after the speech of Mr. Haldane, who has taken a large amount of trouble in trying to settle the question, there was no doubt of the success of the Bill. It is to be hoped that it will quickly pass through the committee stage, so that the statutory Commission may soon get to work. London has waited long enough for a university which shall preside over its teaching and consolidate the various institutions engaged in higher education. The medical schools and the scientific colleges have greatly suffered from the want of resident teachers, who ought to have a distinct position in directing the studies of the pupils who desire to obtain degrees. Such a position is given to them in the Scotch and provincial universities, and such they will obtain under the present Bill if it becomes law. We cannot see why country graduates should decide on the needs of educational London and are pleased that the House of Commons has assessed the recent voting of Convocation in favour of Mr. Fletcher Moulton at its true value. The use of a veto by a slight majority vote of Convocation has been purely obstructive and the graduates will be deprived of this power in future as the members of the Universities of Oxford and Cambridge have already been deprived of it.

THE MEDICAL EXPERT AID COMMITTEE.

"THE individual withers and the world is more and more." Nothing can be done in these degenerate days without a society or at least a committee. The last new-fangled organisation is the Medical Expert Aid Committee. Strange to say there is only one medical name on this committee—that of Dr. Hugh Woods. The objects are (1) to enable persons of limited means to obtain expert medical advice; and (2) to discourage the abuse of hospitals. Let us confess at once great sympathy with the objects of the committee. No person, and especially no medical practitioner, can fail to be struck with the painful difficulty of getting expert opinions for those of modest circumstances, and especially of getting surgical work done for them, except at prohibitive prices which suggest or compel application to a hospital. The general practitioner has to accommodate his charges to the means of his patient. The fashionable or successful consultant probably does so to an extent which we do not know, but there is certainly a want of some arrangement or understanding upon which the general practitioner who first becomes cognisant of most of such cases could apply for a similar accommodation. It must also be remembered, to the credit of the consultant, that he spends an enormous number of hours in the hospital doing gratuitous work. Still there is room for a little more accommodation in fees to the humbler classes of patients. A private consultation at the consultant's house with the ordinary attendant present is a very different thing from the five minutes in the out-patient department of a hospital. We do not think with the committee that half-guinea fees should be introduced. But it would be sometimes an advantage if a consultation for a guinea could be procured easily where in the opinion of the medical attendant the patient could not afford more. We are well aware that some of our most eminent consultants are most kind in this way, but the rule of high fees has lately been such as to drive thousands to hospitals. Still, we are unwilling to admit that the intervention of a society or even a committee is needed for this purpose. The ventilation of the subject will suffice to remind our consultants of the number of persons who by a little accommodation on their part will be kept from losing their independence as private patients and drifting into a form of hospital pauperism. We give the committee every credit for their objects, but we are persuaded that these objects will be better attained by candid and friendly communications from general practitioners to their consulting brethren. We feel assured that our best consultants would hesitate to put themselves into the hands of practically a lay committee, while they will cheerfully coöperate with general practitioners for the objects set forth in the circular of the committee.

THE FEEBLE-MINDED.

PROVISION has been made in various directions for the different imbecile, idiot, and insane classes of the community and there are numerous organisations to help the weaker vessels of society who need the aid of charity. But until quite recently it was not adequately recognised that there exists a large class of feeble-minded persons who form not only a danger to themselves but to the community. These persons form what are known as "borderland" cases. They are not imbecile, they are not insane, yet they do not possess the necessary standard of intellect either to maintain themselves or to hold their own against others in the battle of life. When met with among the wealthier classes they are a constant source of anxiety to their friends and when met with, as they are so widely, amongst the lower classes they constitute a great source of pauperism, crime and immorality. Within the last few years public attention has been aroused to these facts and a Royal Commission was appointed a year or two ago to investigate the matter. Three years ago the National Association for Promoting the Welfare of the Feeble-minded was started, and this association has a strong and special claim on public support, not only for the benefit of the individuals concerned, but also with the view to eradicate the danger to the public welfare. Something has already been done for children of this description. Special classes have been formed for them in the London School Board, where instruction adapted to their standard of intellect is provided, and a few training homes for girls have been opened in various parts of England. It is when such children leave school and are expected to earn their own living that the great difficulty arises. They can only perform unskilled work, and that slowly and badly, and for the most part they

need constant supervision. They can rarely earn enough to maintain themselves and their mental and moral weakness exposes them to many temptations. The boys become tramps and loafers, while the girls are constantly in and out of the workhouse. A meeting of the association referred to was held at Stafford House on June 10th, where the various facts which we have mentioned were discussed and proposals were moved by Lord Herschell, Sir James Crichton Browne, Sir Douglas Galton, Mrs. Garrett Anderson, Sir U. Kay-Shuttleworth, Mrs. Barnett, and others. In March, 1897, the association opened a home for girls at Shepherd's Bush, where they are received and taught house- and laundry-work, needlework, &c. The idea is to make them so happy and comfortable that it is not necessary to apply for special legal powers to forcibly detain them, and hitherto the efforts of the association have been rewarded with success at a very moderate expenditure. The cost is reckoned at 10*s.* a week—7*s.* supplied either by the guardians or by the friends and 3*s.* by the charitable public. In this way, as some of the speakers pointed out, a contribution of 3*s.* a week, or £8 a year, will maintain one individual. During the year the home has received several girls who appeared hopelessly incapable and yet who, under the combined mental and physical training of the home, have improved so much that there is good hope of their becoming useful, self-supporting members of society. Special provision is still required for girls who have fallen into vice by reason of their weakness of intellect rather than from vice. With the exception of a home near Birmingham there is no such refuge for girls. A home for boys has been instituted near Braintree, in Essex, where they are taught gardening, poultry-rearing, and basket-making. We are glad to find that this important question has become the object of organised effort and the association has our best wishes for its success. The office of the association, 49, Victoria-street, S.W., was opened in September, 1897, and some idea may be derived of the necessity of such an organisation from the fact that during the year ended March, 1898, 4610 letters and post-cards have been sent out and 287 applications for admission to the homes (176 women and girls and 111 men and boys) have been received and considered.

PAROXYSMAL HÆMOGLOBINURIA COMBINED WITH URTICARIA "A FRIGORE."

AT the meeting of the Société Médicale des Hôpitaux held on Feb. 18th M. Lucien Roques presented a very exceptional and interesting case. A man, aged thirty-three years, in good health, had suffered for three years from paroxysmal hæmoglobinuria. The attacks were always produced by exposure to cold, to which he was extremely susceptible. A momentary draught or merely getting out of bed would produce one. They were accompanied, especially when intense, by an icteric tint of the skin. The case showed a peculiar phenomenon which has not been previously described. If a portion of the skin was exposed to cold for a short time (a minute or half a minute was sufficient) by any means — for example, by the ether spray or by the application of ice or of a metallic body — a pruriginous urticarial wheal surrounded by a rosy band appeared in two or three minutes. It attained its maximum in four or five minutes and disappeared in ten or fifteen minutes, leaving a yellow patch of œdema which lasted for two hours. When the œdema passed away there still remained a yellowish tint which persisted for about twenty-four hours. The patient for some months had noticed occasionally that the parts of his body exposed to cold became swollen. Apart from this effect of cold dermographia could not be produced. M. Roques endeavoured without effect to produce the phenomenon in a number of cases of nervous diseases including hysterical and organic affections of which some presented already vaso-motor disorders. He also failed in several patients who were the subjects of dermographia. The existence of urticaria *a frigore* in a small number of cases of paroxysmal hæmoglobinuria has been described but not the phenomenon in question, which is in fact factitious urticaria *a frigore*. In THE LANCET of July 26th and Aug. 2nd, 1879, Dr. Stephen Mackenzie published the case of a child, aged four and a half years, the subject of paroxysmal hæmoglobinuria, who under the influence of cold was attacked with shivering, generally accompanied by an eruption of large patches of urticaria. Several writers have studied the relations of dermographia to cold. Mesnet found in one case that the application of ice hindered the appearance of the wheals, and Gull, Michelson, and Féré obtained similar results. The phenomenon described by M. Roques is therefore dissociated from ordinary dermographia. The yellow colouration of the wheals was evidently due to local transudation of hæmoglobin. The case, therefore, is evidence in favour of the view that paroxysmal hæmoglobinuria is due to the setting free of hæmoglobin in the blood-vessels—a direct effect, no doubt, of cold on the red corpuscles. The paroxysmal hæmoglobinuria arises from special susceptibility of the blood to cold and the urticaria from special susceptibility of the vaso-motor system. These susceptibilities appear to be independent and are only exceptionally combined in the same individual with the results described.

THE BATTLE OF ATBARA.

GENERAL RUSSELL recently put several questions to the Under-Secretary for War in the House of Commons regarding the hospital equipment and the medical and sick transport arrangements provided for the British brigade at the battle of Atbara. General Russell's series of questions covered a wide range, for he asked whether the medical department were not insufficiently supplied with anæsthetics for the performance of operations on that battle-field; whether the litters for the conveyance of the wounded were not unprovided with sunshades; whether no apparatus for the application of the Roentgen rays was carried with the army in the field; whether there were no light ambulances attached to the cavalry in Egypt; and, lastly, whether any complaints had been made of the hospital arrangements for the reception, accommodation, and nursing of the sick and wounded officers at Cairo after the campaign. Mr. Brodrick's replies to these questions were, on the whole, satisfactory. He was able to confute the statement regarding the insufficiency of anæsthetics, to show that the nursing staff was ample and that the War Office had received no suggestion whatever of any inattention in this respect, that the hospital wards at the Citadel Hospital, Cairo (as everybody who has seen them must admit), are large and lofty and afford ample cubic space and superficial area, and that every attention was paid to the wounded after the recent action. There were no British cavalry employed at the reconnaissance referred to by General Russell and the arrangements for the cavalry who were present rested with the Sirdar. Mr. Brodrick admitted that the litters were unprovided with folding hoods as a protection from the sun and that steps have been taken to supply the defect. As regards the Roentgen ray apparatus, he pointed out the difficulties attending its adaptation to field service, but said that two sets of such apparatus had been sent to Egypt and would, as far as possible, be adapted for service in the field. He added, however, that the senior medical officer, after having gone very carefully over all the cases, was unable to trace any instance in which the apparatus would have been specially useful or that a single

life would have been spared by its use. We may say that we have heard no mention of any want of anæsthetics on the part of medical officers, which would have been the case had it been the fact. If it is intended to imply that there was any complaint regarding the medical services we may say that, on the contrary, everything we have heard was strongly in favour of the medical officers and of their hard and unremitting work. The only regret was that there were too few of them. Whether the authorities cut down the hospital and other equipment provided on the occasion to too great an extent we cannot say. It was alleged on some previous occasion that our Egyptian campaigns are conducted on a too severely economical scale, and we should have been glad if the Under Secretary for War had expressed himself more definitely in this respect. We are not among those who think that it is always practicable to provide for every single requirement or contingency on field service, but we do very emphatically hold that whatever is possible should be done and that if for financial or military reasons it is not done the responsibility should not rest with the medical branch of the service.

TWO INTERESTING DINNERS.

QUITE recently there have been held two interesting dinners in London—namely, the annual dinner of the Army Medical Staff and the annual dinner of the Indian Medical Service. Brief reports of the proceedings will be found in subsequent pages, from which it will be seen that in both departments great satisfaction was expressed at the promised reforms in the Army Medical Staff, it being generally believed that Lord Lansdowne has solved by his timely concession a problem which had puzzled and irritated many well-meaning people for a long time. Surgeon-Major-General Jameson, presiding over the dinner of the Army Medical Staff, tendered the thanks of the department, of which he is the Director-General, for the new warrant; while Sir Joseph Fayrer, presiding over the Indian medical officers, expressed the gratitude of that department for the promised changes which he said would in all probability extend to their service. Sir Joseph Fayrer used weighty words, which we have pleasure in printing for our readers' information, as he repudiated the idea that the army medical officer wants to ignore his own duties and interfere with those of other departments in seeking to obtain unquestioned and unquestionable military rank. By the way, if any man's words should have practical weight upon such a point, Sir Joseph Fayrer is that man, for he has served in the Medical Services of the Navy and Army, as well as that of India, with which his name is so intimately associated.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE members of the Poor-law Medical Officers' Association and guests lunched together at the Trocadero Restaurant on June 14th. The chair was taken by Dr. R. Farquharson, M.P., who has recently been elected President of the association. After luncheon the honorary secretary, Mr. Arthur Greenwood, read the report of the work of the past year, in which were mentioned numerous instances of the oppressive manner in which some Poor-law medical officers are treated and of the benefit resulting in many of these cases from the action of the association. In one instance a board of guardians had compelled their medical officer to agree to make no claim under the superannuation scheme, but the association brought the matter before the Local Government Board, who informed the guardians that no such agreement with their medical officer would be binding. The treasurer, Dr. Gayton, said that at present the association had £54 in hand. Mr. Balding (of Royston), the chairman of the council, said that it would be difficult to over-estimate the value of the association, for the cases of oppression of the medical officers by boards of guardians were very numerous and very important. Dr. Farquharson said he would be most happy to assist by his influence in Parliament all the endeavours of the association to obtain a better status for the Poor-law medical officer. Several other speakers pointed out the very urgent need of reform which exists in many matters connected with the medical aspect of the administration of the Poor-law, and it was urged that much good might be done by working in union with the Poor-Law Officers' Association. The Shamrock Quartette gave a very agreeable selection of music during the luncheon.

THE NEW FELLOWS OF THE ROYAL SOCIETY.

TWO members of the medical profession—Dr. William Osler and Dr. Edward Waymouth Reid—have become Fellows of the Royal Society at the recent elections and we tender our congratulations to them. Dr. Osler, Professor of Medicine at Baltimore and physician to the Johns Hopkins Hospital, is no less known for his valuable practical researches in cardiac pathology than for his excellent and popular treatise on medicine. Dr. Reid, Professor of Physiology at University College, Dundee, has done much suggestive original work in all branches of physiology.

THE SEPTIC TANK SYSTEM OF SEWAGE TREATMENT.

THE steps now being taken at Exeter mark an epoch in the history of dealing with sewage. We understand that the Local Government Board have signified their sanction to a loan for carrying out the septic tank system on a scale applying to the whole of the sewage of the city. The system now passes, therefore, from the experimental to the practical stage and the progress of the undertaking will be watched with the greatest interest by all who are anxious for sanitary progress. Should success attend the scheme thus applied on a large scale—and judging from what has already been achieved there is no reason for anticipating any contrary result—a very striking instance will be afforded of the great value of studying nature's methods of purification. Indeed, the treatment of sewage is rapidly passing from the domain of chemistry to that of biology and it is probable that precipitation processes and other chemical methods will be relinquished ere long in favour of natural processes. Natural oxidation and precipitation by bacterial agencies is a gigantic phenomenon of everyday occurrence and it is only by a careful study into the conditions under which countless and ubiquitous micro-organisms will favourably work that such a satisfactory solution of a long vexed problem has been brought within measurable distance of attainment.

BACTERIOLOGICAL LABORATORIES AND THE PLAGUE.

WHEN the recent outbreak of plague occurred at Calcutta it was a matter of obvious importance that the exact nature of the disease should be determined with the least practicable delay. Happily for the Government of Bengal the services of M. Haffkine were available and he was able to report, as the result of a bacteriological examination, that the outbreak was due to true bubonic plague. We have heard a great deal about the establishment of bacteriological institutes or laboratories in India; now here was an occasion in which a bacteriological laboratory in Bengal would have been of the greatest use, and we are glad to notice that the *Englishman* of Calcutta has called attention to the subject. It cannot be said that among the number of medical officers of the Indian Medical Service there are not several who are both competent and willing to undertake this special work, and the sooner a

properly equipped institution is established the better. There is probably no place in the world where bacteriological researches are more required to be employed in the investigation of disease-causes than in India, not only in the interest of scientific medicine, but as a matter of State policy. A really good staff of men with the requisite scientific training should be specially selected for the purpose of conducting these inquiries, and as they will probably find ample work in carrying on their investigations their duties should be confined to them. The Government of Bengal recommended the adoption of inoculation with M. Haffkine's prophylactic virus as a voluntary preventive measure and held out as an inducement to people to undergo it that they and their families would be exempted from the liability to segregation. The statistical results of inoculation, whilst they cannot be accepted as conclusive, are favourable and promising, but the subject is one of much difficulty and a good deal has still to be done before the practical value of the inoculations can be regarded as established.

THE VACCINATION BILL.

As will be seen by our report in another column the Vaccination Bill is progressing well in grand committee. Mr. Carlile proposed to make the period within which children should be vaccinated six months from birth instead of twelve months, this amendment being recommended by the British Medical Association and the Jenner Society. Sir Walter Foster and Sir William Priestley supported the amendment, which was agreed to. The honorary secretary of the Jenner Society, Dr. F. T. Bond, has placed in our hands a copy of the amendments which the committee of the society are suggesting for the consideration of the grand committee. They are sixteen in number and all sensible, dealing for the most part with points in the Bill which have elicited expressions of dissatisfaction in well-informed quarters. The first is the one that has already been accepted. But the proposal contained in the fourteenth amendment is quite new to us and is a particularly wise one. The amendment runs as follows:—

New Section.—"Any local authority may incur reasonable expense in the diffusion of information as to the reasons why vaccination of children is required by the State and of literature generally illustrative of the advantage of vaccination."

There is no doubt that if the Government or sanitary authorities in any quantity had thought it worth while to show one tithe of the literary activity which has been displayed by the opponents of vaccination the anti-vaccination agitation would never have attained to its present height. It would be an excellent thing if parents who can now read in the lay press all sorts of so-called reasons why they should dread vaccination for their children could have easy access to the arguments showing the great advantage which accrues from the protective process.

OBLITERATIVE PERICARDITIS A CAUSE OF HEPATIC ENLARGEMENT AND ASCITES.

OBLITERATIVE pericarditis is not generally known as a cause of enlarged liver and ascites. As the symptoms of the former are not definite and the patient only comes under treatment for the latter a diagnosis of hepatic cirrhosis is made and the primary disease is only recognised at the necropsy. In the *Boston Medical and Surgical Journal* of May 19th, 1898, Dr. R. C. Cabot has published the following case. An emaciated boy, aged eighteen years, was admitted to hospital. Six years ago his liver was said to be enlarged, and four years ago he noticed swelling of his abdomen. Occasionally the feet have been swollen. The liver was much enlarged and reached from the fourth rib to a hand's breadth below the navel; it was apparently smooth and its edge was easily felt. There were considerable ascites and effusion in the left pleura. The heart did not appear to be displaced. The apex sounds were loudest in the fourth space. There was constant orthopnœa. The abdomen was tapped three times and the chest once. About four quarts were obtained each time from the former cavity and two from the latter. There was never any pain. The patient died at the end of eight weeks from pulmonary œdema and exhaustion. A necropsy showed complete obliteration of the pericardium by firm adhesions, the heart normal in size and the muscular substance not altered, the left lung retracted, airless, and covered with adhesions, the right lung compressed, much fluid in both pleuræ, and an enlarged nutmeg liver. The diagnosis of these cases, as stated, is difficult. In every case of obscure hepatic enlargement, especially in young persons, the heart should be examined for evidence of pericarditis. As the pericarditis is mostly tuberculous, evidence of tuberculosis in other parts will be of some value.

A GREAT MASONIC MEETING.

So many members of the medical profession are Freemasons (indeed, there are, we imagine, very few "lodges" which do not include at least one medical practitioner in the lists of their members) and the association of the profession with Freemasonry has from the earliest times been so close[1] that we think the very remarkable meeting which was held at the Albert Hall on Friday evening, June 10th, should not pass unrecorded in the columns of THE LANCET. The occasion was the centenary festival of the Royal Masonic Institution for Boys and the chair was occupied by a distinguished (if purely honorary) Fellow of the Royal College of Physicians of London—H.R.H. the Prince of Wales, Grand Master of English Freemasons. The institution was founded in 1798, under the name of the "Institution for Clothing and Educating the Sons of Indigent Freemasons," by the United Mariners' Lodge, and in 1817 a similar institution, established by Surgeon (afterwards Sir) F. C. Daniel and other members of a lodge which is now known as the Royal Naval Lodge, was amalgamated with the original charity. From these beginnings gradually grew the Royal Masonic Institution for Boys which is now situated at Wood Green; it is, however, intended, as a memorial of the centenary of the institution, to erect new schools at Bushey, Herts, the requirements having outgrown the existing buildings at Wood Green. A suitable site has been purchased and it is expected that the work on the buildings will be commenced in the autumn. But for these purposes funds were needed. With the name of Freemasonry charity is, we believe, indissolubly linked and the Freemasons proved true to their name and their traditions. At the conclusion of the dinner it was announced by the Prince of Wales that the total realised by the stewards' lists and other contributions amounted to the noble sum of £134,000—a record collection. There were 3898 stewards, some 2500 of whom were present at the dinner, and together with the ladies who witnessed the scene from the galleries and others there must have been at least 5000 persons in the vast and splendid building, the spectacle presented being as brilliant as it was unusual.

THE REWARDS FOR PLAGUE WORK.

A propos of the rewards conferred by the German Government upon the members of the German Commission sent out to Bombay last year to investigate and report upon the plague—a duty which occupied them some three months in

[1] Vide "The Medical Profession and Freemasonry," THE LANCET, Jan. 26th, 1895.

that city—the *Times of India* calls attention to the dimensions of the work carried on at Bombay and to the untiring energy displayed by the Indian Medical Service and profession in connexion with the epidemic. What is to be the scale of recognition which the Government of India will apply to these medical workers in the plague campaign? Two members of the German Commission, Dr. Gaffky and Dr. Pfeiffer, have received an honorarium of 15,000 marks each and Dr. Stricker and Dr. Dieudonne 9000 marks each. The two first-named receive, in addition, the Order of the Red Eagle of the second class and the others the same Order of the third class. All this is quite as it should be. But now let us turn to the work carried on locally—in Bombay itself. Taking the second epidemic alone the *Times of India* says in the case of the Arthur-road hospital (at which we may say, *en passant*, that Dr. Choksey did very hard and excellent work) that in the nine months ending March 31st over 4000 patients have been treated there, nearly half of whom were plague patients, and of the remainder over 900 were cases of relapsing fever and over 200 cases of cholera, while another 900 were cases of general disease. From October, 1896, to date nearly 3400 plague cases have been treated in this hospital, besides over 1100 cases of relapsing fever. The great plague hospital at Poona, managed in the first instance by Surgeon-Major Barry and in the second epidemic by Surgeon-Captain Lloyd Jones, comes nearest to this in the magnitude of its operations and in the burden of the work thrown upon the officers in charge.

POISONOUS ICE-CREAM.

ICE-CREAM is still sold in the streets without apparently any sort of legislative control as to the wholesomeness of the stuff which has such a peculiar charm and powerful attraction for so many juveniles. And where the difficulty lies in ensuring the use of none but wholesome materials in the manufacture of ices we utterly fail to see. Practically the manufacture is confined to a squalid quarter near Hatton-garden, the manufacturers being mostly Italians. Surely this place could be daily inspected in regard to sanitary environment and a sharp look-out kept on the quality of the eggs, sugar, &c., without adding very seriously to the present duties of our health authorities. Then why not license the ice-cream man, who under the present *régime* may cause an immense amount of mischief, leaving disease and death in his train, and yet no satisfactory means of identifying him and tracing him to his probably filthy den. Twenty years ago we described in these columns how loathsome was the condition of the tenements occupied by ice-cream mongers, pollution of the frozen mixture with human excreta being ocularly demonstrated with hideous certainty. In spite of all this, illness and deaths are still reported, and it is not surprising that these are traceable not to any well-defined metallic poison, but to an obscure product derived most probably from a putrefactive process. The Home Secretary's attention should be given to the matter.

GOUTY PHLEBITIS IN THE SCROTAL REGION.

SINCE the publication of Sir James Paget's classica work gouty phlebitis in the lower extremities has been wel, known. But the unusual site of the disease in a case communicated recently to the Société Médicale des Hôpitaux by Dr. Le Gendre rendered the diagnosis difficult and even erroneous. A man, aged thirty years, was seized with violent pain at the root of the scrotum after having stood for many hours every day at the trial of M. Zola. The skin of the affected region was quite normal, but a flabby cord about 3 cm. or 4 cm. in length and mobile could be felt. The temperature was 100·7° F. The patient had previously exhibited gouty manifestations—nephritic colic, epistaxis, and arthritis of the great toe. His father and brother were gouty. The diagnosis of gouty phlebitis was therefore made and it was supposed that the long periods of standing, by favouring venous stasis, had helped to localise the attack in the venous system of the scrotum. A distinguished surgeon, however, diagnosed inflammation of Cowper's gland. The tumefaction became indolent and modified in shape; it formed an ovoid, hard mass about the size of a small almond, with an elongated pedicle, which became lost in the direction of the perineum. At this time another consultant diagnosed fibroma probably growing from the corpus cavernosum. At the end of twenty days the tumour commenced to diminish. An attack of gout in the right foot occurred one evening and the tumour rapidly disappeared, leaving a thickened varicose vein running towards the obturator foramen. Resolution was soon complete. Such rapid absorption does not occur in thrombosis with a well-formed clot; the exudation was therefore probably the result of periphlebitis.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

UP to yesterday (Thursday) at noon the subscriptions to the Metropolitan Hospital Sunday Fund amounted to £14,000. Among the principal contributions to this total may be instanced the collections made at St. Michael, Chester-square (£1258), at Christ Church, Lancaster-gate (£1367 4*s.*), and at All Saints, Ennismore-gardens (£480 2*s.* 4*d.*). The total on the corresponding date of last year was £17,000, but it will be remembered that Hospital Sunday last year was also the Sunday before the Jubilee, so that the churches were crowded.

AN ILL-MANNERED VESTRYMAN.

THE *South London Press* of May 28th contains a report of a heated discussion which took place at a full meeting of the Vestry of St. George's, Southwark, upon the condition of the crypt of St. George's Church. We do not intend, at any rate just now, to go into any details of a technical character concerning the analyses of the air of that church. Whatever the chairman of the vestry may think, decomposing corpses are not pleasant accessories to the furnishing of places of public resort. It is probable that the crypt will be cleared out soon, while it is certain that at some time or other, if not soon, the funds will have to be found to remove a source of danger to the worshippers at St. George's Church. But what calls for immediate attention is the behaviour at the meeting of Mr. Haynes, the chairman of the St. George's Vestry, if he is correctly reported in the *South London Press*. One gentleman, who had been for thirteen years churchwarden, was told by Mr. Haynes that his "sensational statements made for some motive or other were scandalous and dishonest," while to Dr. Waldo, the medical officer of health of St. George's, Mr. Haynes gave the lie direct. The latter incident is, we hope, without precedent in the records of local administration. It might be expected that the other members of the vestry would make Mr. Haynes feel that if he differs in opinion from the medical officer it is necessary that he should express his dissent in proper language and according to the decent methods which prevail among Englishmen in the conduct of their public affairs. But this expectation is doomed to disappointment. The *South London Press* of June 11th contains a report of another meeting of the vestry when the matter of the crypt came up for further discussion. At this meeting Mr. Haynes deliberately repeated his offensive conduct, justifying his words by some conversation which he said

that he had had with a third party (not present), and we are surprised to learn from the same source that his "statement was loudly cheered."

A SPECIAL meeting of the Council of the Charity Organisation Society will be held on Monday, June 20th, at 4.30 P.M., at the theatre of the Royal United Service Institution, Whitehall, S.W., when papers will be read by Mr. Clinton Dent on the Proposed Arrangements for Out-patients at the New Belgrave Hospital for Children, and by Mr. W. H. Kesteven on the General Practitioner and Out-patient Departments. The chair will be taken by Sir Joshua Fitch, LL.D., and members of the medical profession have been specially invited to take part in the discussion.

THE French Surgical Association will hold its twelfth Congress at the Faculty of Medicine, Paris, from Oct. 17th to 22nd. The subjects for discussion will include nephrotomy and the treatment of goitre (not exophthalmic). Intending readers of papers should communicate before Aug. 15th with the general secretary, M. Lucien Picqué, 8, Rue de l'Isly, Paris.

THE new physiological laboratories at University College, Liverpool, the magnificent gift to the College of the Rev. S. A. Thompson Yates, will be opened on Oct. 8th, Lord Lister performing the opening ceremony. It is stated that the Victoria University will take advantage of Lord Lister's visit to Liverpool to confer upon him the honorary degree of Doctor of Science.

WE learn from the Home Office that the report of the Petroleum Committee has not yet been presented for consideration by the members. So far the document drawn up by Mr. Jesse Collings is private and confidential and all statements which have appeared in the daily press about its contents "are purely speculative."

THE classification and rules for intending exhibitors at the Paris Exhibition of 1900, together with forms of application for space, can be obtained by applying to the Secretary of the Royal Commission, Paris Exhibition 1900, St. Stephen's House, Westminster, S.W.

THE Hospital Reform Association is making arrangements to hold a meeting in Edinburgh on Tuesday, uly 26th, when the subject for discussion will be: The Hospital System in Scotland and Provident Dispensaries: their Use and Abuse.

SIR WILLIAM TURNER, President of the General Medical Council, received the honorary degree of LL.D. of Cambridge University on Wednesday last, in company with the President of the Royal Academy, the Master of the Rolls, Sir Henry Irving, and other distinguished persons.

HER MAJESTY THE QUEEN has forwarded a donation of 25 guineas to the Committee of the Royal Ear Hospital towards the fund now being raised for the new building. Her Majesty has been patron of this hospital since 1841.

THE Merchant Taylors' Company have contributed £1000 to the Prince of Wales's Hospital Fund and promise to repeat this amount for the next two years.

THE treasurer of St. Thomas's Hospital has received a donation of £1000 from "G. R." to endow a medical bed.

THE Freedom of the City of Edinburgh was conferred on Lord Lister and Lord Wolseley on Wednesday last.

THE BRITISH PHARMACOPŒIA.

V.[1]

THE ADDITIONS—(*continued*).

Salol.—As mentioned in our last article the value of this drug lies in its power of passing through the stomach unchanged. Owing to the acidity of the gastric contents, and upon coming into contact with the alkaline secretions pouring into the duodenum, it splits up into its constituents—phenol and salicylic acid. Ewald and Sievers utilised this substance in a most ingenious way for estimating the amount of time which the food takes in a given case to pass from the stomach to the small intestine. A long series of experiments demonstrated that the normal period for the splitting up of salol in the intestine amounted to from 47 to 75 minutes. The period was lengthened to 90 minutes after a meal of purely animal food washed down with acidulated water and it was shortened to 20 minutes by a meal of fruit, meat, and vegetables. These observers employed the drug as a test for the motor sufficiency of the stomach; as soon as the salol was split up its conversion product, *salicyluric* acid, began to appear in the urine. 15 gr. of the drug in cachet or capsule are administered during digestion and in normal conditions of the motor activity of the stomach the acid should be capable of detection in the urine in about one hour by the addition of neutral ferric chloride solution which strikes a violet colour. For all practical purposes at the bedside it is only necessary to dip a piece of white blotting paper into the renal secretion and upon this to let fall a drop of neutral ferric chloride solution when the margins of the drop or splash on the paper will at once show a violet tinge. In this way a fairly accurate idea may be obtained of the length of time required for the passage of food out of the stomach. Huber improved upon the method by determining the period at which the elimination of salicyluric acid was completed. In health the acid was all excreted in about twenty-four hours, but in dilatation of the stomach and in atony of the muscular coats the acid may be detected for thirty or forty hours after the administration of a single dose of 15 gr. of salol. In this way some idea may be also gained of the quality of the pancreatic secretion. In full doses the drug will reduce the temperature in fevers and numerous physicians have testified to its value in acute rheumatism, where its results have been favourably contrasted with those obtained by salicylates. In sciatica, various forms of neuralgia, and in migraine it sometimes succeeds when the new analgesics have failed. Recently it has been recommended as a remedy for general scleroderma and cases have been reported as cured under full doses. In fine powder salol may be sprinkled over wounds and ulcers or dusted upon chancres as a substitute for iodoform, but as it contains nearly 40 per cent. of phenol the danger of its absorption in dangerous amount is possible. It is thus evident how numerous are the indications and how many-sided are the actions of this new addition to the 1898 British Pharmacopœia.

Spiritus Anisi.—This new preparation takes the place of the old essence of anise, and in the previous article dealing with the omissions of the Pharmacopœia we pointed out some objections to its admission, chiefly on the ground of the amount of strong alcohol contained in its maximum dose in the case of very young infants. Its strength is 1 in 10, and the dose is given as from 5 to 20 minims, an amount quite inadequate to relieve the colicky pains of intestinal indigestion.

Strychninæ Hydrochloridum.—This salt takes the place of strychnine in the liquor, though the pure alkaloid is still official. Its introduction is only of pharmaceutical interest, as its actions and dose (from $\frac{1}{60}$ to $\frac{1}{15}$ gr.) are identical with those of the alkaloid, but it possesses the advantage of being more soluble. Strychnine is very sparingly soluble in water, hence in the old liquor diluted hydrochloric acid was added to assist solution by converting it into the hydrochloride. The newly-introduced salt is soluble in 35 parts of water and the liquor now contains no free acid and hence can be used

[1] Articles I., II., III., and IV. were published in THE LANCET of April 16th and 23rd and May 7th and 28th, 1898, respectively.

for hypodermic injection with advantage, as this preparation is undoubtedly a remedy of great value in urgent cases of cardiac failure when administered hypodermically in doses of 5 minims—i.e., ½ grain.

Suppositoria Acidi Carbolici.—Each of these contain 1 gr. of phenol and they are introduced as a method for obtaining the local antiseptic, anæsthetic, or analgesic action of the drug in various painful conditions of the anus, as in ulcer, fissure, hæmorrhoids, &c.

Suppositoria Belladonnæ.—Each contains ⅛₀ gr. of the alkaloids of belladonna root and they are introduced for their local action in similar conditions to those in which the previous preparation is indicated. Their value is, however, less obvious, but they may be useful in bladder troubles, especially in incontinence in adults. They are made with the alcoholic extract which is a standardised preparation.

Syrupus Aromaticus is a flavouring syrup without any therapeutic virtue; it contains tincture of orange, cinnamon water and simple syrup and will prove an agreeable vehicle for many nauseous or bitter drugs.

Syrupus Calcii Lactophosphatis.—This syrup affords an agreeable and efficacious method of administering lime salts in phthisis, rickets and many wasting diseases. It is not necessary to remind the physician that it possesses none of the virtues of free phosphorus and that the value of lime salts in rickets is denied by many competent observers; nevertheless, where the restorative effects of calcium are indicated this preparation may be used in teaspoonful doses with marked advantage.

Syrupus Cascaræ Aromaticus is an agreeable and elegant preparation containing in 20 oz., 8 oz. liquid extract of cascara, 2 cz. tincture of orange, 1 oz. alcohol, 3 cz. cinnamon water and 6 oz. syrup. Its dose is from half a teaspoonful to two teaspoonfuls. Its admission to the British Pharmacopœia supplies a distinct want, as hitherto the objection to the bitter and nauseous taste of the drug necessitated the use of capsules of the liquid extract, which were very satisfactory to the fastidious patient, but which did not permit of that graduation and change of dosage which is the secret in the successful treatment of *chronic* constipation.

Syrupus Codeinæ.—This is a simple solution of the phosphate of codeine in sugar and water and will be useful in allaying the hacking cough of early phthisis. Codeine acts as a sedative to the respiratory centre in the same manner as morphine acts, but it does not alter the secretion and render it adhesive to the same extent that this alkaloid does. Remedies of this class should not be prescribed where the bronchial secretion is profuse; their value lies in their power of checking or preventing *unnecessary* coughing. The dose of the syrup is from ½ to 2 fluid drachms—i.e., from ⅛ to ½ gr. We would suggest that the minimum dose should be seldom exceeded. Of course, the preparation cannot be employed in the treatment of diabetes owing to the amount of sugar contained in it.

Syrupus Ferri Phosphatis cum Quinina et Strychnina.—This is now the official representative of Easton's syrup. The original formula appeared in the fifth edition of Aitken's "Practice of Medicine," and ever since the syrup has been extensively employed as a bitter tonic and restorative. Martindale modified the original formula, the British Pharmacopœia Committee adopted it, and now the British Pharmacopœia has with a slight change accepted it. Martindale's recipe contained 120 gr. phosphate of quinine, whilst the British Pharmacopœia directs 130 gr. of the sulphate to be used; otherwise the formulæ are identical. Each drachm contains 1 gr. anhydrous ferrous phosphate, ¼ gr. quinine sulphate, and ₃₀ gr. strychnine, and the dose is from ½ to 1 fluid drachm.

Syrupus Glucosi.—This, like the aromatic syrup, and we might almost say like the following preparation, is only of pharmaceutical interest, being a mere sweetening agent, consisting of 1 oz. of the liquid glucose of commerce mixed with 2 oz. of syrup. The British Pharmacopœia revisers have devoted considerable attention to agents for sweetening and flavouring. They might with great advantage have made way for these by rejecting some of the older syrups which are worthless—viz., syrupus hemidesmi.

Syrupus Pruni Virginianæ.—Though the Virginian prune bark possesses bitter tonic and astringent qualities, and is even credited with cardiac sedative properties, it nevertheless will be chiefly used for its pleasant almond-like flavour for sweetening cough mixtures when used in the form of the syrup.

Terebenum.—The introduction of this drug into the British Pharmacopœia has been received with mingled feelings. In the opinion of not a few it seems to have outlived its good reputation of some years ago when it was reported upon so favourably by Dr. Murrell as a remedy for winter cough. It is upon the whole doubtful if it will be able to hold its official position at the next or some subsequent revision. It nevertheless is of some value as an expectorant, especially in the bronchitis associated with emphysema. The dose is from 5 to 15 minims and it is best given in capsules or on sugar owing to its turpentine-like taste and odour.

Thyroideum Siccum and Liquor Thyroidei.—The use of thyroid gland substance marks one of the most eventful epochs in therapeutics. The brilliancy of the discovery and the striking nature of the results have produced such an impression upon the minds of workers in original research that we have become inundated with a host of agents which are not creditable to scientific medicine at the end of the nineteenth century. Thus there are preparations of dried uterus, prostate, lymphatic glands, kidney, liver, mammary glands, lung, &c., vaunted for nearly every disease.

The discovery that myxœdema was produced by the absence of the thyroid secretion and the proof that a similar condition followed after the total removal of the thyroid gland in man and monkeys prepared the way for the administration of this remedy in myxœdema after many failures of grafting and transplanting experiments. Those who have not seen the results obtainable by thyroid extract in conditions following disease of the thyroid gland can hardly realise the nature and importance of this agent. After a few weeks' administration of from 5 gr. to 10 gr. daily of dry thyroid to a myxœdematous patient the metabolism of the body increases markedly the body weight falling as the appetite and consumption of food increase and the temperature rises; the facial expression begins to change towards the normal and the mental slowness and weakness rapidly pass off. Sometimes in a few months the patient so changes that recognition by old friends becomes difficult. Luxuriant growth of hair sometimes may be noticed upon a scalp which was before like polished ivory. To obtain these results small doses suffice and the common error is to administer the agent in dangerously large doses, for thyroid substance is an active poison if administered recklessly. Probably after a very decided effect is produced upon the myxœdematous condition the daily administration of 1 gr. of the dry British Pharmacopœia powder may be found quite sufficient. When the patient has been brought to the normal possibly this dose once or twice a week may be found sufficient to maintain the healthy standard. As regards dosage, however, no rule can be laid down; the practitioner should be guided by the results and the body-weight affords a fair test; the drug should be diminished or suspended when the loss of weight becomes obvious and probably it will be found necessary to maintain its regular administration in small amounts as long as the patient lives.

When it was found that sporadic cretinism was simply a form of congenital myxœdema the dwarfed idiot became the subject for thyroid medication and the results obtained were startling. Children who had ceased to grow in stature for years rapidly responded to the remedy and the mental condition brightened as the body developed. The liquor represents in every minim the one-hundredth part of a sheep's thyroid gland and it may be given in doses of from 5 to 15 minims. The revisers are to be congratulated that they did not render official any of the so-called active principles of the gland, as iodothyrin and thyrocol, which we believe at one stage of the revision was contemplated. There is no proof that the iodine-containing substance extracted from the gland is as efficacious as the dried tissue, whilst there is every reason to believe that it only contains a portion of the restorative needed. Thyroid feeding has been recommended as an agent for the cure of obesity and there is no doubt that it is highly efficacious in reducing the body weight, but it must be pushed slowly and the treatment should be suspended for intervals of a few weeks and the condition of the heart must be closely watched. Various skin diseases have been successfully treated by this new agent and quite a number of successes have been reported in psoriasis. It has been found also to possess galactogogue properties and it is claimed for it that it checks uterine hæmorrhage and assists the growth of bone in cases of ununited fractures, &c. It was at first vaunted as a cure for exophthalmic goitre, and cases were published which now appear to require elucidation, as it is a well-recognised fact

that in this disease the agent is positively dangerous and we believe it should never be administered. Exophthalmic goitre is probably the result of an abnormal activity in the gland and the symptoms bear some resemblance to those produced by large doses of the dried thyroid substance. If so the danger of supplementing the already increased thyroid secretion which is being poured into the circulation is obvious and deaths have been reported from the use of this agent in this diseased condition. Thymus gland has sometimes been found to lessen the exophthalmos and quiet the heart.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-fourth sitting of the Royal Commissioners was held on June 6th, at the Guildhall, Westminster, the official home of the Middlesex County Council. With the exception of the Right Hon. J. W. Mellor and Mr. Cripps all the Commissioners were present, but Sir George Barclay Bruce did not sit after the interval for luncheon.

The whole sitting was occupied by the examination of Sir ALEXANDER BINNIE, engineer to the London County Council, and the first part of the time was occupied in hearing his evidence with regard to the partition among the outside county authorities of those portions of the water undertakings which supply the districts beyond the administrative county of London. In the case of Kent he suggested that London should buy the water in bulk. In the case of Hertfordshire the witness believed that the wells at present in existence took almost all the water which could be obtained from the districts in which they were situated and that therefore no future increase could be expected from that source. An agreement with the Hertfordshire authorities might be made by which it was arranged that a fixed amount of water only should be taken from that county for the use of London. The witness did not know how far this proposal would meet the objections of the Hertfordshire County Council to the present proposals of that body.

In answer to the CHAIRMAN the witness said that the London County Council would have to buy the whole of the undertaking of the New River Company and that they might arrange not to draw any more water than is at present taken by the company. In considering the case of Essex there were two chief factors—the supply to the county borough of West Ham and that to the scattered outlying rural districts.

The CHAIRMAN said that he understood that the representatives of Essex wished to have the control of their own supplies and the witness admitted that in Hertfordshire and Essex there was a growing suburban population and that in Essex the growth was very rapid. In Hertfordshire, however, the growth was less rapid.

Sir JOHN DORRINGTON asked the witness whether he knew that the supply to Barnet was at present insufficient for the requirements of the district. The witness replied that he did not know that this was the case and that Barnet was outside the "purview" of the London water companies.

Mr. PEMBER, Q.C., said that the Barnet people had a water company of their own and that he might say that they were looking out for an increase of supply.

In answer to Major-General SCOTT the witness said that his proposals for the re-arrangement of the supplies for the districts beyond the jurisdiction of the London County Council would not be economical. The arrangements involved waste of energy. The most economical way of supplying the outside districts would be for them to take the water in bulk.

The CHAIRMAN suggested that the proposed arrangements for division of the present undertakings between London and the outlying districts were so "impracticable, inconvenient, and expensive," that in case of purchase by the London County Council the outlying authorities would be forced to take the water in bulk. The witness said that the best method would be for them to take it in bulk.

Mr. PEMBER, Q.C., examined the witness on behalf of some of the water companies. The first part of his examination was directed to show the enormous increase which was taking place in the population in the outlying districts. During the last sixteen years the population of Croydon had doubled. What provision did the witness propose should be made for future possible increase? A well at Addington belonging to the Croydon Corporation supplied 2,000,000 gallons daily, but by an arrangement made between the Croydon Corporation and the Kent Water Company the former were prevented from taking more than that amount. The witness said that it was proposed to give the outlying authorities 20 per cent. more than they had at present, but beyond this no provision for their increasing wants was proposed.

Mr. PEMBER asked the witness whether with regard to the arrangements for the transfer of part of the water undertakings to Surrey he had considered in detail the questions of the pumping arrangements and of the filter-beds, and presented some points for his consideration. The witness said that with regard to water which was to be supplied through the works now owned by the Lambeth company a dam might be built across the reservoir to divide the water intended for the use of Surrey from the water which was to be reserved for London.

With regard to the supply from the Coombe reservoir counsel stated that three engines were used for pumping the water there and asked the witness whether he thought it would be convenient that the engines used by the Surrey authorities and those used by the London authorities should be not only situated in the same house but have a common supply of steam? Was it likely that servants working for the London County Council and those working for the county of Surrey would at all times work harmoniously together under such conditions? In the case of the Lambeth station at Brixton-hill counsel pointed out that there was one coal store and the witness suggested that part of it might be cut off for the use of the Surrey authorities. In the case of the supply coming from the Selhurst reservoir counsel pointed out that under the arrangement proposed by the witness the supplies from that reservoir would go into the districts of four different local authorities. He pointed out also that in the case of Seething Wells there was only one filtered water well and asked whether the witness thought that the arrangements with regard to sand washing and filtration could be harmoniously carried on by the servants of two different authorities. Workmen were not "angels." Under the proposed arrangements Norwood reservoir would supply the districts of Croydon, London, Surrey, and Kent. How was this reservoir to be partitioned amongst these four authorities? Counsel also asked the witness whether he knew that Norwood reservoir supplied parts of Surrey which the Selhurst reservoir could not supply.

With regard to the Southwark and Vauxhall Company Mr. PEMBER pointed out that the 12 in. main which the witness suggested should be given over to the county of Surrey did not exist; there was no 12 in. main from Richmond to Hampton.

Mr. POPE, Q.C., on commencing his cross-examination suggested that the engineering difficulties were so considerable and that the cost would be so great that a division of the existing works between London and the outlying authorities could not be economically carried out, and he asked the witness whether the question did not really resolve itself into whether the authorities should or should not be supplied with water in bulk. The witness said that there were really three courses open—(1) that the supply should go on as at present; or (2) that the water should be brought from London in bulk by the outlying districts and that they should take over the pipes which now exist in their districts; or (3) that there should be a partition of which the details should be arranged by arbitration.

Mr. LEWIS COWARD, on behalf of the Kent Water Company, quoted an opinion given by the chairman of the Kent County Council to the effect that they wished to prevent the London County Council from taking their water from them. The Kent Company differed from the others in the fact that they had no storage reservoirs and no arrangements for filtration. Of the London district supplied by the Kent Company sixteen miles, roughly speaking, were at present built over and thirteen square miles were not built on. The area of the Kent Company had been extended throughout the county at the instance of, and by the Parliamentary assistance of, the various local authorities whose districts the company supplied.

Lord ROBERT CECIL, on behalf of the Hertfordshire County Council, asked how the people at present supplied with water by the New River Company would fare in the case of purchase of the company by the London County Council, and if the people of Hertfordshire were supplied in

bulk with water by the London authorities who would arrange the price the people of Hertfordshire would have to pay. The witness said that the London County Council proposed to buy the New River Company and to take the water. The people in Hertfordshire at present supplied could either buy the water back in bulk or be supplied as they are at present.

Mr. FREEMAN, Q.C., re-examined the witness on behalf of the London County Council and long extracts were read from the Balfour Report and from other sources with a view to prove that the Staines reservoir scheme as recommended by Lord Balfour's Commission and originally suggested by Messrs. Hunter and Fraser was intended for the storage of water for six metropolitan water companies and that all water taken from the Thames ought to be stored in those reservoirs and that the present intakes of the metropolitan water companies ought not to be used.

In answer to Major-General SCOTT the witness said that the great objection to the Thames water was that no less than 20,000,000 gallons of clarified sewage were poured into the river and at some periods this amounted to no less than 5 per cent. of the total flow of the river.

Major-General SCOTT suggested that in summer occasionally sewage effluents did not really exist; the whole of the water was evaporated.

Sir JOHN DORRINGTON asked how far the sewage could be traced from Crossness up the Thames and the witness said that formerly it could be traced as far as London Bridge. There was, however, a certain amount of increase in the chlorides in the water as far as Hammersmith.

At the conclusion of his evidence Sir ALEXANDER BINNIE summed up his reasons in favour of going to Wales for the future water-supply of London.

The twenty-fifth sitting of the Royal Commissioners took place at the Guildhall, Westminster, on June 13th. The whole of the time was occupied by the examination of Mr. R. M. Littler, Q.C., chairman of the County Council of Middlesex.

Mr. LITTLER said that the County Council of Middlesex is not in the least a political body and that it represents people of all shades of opinion. He gave in detail the facts making it of importance to Middlesex that the greatest economy should be exercised. The population of the administrative county of Middlesex, according to the Census of 1891, was, he said, 559,392. At the present time it is over 740,000. The area of the district is nearly 233 square miles. The rateable value in 1891 was £3,180,633. The districts in which the most rapid extension of water-supply is taking place are Tottenham, Edmonton, Southgate, Hornsey, and the western districts of the county, which are supplied by the West Middlesex and the Grand Junction Waterworks Companies. The water-supply of Middlesex is derived from four of the metropolitan water companies and there are in addition a number of supplies given by private companies and by urban district councils. The East London Waterworks Company supplies at Tottenham a population of over 5000; the Grand Junction Waterworks Company supplies Acton, Brentford, Ealing, Hampton, Hampton Wick, Hanwell, Heston, Isleworth, Twickenham, and Teddington—a population of over 147,000; the New River Company supplies Edmonton, parts of Enfield and Tottenham, Hornsey, Southgate, South Hornsey, and Wood Green—a population of 180,000. The West Middlesex Waterworks Company supplies Chiswick, Hendon, and Willesden—a population of over 130,000. The parts of Middlesex not supplied by the metropolitan companies are supplied from the waterworks of local authorities and by companies whose districts do not extend to London. The Enfield Urban District Council supplies a population of 34,600; Tottenham Urban District Council a population of 56,977; and Uxbridge Urban District Council a population of 8636. At Barnet a population of over 20,000 is supplied by a local gas and water company. The Colne Water Company supplies a population of 23,660 in Middlesex and gives also supplies in Hertfordshire; the South-West Suburban Water Company supplies in Middlesex a population of 37,100 and gives supplies also in the county of Surrey. The Rickmansworth and Uxbridge Valley Water Company supplies a population of 15,350. The Central Middlesex Water Company is a small undertaking and supplies a population of 747. The figures given are those of the population of 1896, since which date considerable increase has taken place in some of the districts. The witness, as chairman of the Middlesex County Council, said he had been in communication with most of the urban and rural authorities in connexion with the water-supply. Two conferences had been held with representatives of district councils, the first in February, 1895, and the second in January of the present year. At the first conference the following resolution had been passed:—

That the representatives of the district councils in the county of Middlesex now present agree that their interests may be safely entrusted to the County Council of Middlesex as regards the course to be adopted in dealing in Parliament with the several Waterworks Bills being promoted by the London County Council and that the district councils be recommended to present petitions to both Houses in opposition to the Bills as co-petitioners with the county council.

The following resolution, which represents the opinion of all the local authorities in Middlesex, was passed at the meeting held on Jan. 26th, 1898:—

That this conference, having considered the resolution passed by the conference in 1895, approves of the past policy of the County Council of Middlesex and is of opinion that the interests of the district councils should be left in the hands of the council as representing the whole county before the Royal Commission.

The Parliamentary Committee of the Middlesex County Council made a report on the London Water Commission Bill (1891) and on the Metropolis Water-supply Bill (1891). These resolutions were made on the supposition that purchase of the water companies by some public body would take place. The resolutions were as follows:—

1. That the interests of the county require that in any dealing with the question of the London water-supply as it affects Middlesex provision should be made against: (*a*) the sinking of any new wells in the county; (*b*) the deepening of any existing wells in the county.
2. That provision should be made for limiting the abstraction of water for the London or any other external supply from Middlesex.
3. That no scheme will be acceptable to Middlesex which does not provide: (*a*) for no further water being abstracted from the Middlesex area; (*b*) for the independent control by Middlesex from the beginning of (*a*) the sources of supply for Middlesex; (*b*) the supply service; (*c*) the absolute non-interference with Middlesex either as to rating or otherwise.

The County Council of Middlesex have re-confirmed the position they then took up in case purchase should be decided on. At the present time the County Council of Middlesex and the councils of several urban and rural districts in the county strongly object to any outside authority having control of the water-supply in any part of the administrative county of Middlesex or to having power to levy rates in the county. The witness objected to purchase, partly because he believed that if a water trust were formed the county of Middlesex would not be sufficiently represented.

The CHAIRMAN asked the witness whether he would object to purchase of the companies by a water trust on which representatives should be sent from the Metropolitan counties, the Thames Conservancy, the Local Government Board, &c., and the witness said that control of the water by such a board would be less objectionable than that by the London County Council. Purchase of the water companies by the State would be still less objectionable. The witness, however, thought that purchase of the water companies' undertakings was not desirable.

In answer to Mr. DE BOCK PORTER the witness said that he did not see any great injustice in the fact that prices charged for water varied in different parts of London. The circumstances of rating were always taken into account in fixing rents.

In answer to the CHAIRMAN the witness said that the Middlesex County Council had received complaints with regard to the water-supply at Willesden. The attention of the companies had been called to the matter by the council and it had been remedied.

In answer to Mr. CRIPPS, Q.C., the witness said that he did not approve of Sir John Lubbock's proposal that water consumers should be directly represented on the boards of directors of the water companies. In his opinion it would weaken the control which the public already exercised over the companies and the power of the new directors would not be great as they would always be in a minority.

Mr. BAGGALLAY, Q.C., on behalf of the water companies, asked some further questions on this point. The witness said that in the case of the Indian railways to which Sir John Lubbock had referred the dividends were guaranteed by the East India Company, that that company had in some cases paid part of the original outlay of the undertaking, that the company had a reversionary interest in the property, and that they had in many cases given the land on which the railways were built.

At the conclusion of the sitting Mr. CRIPPS, Q.C., told Mr. Baggallay that the Commissioners would be glad to

understand what position the water companies took up with regard to the inquiry. Were the companies in favour of control or of purchase or did they wish to be left alone?

MR. BAGGALLAY said that the water companies were opposed to purchase and they did not think much further control was necessary; they were on their defence.

The next meeting of the Commissioners will take place on Monday, June 20th.

THE ANNUAL DINNER OF THE ARMY MEDICAL STAFF.

THE officers of the Army Medical Staff held their annual dinner at the Whitehall Rooms of the Hôtel Métropole on Monday evening last. The attendance was very good—in fact, well beyond the average, notwithstanding the calls made upon the services of army medical officers by the campaigns in India and Egypt. Moreover, the recent concession of the claims of the service to become, as a Royal Army Medical Corps with definite military titles and rank, an integral portion of the army and not a mere appendix, announced by Lord Lansdowne in his speech at the banquet given to the medical profession by the Lord Mayor at the Mansion House on May 4th, infused into the meeting a spirit of enthusiasm pleasant and most satisfactory to witness. At this dinner it has been the custom of recent years strictly to dispense with after-dinner oratory, but at this particular juncture Surgeon-Major-General JAMESON, C.B., the Director-General, wisely, indeed perhaps unavoidably, departed from tradition, and after giving the health of Her Majesty the Queen (which toast, of course, is never omitted) again rose and said that on this special occasion he must depart from their usual custom and congratulate them on the new warrant which was about to be issued and on the fact that they were at length to become an actual part of, and not merely attached to, the army. He added that their thanks were sincerely due to Lord Lansdowne for his statesmanlike grasp of the situation and for his willing recognition of their just claims. He also pointed out that, although it might not be so well-known to many of them, they were also much indebted to Lord Haliburton, as they were to General Sir Evelyn Wood, who was prominent in acknowledging their right to army rank and title in a Royal corps. He then referred to the services rendered by the Royal College of Surgeons of England, the Royal College of Physicians of London, and the sister Colleges of Scotland and Ireland, the British Medical Association (especially referring to the work so admirably carried out by a sub-committee of its Parliamentary Bills Committee under the chairmanship of Dr. W. Gordon of Exeter), the medical press, and the medical profession generally.

Surgeon-Major-General J. B. HAMILTON, in a few well-chosen words proposed the health of the Director-General, emphasising the great value of the influence of Surgeon-Major-General Jameson in securing the desired concessions—reforms for which he (Surgeon-Major-General Hamilton) had himself worked for thirty-nine years, and which he was glad to see granted during the tenure of office of the present Director-General. The toast of "The Guests" was proposed by Sir J. H. KER INNES, K.C.B., and responded to by Sir SAMUEL WILKS, President of the Royal College of Physicians of London, Sir WILLIAM MACCORMAC, President of the Royal College of Surgeons of England, and Dr. GORDON. Space will not permit us to give the various speeches at any length. Suffice it to say that they were without exception terse, to the point, and of a congratulatory nature. If any dissatisfaction exists amongst army medical officers with the proposed new warrant (which we understand will soon be issued) it was not proclaimed at the very successful and pleasant reunion which we thus imperfectly record. A word of acknowledgment is due to the services of Brigade-Surgeon-Lieutenant-Colonel J. Hector, who acted as hon. secretary of the dinner.

The following officers and guests were present:—*Surgeon-Major-Generals* J. Jameson, C.B. (in the chair), A. F. Bradshaw, C.B., Sir C. A. Gordon, K.C.B., J. B. Hamilton, Sir J. H. Ker Innes, K.C.B., H. S. Muir, W. Nash, T. F. O'Dwyer, A. F. Preston, J. B. C. Reade, C.B., P. B. Smith, W. Taylor, J. Warren, and W. M. Webb. *Surgeon-Colonels* H. Comerford, O. Codrington, W. G. Don, J. H. Jeffcoat, J. Maturin, F. W. Moore, J. L. Notter, T. O'Farrell, F. B. Scott, C.M.G., W. Sly, W. F. Stevenson, and F. H. Welsh. *Brigade-Surgeon-Lieutenant-Colonels* W. B. Allin, J. F. Beattie, H. M. Blennerhassett, C.M.G., J. A. Clery, W. Donovan, J. D. Edge, R. Exham, T. J. Gallwey, C.B., W. L. Gubbins, W. Johnston, W. Keir, H. Mackinnon, D.S.O., J. Martin, H. J. O'Brien, C. F. Pollock, J. Powell, S. K. Ray, W. Temple, V.C., and W. J. Wilson. *Surgeon-Lieutenant-Colonels* J. A. Anderson, R. T. Beamish, U. J. Bourke, W. L. Chester, A. Doig, W. C. Gasteen, H. Grier, J. Hector, R. D. Hodson, G. A. Hughes, H. Jagoe, G. T. Langridge, T. Ligertwood, C. Mackinnon, W. F. Ruttledge, B. W. Somerville-Large, J. Tidbury, and T. Wright. *Surgeon-Majors* W. Babtie, C. R. Bartlett, J. Battersby, W. G. Bedford, W. C. Beevor, R. P. Bond, H. Carr, Sir J. R. A. Clark, Bart., A. B. Cottell, J. G. Crofts, W. Dick, H. P. Elkington, J. J. Falvey, C. E. Faunce, R. I. D. Hackett, R. G. Hanley, F. A. Harris, A. P. Hart, J. G. Harwood, R. P. Hetherington, G. D. Hunter, D.S.O., H. E. R. James, R. Jennings, F. J. Lambkin, T. B. Maclean, W. S. Macpherson, W. J. Macnamara, T. A. Marsh, A. J. Moberley, A. H. Morgan, A. Morphew, R. E. Morse, W. H. Murray, E. North, T. J. O'Donnell, G. Sylvester, H. N. Thompson, D. Wardrop, E. M. Wilson, C.M.G., and B. T. Zimmerman. *Surgeon-Captains* T. B. Beach, A. P. Blenkinsop, T. H. F. Clarkson, J. G. Deacon, H. E. Dowse, H. N. Dunn, C. Garner, C. W. R. Healey, M. L. Hughes, J. C. Jameson, O. R. A. Julian, R. E. Kelly, W. B. Leishman, J. MacCarthy, C. J. MacDonald, S. G. Moores, F. J. Morgan, H. J. Parry, C. S. Spong, and H. C. Thurston. *Guests:* the President of the Royal College of Physicians, the President of the Royal College of Surgeons, the Senior Officer Militia Medical Staff Corps, Mr. Vesey Holt, Dr. William Gordon (of Exeter), Mr. Thomas Wakley, jun. (joint editor of THE LANCET), and Dr. Dawson Williams (editor of the *British Medical Journal*).

The Director-General of the Medical Department of the Royal Navy, the President of the Indian Medical Board, and the Honorary Commandant of the Volunteer Medical Staff Corps also accepted invitations but were prevented from being present.

THE ANNUAL DINNER OF THE INDIAN MEDICAL SERVICE.

THE second annual dinner of the officers of the Indian Medical Service was held on Thursday, June 9th, at the Café Monico, Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., being in the chair. As will be seen from the list given below a large number of members of the service and guests were present. It is probable, however, that the gathering would have been still larger but for the fact that, except in the case of those invalided (few of whom were well enough to put in an appearance), furlough from India is closed owing to famine, plague, and war, and as a necessary consequence very few officers on the active list were able to be present. Moreover, the "Delhi" dinner and the College of Surgeons dinner being unfortunately held on the same evening, Field-Marshal Sir Donald Stewart, the respective Presidents of the Royal College of Physicians of London, of the Royal College of Surgeons of England, and of the Royal Medical and Chirurgical Society, and other guests were prevented from attending. Surgeon-General Sir Alexander Christison, Bart., and Surgeon-General Sir Benjamin Simpson, K.C.I.E., who had intended to be present, found themselves at the last moment unavoidably detained.

After the toasts of "The Queen" and "The Royal Family" had been proposed from the chair and loyally honoured the toast of "The Sister Services" was eloquently given by Surgeon-General A. C. C. DE RENZY and responded to by Surgeon-Major-General JAMESON, C.B., Director-General of the Army Medical Department, in a very interesting speech with which we hope to deal at greater length in an early issue.

Surgeon-Major-General JAMESON then proposed the toast of the evening, "The Indian Medical Service."

Sir JOSEPH FAYRER, on behalf of the Indian Medical Service, thanked the Director-General for the kind things he had said about that service, and also for having done him the honour of associating his name with the toast. It was a source of gratification to the Indian Medical Service to have been so spoken of by the Director-General, who had so eloquently referred to their work. He was glad to see that there was such a good attendance at this dinner and that the hopes expressed at the last one that it might be so had been realised, and he trusted that it would continue, for he felt satisfied that this reunion of the older with the younger members was for the interests of the service and would conduce to the prestige and *esprit de corps* which were so desirable. On behalf of his brother officers he accepted all that the Director-General had said, for tradition and history testified to its truth. He had on a former occasion expressed a hope that some one would undertake to write a history of the Indian Medical Department from its foundation and he still hoped that this would be done, for they had a right to be proud of a service which had always been so varied in its character. They knew how intimately it had been associated with the foundation and progress of the Indian Empire and how much it had done to harmonise differences and to reconcile Eastern to Western rule and that it had originated and developed several important departments of the State. They had pride also in remembering that though its members had not been undistinguished as surgeons and physicians, in pure science, in philology, and in diplomacy and administration such men as Falconer, Roxburgh, Cleghorn, H. H. Wilson, Aloys Sprenger, Gabriel Broughton, McNeil, Robertson, and many others in different departments of science had conferred a lustre and character upon the Indian Medical Service which were peculiarly its own. It was needless for him to refer to their great sanitary and medical work, for it was well known to all and was associated with such names as those of Annesley, Twining, Ranald Martin, and others who were still carrying it on and whose researches at present into the remoter causes of disease offer hope of the solution of many difficult problems hitherto not satisfactorily explained. He would not weary them, did his memory allow him, by recapitulating a host of distinguished names such as he presented to them at the last meeting. Whatever might be in store for the Indian Medical Service in its present combined aspect there could be no doubt that its members justly regarded it with pride and affection and aspired not only to sustain its ancient prestige but to maintain that standard at its highest pitch in the future.

The toast of "The Guests" was cordially given by Deputy-Surgeon-General Sir JOSEPH EWART and responded to by Sir R. DOUGLAS POWELL, Bart., M.D., and Dr. SANSOM, President of the Medical Society of London.

Sir J. FAYRER subsequently made a few remarks with reference to the proposed changes in the character of the medical service and said that whilst desiring to express their gratitude to the Director-General and to the other authorities at whose instigation and by whose efforts these changes were effected, and which would in all probability extend to the Indian Medical Service, and expressing his conviction that the alterations made must conduce to the benefit of all concerned, he desired most emphatically to repudiate the idea that the medical officers in any sense wished to ignore their own special duties or to interfere with those of other departments. There was no desire on their part to substitute purely military titles for professional ones, but it was necessary that if they were to form part, as they must inevitably do, of a military system where they have control and command and a position of responsibility and authority to maintain, where they wear the insignia of soldiers and are subject to military discipline and law, they must necessarily have such rank, such titles, such authority, and such position as would enable them to carry on their duties with efficiency. As military officers—and they were proud to think that as medical they were military officers — they could accept no subordinate or inferior position. The old ideas which might have come down from feudal times have long since disappeared; the medical officer in social position, in education, in responsibility, holds just as important a place as does any member of the so-called combatant branch and is an essential part of the army. The distinction between combatant and so-called non-combatant is a well-marked one, and has its special significance in the service more than might at first sight appear, but upon what grounds the latter term is applied to the medical service it is impossible to comprehend. Every campaign, every military expedition bears witness to its absurdity. The changes which are about to be inaugurated will no doubt remedy some of these defects, and though something is still wanting, it would be most ungracious not to accept what has been given in a proper spirit. It is recognised that the Medical Department is an integral portion of the army, that medical officers are not merely glorified camp followers, that they have duties to perform which from the constitution of the army require them to have authority. There is only one recognised authority in the army and that is military rank and title. Relative and comparative rank are without meaning. It is well to discard also the idea, much proclaimed but of little validity, that military titles of colonel, captain, and so on can only be held by the so-called fighting soldiers, the fact being that they merely signify rank held by an officer in any particular department in the army. He concluded by saying that he hoped the concessions made would be received in a proper spirit of gratitude and that out of it all would come benefit alike to the service and to all concerned.

A few impromptu words in praise of the comparatively large numbers of members of the medical services who have won that most distinguished decoration the Victoria Cross were acknowledged by Surgeon-Major J. CRIMMIN, V.C., with a brevity and modesty becoming a medical hero.

The proceedings of a very enjoyable evening were brought to a close with expressions of thanks to Sir Joseph Fayrer for presiding and to Surgeon-Lieutenant-Colonel Freyer for the trouble he had taken in carrying out all the details necessary to ensure the success of the meeting. We venture to offer to him also our own congratulations.

The following is a list of the officers and their guests who were present: *Surgeon-Generals* W. H. Adley, J. Cunningham, C.S.I., A. C. C. De Renzy, Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S. (in the chair), W. Pearl, G. H. Ray, and P. W. Sutherland. *Surgeon-Major-Generals* W. R. Hooper, C.S.I., and W. R. Rice, C.S.I. *Deputy Surgeon-Generals* Sir J. Ewart, J. C. Penny, B. Williamson, and W. A. S. Wynne. *Surgeon-Colonels* W. Cates, C. Costello, D. E. Hughes, A. Porter, and W. H. Roberts. *Bridage-Surgeons* J. E. I. Aitchison, C.I.E., J. Barter, E. F. Drake-Brockman, G. Grant, R. Gray, I. B. Lyon, C.I.E., C. W. MacRury, G. Massy, G. D. Riddell, J. B. Scriven, T. G. Skardon, and G. S. Sutherland. *Surgeon-Lieutenant-Colonels* D. Baker, D. F. Barry, J. W. Clarkson, P. J. Freyer, J. O'Neil, A. J. Sturmer, and A. H. Williams. *Surgeon-Majors* P. F. Bellew, W. Caldwell, J. Crimmin, V.C., A. M. Crofts, T. Duka, D. F. Dymott, A. S. Faulkner, G. M. Giles, W. Harvey, J. Ince, A. W. D. Leahy, C. P. Lukis, R. W. S. Lyons, C. Manifold, and M. O'Dwyer. *Surgeon-Captains* D. C. Johnston and H. W. G. Macleod. *Surgeon-Lieutenant* E. L. Perry. *Guests:* Sir Richard Douglas Powell, Bart.; Surgeon-Major-General Jameson, C.B. (Director-General, Army Medical Department), Dr. Sansom (President of the Medical Society of London), Mr. Austin Low, Mr. Thomas Wakley, jun. (joint editor of THE LANCET), Dr. Dawson Williams (editor of the *British Medical Journal*), and Mr. Percy Dunn (editor of the *Medical Press and Circular*).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on June 9th, the President, Sir WILLIAM MACCORMAC, Bart., being in the chair.

As recommended by the committee appointed for the purpose it was resolved that Fellows of the College should be entitled to wear a special gown on all ceremonial occasions. The gown is to be a black stuff gown with crimson satin facings of a regulation shape and shade of crimson. A specimen Fellow's gown, made by Messrs. Ede and Son of Chancery-lane, was submitted to the Council. It was further resolved that Fellows of the College who are also graduates of any University may use the gowns representing their degrees on the occasions when the Fellow's gown would otherwise be worn.

The following report from the Laboratories' Committee was approved:—

1. *The work on diphtheria for the Metropolitan Asylums Board.*—The preparation of antitoxic serum. The director reported that the new stables have been completed and taken over and that they are admirably suited for the purpose for which they are required. Since March 4th 6000 doses of antitoxic serum, each containing 2000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board have been supplied and all the demands fully met. During this period 12,000,000 units have been supplied, against an average of 12,252,000 for the preceding two quarters. During this period the average strength of the antitoxin has been so far raised that it has been possible to send out the 2000 units in quantities of from 6·5 to 7·5 c.c.

2. *Researches in connexion with the grant from the Goldsmiths' Company.*—Dr. T. G. Brodie and Dr. Cartwright Wood have continued their investigations and have obtained some most satisfactory results. In fulfilment of one of the conditions of the grant from the Goldsmiths' Company, that antitoxin should, if possible, be supplied for use amongst the poorer classes of the community, the director has continued the supply of antitoxic serum to various general and children's hospitals in London during the past quarter, as well as to certain medical practitioners for cases fulfilling the necessary conditions.

The following examiners were appointed:—

Elementary Biology.—Peyton T. B. Beale, Frederick Gymer Parsons, Thomas William Shore, and Thomas George Stevens.

Anatomy under the Examining Board.—Stanley Boyd, William Bruce Clarke, George Henry Makins, and Arthur Robinson.

Physiology under the Examining Board.—John Rose Bradford, Leonard Erskine Hill, and Walter George Spencer.

Anatomy for the Fellowship.—William Frederick Haslam, James Ernest Lane, Charles Barrett Lockwood, and Frederick Gymer Parsons.

Physiology for the Fellowship.—Thomas Grigor Brodie, D'Arcy Power, Ernest Henry Starling, and William Henry Thompson.

Midwifery under the Examining Board.—William Radford Dakin, Arthur Hamilton Nicholson Lewers, Amand Routh, and Herbert Ritchie Spencer.

Public Health.—Part I., Arthur Pearson Luff; Part II., Edward Seaton.

A letter was read from Mr. R. B. Anderson, stating that he intends to take proceedings to establish his right and that of all Fellows and Members to exercise the franchise conferred on them by the Medical Acts for the purpose of choosing a member of the General Medical Council, and asking whether the Council will treat such proceedings as a friendly suit and pay the costs of both sides with the College funds. It was resolved that Mr. Anderson should be informed that the Council are not prepared to accede to the propositions made by him in his letter.

The PRESIDENT reported that he had accepted on behalf of the Council an oil portrait, by Benjamin Robert Haydon, of Thomas Alcock, M.R.C.S. Eng., father of the late Sir Rutherford Alcock, K.C.B., presented to the College by Lady Alcock.—The best thanks of the Council were voted to Lady Alcock for her present.

The PRESIDENT stated that the vacancy on the Court of Examiners occasioned by the expiration of Mr. R. J. Godlee's period of office on July 7th next, and the vacancy on the Board of Examiners in Dental Surgery occasioned by the expiration on the same date of Mr. J. H. Mummery's period of office, would be filled up at the quarterly meeting of the Council on July 14th. The President also stated that Mr. Godlee and Mr. Mummery were candidates for re-election.

THE BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

THE annual conversazione of this society was held on June 8th, at Limmer's Hotel, Conduit-street, W., Dr. W. V. SNOW presided, and an address was delivered by Dr. G. Vivian Poore.

Dr. POORE said the subject on which he proposed to make some remarks, the Circumstances which Influence or tend to Influence the Effectiveness of Climatic Treatment, was one of importance to the general physician. Medical education should be practical and the knowledge obtained from books should be supplemented in other ways. This especially applied to the question of climatic treatment. Every day he regretted that he had never been to the tropics or to any of our southern colonies. He felt constantly that his knowledge of these places obtained from reading was not the same thing as the knowledge which residence would give. The first circumstance which influenced for good climatic treatment was the degree of practical knowledge possessed by the prescriber. Climatic treatment was often prescribed by people who had never visited the climate, and the prescription was made more or less in ignorance. Again, it was not sufficient to prescribe climate in a wide sense, as, say, the climate of the South of France or of Canada. Accurate local knowledge was equally important. As an example, if we went into a garden with a wall running east and west we should find on the south side, perhaps, warmth and sunshine and ripe peaches, and hear the hum of insects; but if we went to the north side of the same wall we should find it in shadow with a chilling atmosphere, hard pears and unripe cherries, and fustiness coming from the dank and damp earth. When we remembered that these two climates were only 9 in. apart we should see that attention to detail was very important. The physician should, then, have local as well as general knowledge in prescribing. Personally he (Dr. Poore) was very particular never to recommend a place unless he had been there. One of the good things which this society would bring about was the furnishing of accurate details about the various climates. Failure to accommodate the recommendations of the physician to the convenience of the patient was another point which should be considered, as was also the adaptability of the patient to his surroundings. To send a fashionable patient to a dull place or a dull person to a fashionable place was not much good. We should remember that "The labour we delight in physics pain." Overcrowding was another point which should be considered. Directly a place became famous it ran this risk and as the place became popular it deteriorated in its health-giving properties. The house in which the patient resided should also receive attention. When we sent a person abroad in the winter we should remember that he would probably spend twice as much time indoors as out of doors, and if the house should be unwholesome the good done in the open air would be counteracted by the harm done in the house. Modern hotels were not the place for the permanent residence of chronic invalids. Proper ventilation could not be obtained in them as at present constructed. An hotel for a chronic invalid should be constructed on the plan of an infectious hospital, but this did not mean that it should resemble an institution. It was getting very much the custom now to build separate cottages for invalids around some central common rooms. The colleges at the Universities of Oxford and Cambridge formed excellent models for hotels. A little more money should be spent on the land and a little less on decorations which prevented adequate cleaning and harboured dust. Inadequate food was another thing which should be considered. The food was often inadequate; it ought to be abundant, simple, and wholesome. Then it was very undesirable that people should be herded together too much, and this especially applied to the phthisical. Dr. Poore here gave an account of his residence for some time in a "cure-house" for tuberculosis, and showed how depressing it was to the patient to see others come down to breakfast without appetite and play with their food and also to listen to the conversation, which was equally depressing. Perhaps the most important duty of a physician prescribing climatic treatment was the selection of a medical man to take charge of the patient while abroad. In this country it was easy enough to form some opinion of the medical man's qualifications by means of the directory, &c., but in foreign countries it was exceedingly difficult. Health resorts abroad, too, were the happy hunting grounds of irregular practitioners of every kind. This touched the question of reciprocity in medical practice and it was unfortunately true that increased opposition was being made to the residence of English practitioners in foreign places. Even if this question of reciprocity were not settled with tolerable advantage to English practitioners it would do nothing but good in the end, for it would simply lead to the development of our home and colonial health resorts. The British Empire contained every description of climate. Egypt was being utilised, South Africa was beginning to be heard of, and we should probably very soon hear of Canadian health resorts. This little opposition on the part of the

foreigner then would do us nothing else but good. To sum up, there was the want of knowledge, especially local knowledge, on the part of the person prescribing the treatment, the want of means to really adequately carry out the advice given, the failure to adapt the place to the patient or the patient to the place, overcrowding, the ill-construction of hotels or similar establishments and the crowding of many people in one house, sometimes inadequate feeding, the herding of people together and the standing of the medical man into whose care the patient was entrusted.

During the evening there was an exhibition of Meteorological Instruments by Messrs. NEGRETTI and ZAMBRA and Dr. W. S. HEDLEY showed a Stereoscope for exhibiting x ray pictures in relief. Music and refreshment added to the enjoyment of the conversazione.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Exeter Urban District.—Until quite recently the condition of Exeter *quâ* sanitation was practically unknown save to the few officials immediately concerned with it. The medical officer of health is not under the provisions of the Order of the Local Government Board and hence he has not submitted an annual report. Certain visits of Local Government Board Inspectors seem, however, to have had a good effect and Exeter is now falling into line and taking the position which its population of 38,000 justifies. Its sanitary administration is, however, somewhat unique. The medical officer of health, who received for several years but £25 per annum, together with £50 for part attendance at the isolation hospital, has recently been paid an additional £50 for making an annual report. It has, however, to be noted that out of this latter sum he has to pay £20 to the inspector of nuisances for his share in the annual report. Much, however, of the work is done by the district medical officers, each of whom, under the title of assistant medical officer of health and with a salary of £75, supervises the sanitary condition of his Poor-law district and attends in turn at the isolation hospital. None of these gentlemen possessed at the time of Dr. Fletcher's inspection of the district the diploma of public health and it may be that the appointment of a whole time officer would have its advantages. There does not seem about the sanitary administration of Exeter that centralisation of matters in one medical officer of health which is so highly desirable. Dr. John Woodman speaks highly of the "septic tank" method of sewage disposal which was introduced by Mr. Donald Cameron, the Exeter surveyor, and which has been in operation for the sewage of a small portion of the city for a considerable time. Dr. Woodman has little doubt but that the Royal Commission on Sewage Disposal under the chairmanship of Lord Iddesleigh, who, by the way, resides near Exeter, will report favourably on the scheme. The water-supply of the city is derived from the Exe, into which above the intake there passes certain treated and untreated sewage. Under these circumstances it is matter for congratulation that an improvement in the plant for filtration is to be effected.

Surrey County District.—The annual report of this administrative county appears, as usual, early, and Dr. Edward Seaton, the medical officer of health, is to be congratulated on being able to issue the volume so soon. There are obvious advantages in the appearance of a report of this class at a time when the events to which it relates are fresh in men's minds, provided, that is, that the report does not suffer curtailment as a result of speedy issue. The volume before us, which runs to 70 pages, contains not only the annual report properly so called but also—and indeed no small portion of the pamphlet is occupied thereby—a report of a conference on water-supply which was held on March 21st of this year, and some remarks by Dr. Seaton on certain biological methods of sewage disposal. The administrative county of Surrey has, many persons will probably learn with surprise, a population of not yet half a million. Its general death-rate during 1897 was but 12·2 per 1000, the rates for the urban and rural districts being nearly identical. The infantile mortality of the rural districts was 100, and in the urban district 119, per 1000 registered births; the zymotic death-rate was 1·29 per 1000. This, the statistical, portion of the report is not as full as is perhaps desirable in a county report—for instance, we look in vain for the population of each district in the county and for the separate rates for diseases such as scarlet fever and diphtheria. This fact rather detracts from the value of the report for reference purposes, and it would be useful if in his next annual report Dr. Seaton could see his way to repair the omission; otherwise we fear an interesting series of figures will be interrupted. In previous reports Dr. Seaton has entered more fully into the statistics of the county and has furnished the usual Table A together with a summary of the notification returns, referring to Table A both in the index and in the text. An interesting part of the volume before us is that which relates to the conference of medical officers of health to which reference has already been made. There would seem to be very fair promise that before long progress may be made in the direction of a better control of the water-supplies in the administrative county. The resolutions which were passed at the meeting had reference to such matters as the necessity for the periodical examination of, and report upon, the water-supplies, the examination in certain cases to be made by the district and county officials in conjunction; to the desirability of every district council being possessed of accurate information as to the sources of supply of every house in the district, and to the importance of water-softening processes being applied where necessary. It is to be hoped that these expressions of opinion elicited by Dr. Seaton upon these elementary but nevertheless highly essential points may soon have an outcome in practice. With respect to the prevalence of enteric fever in the county a map is furnished, constructed after the manner of those which appear in the last report of the medical officer of the Local Government Board, showing the incidence of enteric fever (a three years' average only) on the several districts of the county; but, as Dr. Seaton himself observes, three years is too short a period for any reliable deductions. Dr. Seaton's explanation to his sanitary committee of biological methods of sewage purification should prove useful to them and to others.

West Lancashire Rural District.—Dr. Herbert Peck furnishes in his current annual report a plan of the existing and proposed water mains within this district. A plan of this description cannot fail to be of value in connexion with inquiries relative to water-borne disease and it is well that it should be easily accessible for reference. The mains laid down during 1896–97 are distinguished from those previously laid. It would have added to the utility of the map could the position of the hydrants have been shown.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6982 births and 3643 deaths were registered during the week ending June 11th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 16·4 to 16·8 per 1000, further rose last week to 16·9. In London the rate was 16·3 per 1000, while it averaged 17·3 in the thirty-two provincial towns. The lowest rates in these towns were 8·4 in Croydon, 10·3 in Norwich, 11·1 in Brighton, and 12·2 in Hull; the highest rates were 20·3 in Manchester, 20·4 in Liverpool, 23·6 in Sunderland, and 24·1 in Newcastle-upon-Tyne. The 3643 deaths included 380 which were referred to the principal zymotic diseases, against 400 and 389 in the two preceding weeks; of these, 131 resulted from measles, 103 from whooping-cough, 57 from diarrhœa, 42 from diphtheria, 27 from scarlet fever, and 20 from "fever" (principally enteric). No death from any of these diseases was recorded last week in Croydon or in Burnley; in the other towns they caused the lowest death-rates in Portsmouth, Swansea, and Bolton, and the highest rates in Liverpool, Manchester, Salford, and Gateshead. The greatest mortality from measles occurred in Bradford, Salford, and Newcastle-upon-Tyne; from scarlet fever in Gateshead; and from whooping-cough in Salford, Gateshead, and Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 42 deaths from diphtheria

included 23 in London, 3 in Cardiff, 3 in Birmingham, and 2 each in West Ham, Sheffield, and Hull. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and only one case of small-pox was under treatment in the Metropolitan Asylums Hospitals on Saturday last, June 11th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 2169, against 2241, 2195, and 2207 on the three preceding Saturdays; 206 new cases were admitted during the week, against 223, 256, and 220 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 216 and 226 in the two preceding weeks, declined to 212 last week, and were 32 below the corrected average. The causes of 34, or 0·9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Leicester, Nottingham, Manchester, Leeds, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the four preceding weeks from 19·8 to 23·0 per 1000, declined again to 21·3 during the week ending June 11th, but exceeded by 4·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·6 in Leith and 13·3 in Aberdeen to 23·3 in Glasgow and 24·0 in Dundee. The 642 deaths in these towns included 43 which were referred to whooping-cough, 42 to measles, 18 to diarrhœa, 8 to "fever," 4 to scarlet fever, and 1 to diphtheria. In all, 116 deaths resulted from these principal zymotic diseases, against 91 and 112 in the two preceding weeks. These 116 deaths were equal to an annual rate of 3·8 per 1000, which was 2·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 31 and 43 in the two preceding weeks, were again 43 last week, and included 27 in Glasgow, 7 in Paisley, and 4 in Dundee. The deaths from measles, which had increased from 27 to 34 in the three preceding weeks, further rose to 42 last week, of which 19 occurred in Glasgow, 13 in Dundee, 5 in Edinburgh, and 3 in Paisley. The deaths referred to different forms of "fever," which had been 13 and 6 in the two preceding weeks, rose again to 8 last week, of which 4 occurred in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 125 and 133 in the two preceding weeks, declined to 109 last week, and were within one of the number in the corresponding period of last year. The causes of 33, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 24·0 to 19·7 per 1000, rose again to 25·1 during the week ending June 11th. During the four weeks ending on Saturday last the death-rate in the city has averaged 23·0 per 1000, the rate during the same period being 16·0 in London and 20·6 in Edinburgh. The 168 deaths registered in Dublin during the week under notice showed an increase of 36 upon the number in the preceding week, and included 4 which were referred to the principal zymotic diseases, against 14 and 10 in the two preceding weeks; of these, 2 resulted from whooping-cough, 1 from "fever," and 1 from diarrhœa, and not one from small-pox, measles, scarlet fever, or diphtheria. These 4 deaths were equal to an annual rate of 0·6 per 1000, the zymotic death-rate during the same period being 2·1 in London and 2·6 in Edinburgh. The deaths referred to whooping-cough, which had increased from 1 to 5 in the three preceding weeks, fell again to 2 last week. The mortality from "fever" showed a further decline from that recorded in recent weeks. The 168 deaths in Dublin last week included 27 of infants under one year of age and 52 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in the preceding week. Six inquest cases and 2 deaths from violence were registered; and 70, or more than a third, of the deaths occurred in public institutions. The causes of 6, or nearly 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1898.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·2 per 1000 of the population, estimated at 4,504,766 persons in the middle of this year. In the three preceding months the rates had been 7·8, 7·4, and 7·1 per 1000 respectively. No notifiable case of infectious disease was recorded during May in St. Olave Southwark; in the other sanitary areas they caused the lowest rates in St. Marylebone, St. Pancras, St. Giles, St. Martin-in-the-Fields, Strand, Holborn, Woolwich, and Plumstead; and the highest rates in Fulham, Chelsea, Hampstead, Hackney, City of London, St. George-in-the-East, Newington, and Battersea. Only 1 case of small-pox was notified in London during May, against 3 and 4 in the two preceding months; this case occurred in Bermondsey sanitary area. No small-pox patients were under treatment during last month in any of the Metropolitan Asylums Hospitals. The prevalence of scarlet fever in London almost corresponded with that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Hampstead, Stoke Newington, Hackney, Clerkenwell, St. George Southwark, Newington, and Battersea. The Metropolitan Asylums Hospitals contained 2147 scarlet fever patients at the end of May, against 2640, 2358, and 2270 at the end of the three preceding months; the weekly admissions averaged 223, against 214, 208, and 218 in the three preceding months. The prevalence of diphtheria in London during May showed an increase upon that recorded in the preceding month; this disease was proportionately most prevalent in Chelsea, Westminster, Hackney, St. Luke, St. Saviour Southwark, and Lewisham sanitary areas. There were 917 diphtheria patients under treatment in the Metropolitan Asylums Hospitals at the end of May, against 1042, 1009, and 923 at the end of the three preceding months; the weekly admissions averaged 134, against 140, 129, and 111 in the three preceding months. The prevalence of enteric fever in London during May showed a further marked decline from that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in St. Martin-in-the-Fields and St. George-in-the-East. The Metropolitan Asylums Hospitals contained 54 enteric fever patients at the end of May, against 84, 64, and 59 at the end of the three preceding months; the weekly admissions averaged 8, against 12 in each of the two preceding months. Erysipelas was proportionally most prevalent in Hackney, St. Luke, Bethnal Green, Whitechapel, and Rotherhithe sanitary areas. The 12 cases of puerperal fever notified in London during May showed a marked decline from those recorded in any recent month, and included 2 in Whitechapel and 2 in Wandsworth sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 28th, the deaths of 5419 persons belonging to London were registered, equal to an annual rate of 15·7 per 1000, against 21·4, 20·8, and 18·1 in the three preceding months. The lowest death-rates in the various sanitary areas were 9·4 in Hampstead, 12·7 in Battersea, 12·8 in Stoke Newington, 13·2 in Hackney, 13·3 in Camberwell, and 13·5 in St. James Westminster; the highest rates were 20·8 in Holborn, 21·1 in City of London and in Woolwich, 21·3 in St. George-in-the-East and in St. George Southwark, 21·8 in Strand, 23·2 in St. Luke, and 26·6 in St. Olave Southwark. During the four weeks of May 745 deaths were referred to the principal zymotic diseases in London; of these, 329 resulted from measles, 204 from whooping-cough, 104 from diphtheria, 47 from diarrhœa, 43 from scarlet fever, 18 from enteric fever, and not one either from small-pox, typhus, or any ill-defined form of continued fever. These 745 deaths were equal to an annual rate of 2·2 per

(*Specially compiled for* THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1898.	Notified Cases of Infectious Diseases.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,504,766	1	1223	811	1	93	6	12	349	1	2497	7·2	—	329	43	104	204	—	18	—	47	745	2·2	5419	15·7	127
West Districts.																										
Paddington	127,480	—	26	21	—	1	—	—	7	—	55	5·6	—	15	—	2	1	—	—	—	1	19	1·9	138	14·1	134
Kensington	172,174	—	39	28	—	9	1	—	14	—	91	6·9	—	18	5	3	6	—	1	—	1	34	2·6	212	16·0	118
Hammersmith	107,370	—	33	10	—	3	1	—	2	—	49	6·0	—	13	1	—	2	—	—	—	—	16	1·9	127	15·4	127
Fulham	125,275	—	60	29	—	2	—	1	6	—	98	10·2	—	1	3	3	10	—	1	—	3	21	2·2	153	15·9	131
Chelsea	96,713	—	22	38	—	1	1	—	6	—	68	9·2	—	19	2	5	2	—	—	—	1	29	3·9	140	18·9	175
St. George Hanover-square	80,608	—	25	8	—	1	—	—	4	—	38	6·1	—	1	—	—	3	—	1	—	1	6	1·0	85	13·7	84
Westminster	52,574	—	10	22	—	1	—	—	3	—	36	8·9	—	6	—	2	3	—	—	—	—	11	2·7	64	16·4	158
St. James Westminster	22,200	—	4	4	—	1	—	—	2	—	11	6·5	—	1	—	—	—	—	—	—	—	1	0·6	23	13·5	111
North Districts.																										
Marylebone	140,483	—	15	21	—	6	—	—	13	—	55	5·1	—	40	—	2	3	—	2	—	2	49	4·5	199	18·5	160
Hampstead	78,755	—	41	9	—	2	—	—	6	—	58	9·6	—	—	—	3	1	—	—	—	1	5	0·8	57	9·4	72
St. Pancras	243,416	—	51	25	—	5	—	1	21	—	103	5·5	—	14	—	6	15	—	1	—	—	36	1·9	308	16·5	118
Islington	344,616	—	97	38	—	2	—	1	23	—	161	6·1	—	20	2	6	16	—	1	—	2	47	1·8	371	14·0	103
Stoke Newington	34,660	—	13	4	—	—	—	—	1	—	18	6·8	—	—	1	—	1	—	—	—	—	2	0·8	34	12·8	129
Hackney	219,630	—	91	79	—	2	—	—	30	—	202	12·0	—	10	4	5	7	—	1	—	1	28	1·7	223	13·2	116
Central Districts.																										
St. Giles	37,519	—	4	2	—	2	—	—	3	—	11	3·8	—	6	—	—	1	—	1	—	—	8	2·8	56	19·5	147
St. Martin-in-the-Fields	12,424	—	1	1	—	3	—	—	—	—	5	5·2	—	—	—	—	—	—	—	—	—	—	—	16	16·8	83
Strand	23,284	—	3	1	—	—	—	—	—	—	4	2·2	—	1	—	—	—	—	—	—	1	2	1·1	39	21·8	118
Holborn	30,056	—	5	4	—	—	—	—	2	—	11	4·8	—	5	1	—	1	—	—	—	—	7	3·0	48	20·8	116
Clerkenwell	66,120	—	24	14	—	—	—	—	3	—	41	8·1	—	7	1	1	3	—	—	—	1	13	2·6	102	20·1	186
St. Luke	41,076	—	10	11	—	—	—	—	5	—	26	8·3	—	3	1	6	1	—	—	—	1	12	3·8	73	23·2	137
City of London	29,088	—	8	6	—	—	—	—	3	—	17	7·6	—	2	—	1	—	—	—	—	—	3	1·5	47	21·1	171
East Districts.																										
Shoreditch	121,485	—	39	13	—	3	—	—	13	—	68	7·3	—	3	4	3	8	—	—	—	3	21	2·3	151	16·2	124
Bethnal Green	129,027	—	21	25	—	5	—	—	15	—	66	6·7	—	10	1	4	10	—	2	—	2	29	2·9	180	18·2	136
Whitechapel	80,559	—	26	13	—	1	—	2	10	—	52	8·4	—	3	—	3	2	—	—	—	2	10	1·6	90	14·6	90
St. George-in-the-East	48,241	—	13	11	—	8	—	—	3	—	35	9·4	—	2	—	2	3	—	—	—	1	8	2·2	79	21·3	129
Limehouse	58,661	—	15	7	—	2	—	—	5	—	29	6·4	—	8	—	2	3	—	—	—	1	14	3·1	90	20·0	175
Mile End Old Town	112,528	—	33	18	—	—	—	1	12	—	64	7·4	—	7	—	1	11	—	—	—	—	19	2·2	138	16·0	125
Poplar	170,220	—	40	36	—	2	2	—	17	—	97	7·4	—	6	3	7	6	—	—	—	3	25	1·9	220	16·8	124
South Districts.																										
St. Saviour Southwark	24,562	—	4	7	—	—	—	—	3	—	14	7·4	—	1	—	1	4	—	—	—	—	6	3·2	34	18·0	240
St. George Southwark	60,466	—	22	9	—	1	1	—	3	—	36	7·8	—	1	4	1	4	—	—	—	1	11	2·4	99	21·3	151
Newington	123,183	—	60	24	—	1	—	—	10	—	95	9·9	—	4	2	3	—	—	—	—	3	12	1·3	141	14·9	84
St. Olave Southwark	11,288	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3	—	—	—	—	4	4·6	23	25·6	208
Bermondsey	85,738	1	27	5	—	—	—	—	6	—	39	5·9	—	5	1	—	5	—	—	—	1	12	1·8	109	16·6	153
Rotherhithe	40,849	—	9	1	—	—	—	—	9	—	19	6·1	—	7	1	—	—	—	—	—	—	8	2·6	65	20·7	178
Lambeth	304,073	—	78	41	—	7	—	1	18	—	145	6·2	—	13	1	4	22	—	—	—	1	41	1·8	343	14·7	130
Battersea	171,921	—	69	42	—	4	—	—	7	—	122	9·3	—	13	—	9	4	—	—	—	—	26	2·0	168	12·7	130
Wandsworth	202,526	—	64	35	—	3	—	2	21	—	115	7·4	—	11	1	4	13	—	1	—	4	34	2·2	211	13·6	102
Camberwell	261,189	—	56	58	—	6	—	—	18	—	138	6·9	—	11	—	5	8	—	2	—	2	28	1·4	266	13·3	115
Greenwich	180,441	—	38	35	1	8	—	1	17	—	100	7·2	—	18	1	1	14	—	4	—	3	41	3·0	2 9	15·8	136
Lewisham (excluding Penge)	88,562	—	10	36	—	—	—	—	4	—	50	7·4	—	7	1	6	2	—	—	—	2	18	2·6	94	13·8	134
Woolwich...	41,478	—	4	6	—	—	—	1	2	—	13	4·1	—	2	—	2	3	—	—	—	—	7	2·2	67	21·1	169
Lee	39,717	—	12	8	—	—	—	—	—	—	20	6·6	—	1	1	—	2	—	—	—	1	5	1·6	42	13·8	213
Plumstead	62,531	—	11	6	—	—	—	1	2	1	21	4·4	—	13	1	1	1	—	—	—	1	17	3·5	73	15 2	92
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 21 cases of membranous croup.

† Including deaths from membranous croup.

1000; no fatal case of any of these diseases was registered during the month under notice in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, St. James Westminster, Hampstead, Stoke Newington, Strand, City of London, and Newington; and the highest rates in Chelsea, St. Marylebone, St. Luke, Limehouse, St. Saviour Southwark, St. Olave Southwark, and Plumstead. The 329 fatal cases of measles were 37 above the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Chelsea, Marylebone, St. Giles, Holborn, Limehouse, Rotherhithe, and Plumstead sanitary areas. The 43 deaths from scarlet fever were 23 below the corrected average number; the mortality from this disease was highest in Shoreditch and St. George Southwark sanitary areas. The 104 fatal cases of diphtheria were 39 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Hampstead, St. Luke, Poplar, and Lewisham. The 204 deaths from whooping-cough were 39 below the corrected average number; the mortality from this disease was highest in Fulham, Bethnal Green, Mile End Old Town, St. Saviour Southwark, and St. Olave Southwark sanitary areas. The 18 fatal cases of enteric fever were 17 below the corrected average number; the mortality from this disease last month showed no marked excess in any of the sanitary areas. The 47 deaths from diarrhœa were 16 below the corrected average. In conclusion, it may be stated that the aggregate mortality in London last month from these principal zymotic diseases was 12 per cent. below the average, the deaths from each of the diseases except measles being below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was last month equal to 127 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, Hampstead, St. Martin-in-the-Fields, Whitechapel, Newington, and Plumstead; and the highest rates in Chelsea, Clerkenwell, Limehouse, St. Saviour Southwark, St. Olave Southwark, Rotherhithe, and Lee.

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEON FRANCIS AUSTEN JEANS has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant O'Gorman is transferred from Aldershot to Dublin for duty. Surgeon-Major Forman is posted to the Station Hospital, Western Heights, Dover, for duty. Surgeon-Major Pike has assumed Medical Charge of the District Staff, Army Pay Department, Fire Brigade, Military Police, Model School, women and children, and Hospital for Soldiers' Wives, Aldershot. Surgeon-Major McCormack and Surgeon-Captain Kelly hold themselves in readiness for service in Egypt next month. Surgeon-Captain Beach has joined at Woolwich for duty. Surgeon-Captain Thomson is held in readiness for service in Egypt.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain Hore (Bengal) is appointed to officiate as Residency Surgeon in the Persian Gulf until further orders. Surgeon-Captain Stevens is appointed Resident Medical Officer of the Medical College Hospital at Calcutta, and is also appointed to act as Professor of Physiology, Medical College Hospital, Calcutta, during the absence on furlough of Brigade-Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain J. W. T. Gilbert to be Surgeon-Major.

VOLUNTEER CORPS.

Rifle: 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant W. H. Webb to be Surgeon-Captain. 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: The surname of the medical officer hitherto described as Brigade-Surgeon-Lieutenant-Colonel Shrimpshire is Skrimshire. 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Lieutenant J. McWatt, M.B. Edin., resigns his commission. 6th Volunteer Battalion, the Manchester Regiment: Surgeon-Major T. Fort to be Surgeon-Lieutenant-Colonel.

THE SPANISH-AMERICAN WAR.

We said quite recently that the war was fast approaching its most critical stage and that everything depended upon the nature of the measures adopted at the present time whether it was soon to be within measurable distance of its end or not. There has since then been much to chronicle, but there is the same perplexing difficulty in trying to separate fact from fiction or mere rumour in the intelligence which has been received. The exaggerated accounts, too, of the fighting, when compared with the results, are often ludicrous. We think the following may, however, be taken as representing a fairly reliable, or highly probable, view of the position. Admiral Cervera's fleet is at Santiago. Lieutenant Hobson, belonging to the Construction Department of the United States Navy, and his crew on board the *Merrimac*, by a very bold and daring act of bravery executed with rare skill and coolness, have succeeded in sinking that vessel pretty fairly athwart the throat of the channel to the harbour—in other words, the Spanish fleet is "bottled up" there. We are glad to notice that the Americans have fully recognised, by the way, the chivalric generosity displayed by Admiral Cervera on the occasion in question, which may hereafter prove very useful to Spain when the terms of peace have to be settled. A large invading force is reported to have left America for Cuba for the capture of Santiago. It seems certain, moreover, that Santiago has been again bombarded by the American fleet. In the Philippines it is alleged that the insurgents have nearly surrounded Manila and have on several occasions defeated the Spanish troops in their encounters with them. As regards the Cadiz squadron the news is as conflicting and contradictory as it was a short time ago in regard to Admiral Cervera's fleet, but it is most probable that the Cadiz fleet is still there or somewhere in the vicinity. The most curious thing about the war, which was long foreseen as probable, is that neither side was prepared for it and that Spain in particular seems to have done little or nothing with the forces—naval or military—at her disposal. The description of the hospital arrangements at Key West (published in the *Standard* of June 7th from its special correspondent with the army at Tampa) does not give a favourable account of them. The choice of Key West was no doubt forced upon the Americans from its geographical position, but it is in most respects a very unsuitable climate and locality for the accommodation of sick and wounded soldiers, and much remains to be done before even the best that can be practically made of it has been attained. According to the descriptions that have been given of the United States hospital ship *Solace*, commissioned with Admiral Sampson's fleet, it must be a very fine floating hospital. It flies a Geneva Cross flag and carries no arms or weapons of war. It has a number of launches for rescuing the crews of vessels sunk in action. The equipment of the *Solace* is very elaborate and complete: lifts, ice-making machinery, operating rooms, pharmacy, means of disinfection, and all the latest surgical and scientific appliances. The medical and nursing staff on board is upon an ample scale.

APOTHECARIES IN THE FRENCH ARMY.

The new Cadre of the French Army Medical Service provides for 115 apothecaries, in addition to the 1457 medical officers whose grading was recently mentioned in this column.[1] The apothecaries are graded as follows: Inspector, 1; principal apothecaries of the first and second class, 4 and 5 respectively; apothecary-majors of the first and second class, 30 and 45 respectively; assistant apothecary-majors of the first and second class, 20 and 10 respectively. The next examination for admission to the service, whether as medical officer or apothecary, is to take place next December. All candidates must be born or naturalised Frenchmen, not less than twenty-six years of age, and possessing diplomas as doctors of medicine or first-class apothecaries. They must also produce certificates of aptitude for military service granted by officers of not lower rank than surgeon-major, and be prepared to sign an agreement to serve with the colours for at least six years after gaining their first step.

A MEDICAL HERO.

The Cross of the Legion of Honour has been conferred upon Dr. Abbatucci, a French naval surgeon, for gallant conduct under circumstances which recall the brave conduct in the New Zealand war of two officers of the Army Medical

[1] THE LANCET, May 7th, 1898, p. 1283.

Department — Surgeon-General Mouat, V.C., and the late Surgeon-General (afterwards Director-General) Mackinnon.[2] The description of Dr. Abbatucci's exploit in the *Journal Officiel* runs as follows: "In the affair at Diagouron (Soudan) he not only distinguished himself by attending to the wounded under fire, but also took a prominent part in repelling the enemy, with his own hands keeping up a well-directed rifle fire in order to encourage by his example a section of *tirailleurs*, and subsequently doing gunner's duty for an officer of artillery whose men for the most part were *hors de combat*."

THE COMMANDER-IN-CHIEF.

The rumour that Lord Wolseley had been offered the appointment of the Governor-Generalship of Canada and that he might possibly be induced to accept a less arduous post than that which he at present holds seems to have obtained some credence. Nothing definite is really known, however, as to the truth or otherwise of this rumour. It is very naturally surmised that in case of Lord Wolseley's retirement he would be succeeded in his present post by Lord Roberts and that the Duke of Connaught would command the Forces in Ireland and Sir Redvers Buller would take over the Aldershot command. It was also rumoured some time ago that Lord Wolseley's health was not so good as it has hitherto always been. We should be sorry if this were so, but from his lordship's frequent appearances in public of late it certainly would not seem to be the case.

THE PARKES MEMORIAL PRIZE.

This prize, which was founded in memory of the late Professor Parkes, is awarded triennially and consists of 75 guineas in money and a bronze medal. The competition is open to all medical officers of the Army, Navy, and Indian services of executive rank on full pay. The assessors, Dr. Arthur Ransome, Dr. James Niven, and Professor Sheridan Delépine, have awarded the prize this year to Surgeon-Captain Fred. Smith of the Army Medical Staff, while stating that Staff-Surgeon W. W. Pugh, R.N., and Surgeon-Lieutenant-Colonel Andrew Duncan, I.M.S., contributed essays of great merit. The subject of Surgeon-Captain Smith's prize essay was "The Etiology, Prevalence, and Prevention of Diphtheria."

ROYAL VICTORIA HOSPITAL, NETLEY.

The under-mentioned officers, who since passing through the School at Aldershot have been serving in the Surgical Division of the Royal Victoria Hospital, Netley, are ordered to hold themselves in readiness to proceed to Egypt: Surgeon-Lieutenant P. McKessack, M.B. Aberd., and Surgeon-Lieutenant J. McD. McCarthy. The number of patients in the Royal Victoria Hospital is now reduced to about 650.

DEATHS IN THE SERVICES.

Brigade-Surgeon-Lieutenant-Colonel William Alexander Barren, on June 8th, in his 49th year. He served with the Bombay Sappers and Miners in the Afghan War of 1880 and was in medical charge of the 4th Bombay Native Infantry (medal). He also took part in the Burmese Expedition of 1886–88 (medal with two clasps).

[2] See THE LANCET, Nov. 20th, 1897, p. 1349.

MEDICAL GUILD AT CARDIFF. — At a recent meeting of members of the medical profession in Cardiff it was decided to establish a medical guild similar to the one existing at Manchester.

THE CHEMISTS' EXHIBITION, 1898.—This exhibition, now an annual event, has become deservedly popular, having developed into a well-arranged display of interesting exhibits so large as to need the commodious area afforded by the Agricultural Hall. We noticed that all the leading and conspicuously enterprising firms were represented and most of them found excellent materials in the manifold drugs, chemical preparations, &c., to form a decidedly artistic and attractive exhibition. Pharmacy was chiefly in evidence, but not exclusively, as instanced in the assortment of sanitary appliances, food and food products, photographic requisites and new developments, dental apparatus, and a great variety of advertising devices. In short, the exhibition is a success and receives support from the most reputable quarters. Last year some 25,580 persons attended and there is every reason for believing that this year that number will be largely exceeded.

Correspondence.

"Audi alteram partem."

THE ST. NEOTS CASE OF POISONING BY STRYCHNINE: AN INSTRUCTIVE CASE.

To the Editors of THE LANCET.

SIRS,—May I invite attention to one very instructive point in the history of this case? No one who has made a study of forensic medicine can fail to concur in the admirable summing up of Mr. Justice Hawkins or in your leading article on the case. But the point which it is especially desirable to emphasise is the bearing upon experimental science. The first point in the trial was to establish the fact that the victim died by poisoning and by what poison. How was this fundamental point proved? Dr. Thomas Stevenson, scientific analyst to the Home Office, stated first that he found strychnine in all the organs he removed from the body. He arrived at the conclusion that death was due to poison by means of the approved chemical tests, and also by *physiological tests — i.e., he gave some of the poison to animals.* What will the anti-vivisection bigots say to this application of experimental science to the aid of justice? Of course, it is hopeless folly to reason with minds possessed of one idea. But a case of this kind deserves special record for the benefit of mankind and the sound administration of justice. But this is not all. The enormous quantity of strychnine administered in this case defied successful treatment. Experiment, however, has proved that poisoning by such a dose of strychnine as would be sufficient to kill may be successfully treated. I have always looked back upon my work with Marshall Hall as one of the most fortunate and instructive events in my career. I assisted him in the following experiments. A frog was poisoned by subcutaneous injection of strychnine. If left in a state of perfect quiescence no convulsion occurred and it recovered. But another frog treated with the same dose suffered attacks of convulsion by simply shaking the table on which it rested or by irritating the skin and the repeated provocation of convulsive fits ended in its death.

Now what is the practical lesson dictated by this experiment? It teaches how to treat convulsion. Absolute rest is the first condition. Observing this rule, I have several times rescued women suffering from albuminuric convulsions by close watching and making them inhale chloroform or nitrite of amyl on the first sign of approaching convulsion. The recurrence of convulsive fits is a main factor in causing the death. The repeated shocks to the nervous centres exhaust and paralyse the nervous power. Avoid these shocks and the first cause of the nervous distress may be eliminated. I have had one striking example of this truth in a case of poisoning by strychnine. An officer in the army given to the free use of alcohol and repudiating heel-taps, swallowed in one draught a bottle of physic containing one grain of strychnine. The direction was to take a sixth part twice a day. He was seized with violent characteristic convulsions. Fortunately I was at hand. I immediately put him under chloroform and put him under the care of an assistant, who assiduously watched him, making him inhale the anæsthetic whenever nervous disturbance threatened. This was continued for the whole night. Next day the poison had been eliminated and he recovered. Here, then, is clear evidence of the value of experimental physiology in the saving of human life. Is the sacrifice of a frog to be regarded as sinful when applied to the saving of human life? What can be said for the sportsman who shoots a bird for mere sport or for the butcher who kills a sheep to find us food?

I am, Sirs, yours faithfully,

June 13th, 1898. ROBERT BARNES.

"GENU RECURVATUM."

To the Editors of THE LANCET.

SIRS,—Dr. Taylor's case of genu recurvatum (described in THE LANCET of June 11th) with delayed development of the patellæ is instructive as showing the tendency to spontaneous cure which this deformity so often evinces. Even extreme cases may recover practically without treatment.

For instance in Hilton's case,[1] the patient who had first walked on the condyles of her femurs with the legs directed horizontally forward and usually fell asleep sucking one of her own big toes, recovery was complete at the age of twenty-seven years. No doubt the cure in this case would have been much hastened by proper treatment by splints and massage. The immediate cause of the deformity appears to be deficient development of the tendon of the quadriceps extensor. Whether this is primary or secondary to malposition *in utero* is, like the etiology of the often accompanying club-foot, a disputed question and one which does not much affect treatment. Dr. Taylor and others have noted deficiency of liquor amnii, but on the other hand, hydramnios has often been recorded in such cases. Genu recurvatum is almost invariably present in cases of absence of patella, on which I wrote in THE LANCET of Sept. 25th, 1897. The treatment which I adopted and then described in your columns has generally proved successful in the hands of others as well as myself. It consists in promoting flexion by manipulations and splints and in preventing the recurrence of hyperextension by the latter means. The development of the tendon and of the patella may be encouraged by massage of the front of the knee and thigh. Whether such means would have been successful in such an exceptional case as that described by Mr. Sheild may well be doubted. Probably section of the tendon and capsule as practised by Mr. Edmund Owen would have been necessary.

It seems likely that this and some other deformities of the knees are much less rare than has been generally supposed and that they have either been overlooked when slight or else were not formerly thought worth recording. Thus as regards absence of the patella, a year ago, when my paper was written, I was only able to find records of 42 cases, but since that time I have collected notes of five more cases from contemporary medical journals.

I am, Sirs, yours faithfully,

Seymour-street, W., June 11th, 1898. E. MUIRHEAD LITTLE.

A QUESTION OF DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—Recently I was called to see some cases where there was doubt as to the true nature of the disease. There were four children all of whom had sore-throat and one a rash somewhat like a scarlet fever rash but more dusky than it usually appears in that disease. On inspecting the throats I found a limited amount of exudation membrane, but one child had croupous breathing and running at the nostrils. The temperature was not above 102° F. I considered all the cases to be diphtheritic. The practitioner who called me in—a gentleman of much experience—was of the same opinion and as the patients were all in one small room which was shared by other members of the family he sent the necessary notifications direct to the hospital to ensure their early removal, the town-hall being by that time closed for the day. Receiving notice that the medical officer at the hospital had notified these cases as scarlet fever I saw our medical officer of health and told him that I still looked upon them as cases of diphtheria. He told me that one child had since died, the cause of death being given as scarlet fever and "septic" sore-throat, but he could give me no information as to the means which had been taken at the hospital to verify this diagnosis. It has occurred to me that it would be well if in connexion with the sanitary department of every important district there could be facilities afforded for making cultivations of membranes, &c., so that points of such vital importance might be cleared up without delay. In connexion with this matter and while still in doubt as to the most important part of the case my notification certificates were returned to me with a note solemnly calling my attention to the fact that I had omitted to fill in the blanks to show whether Mary and John respectively were male or female! I am, Sirs, yours faithfully,

Kensington, June 8th, 1898. ALFRED E. BARRETT.

AN URGENT CASE.

To the Editors of THE LANCET.

SIRS,—We venture to bring a pitiable case to the notice of the medical profession. Mr. James McGregor Laing, a surgeon in the employment of the Coolie Emigration Service, died in Calcutta on July 6th, 1889, leaving a widow and four children, a girl and three boys, totally unprovided for. Assisted by friends the widow took a boarding-house in Bayswater, but eventually failed to make ends meet. For the last few months she has lived in a small office in 16, Colville-road, W., a tiny place, without fireplace of any kind. The rent of this has been paid up to the end of this month by some generous Freemasons. She has tried to get dressmaking work and has not succeeded in doing so. Since her failure she has had grants of £10 and £12 from the British Medical Benevolent Fund, £10 from Grand Lodge, and small amounts from other Masonic lodges. Her children's ages are: the girl fourteen years, the boys twelve, eleven, and nine. The girl is at school, by the kindness of the teachers obtaining tuition without charge. The eldest boy has been elected into the Masonic School but is too ignorant to be admitted, the second is a candidate for Epsom. The boys go to the Westbourne Park Schools at present, helped to do so by the clergy of All Saints, Notting-hill. For a long time the providing of food for these hungry young mouths has been an intense anxiety to the mother; indeed, there actually has not been a sufficient supply of proper nourishment. Mrs. Laing will have to leave her present abode at the end of this month as she has no money to pay the rent.

We can personally guarantee the urgency of this poor lady and are desirous of placing her in a small shop to enable her to gain a living for herself and her children. We strongly recommend the case to the generous consideration of your readers. We shall be glad to receive any subscriptions or offers of help on Mrs. Laing's behalf.

We are, Sirs, yours faithfully,

J. PICKETT, M.D. St. And.,
26, Colville-square, W.
REGINALD HARTLEY, M.D. Durh.,
68, Porchester-terrace, W.

June 10th, 1898.

THE CATHOLICITY OF THE METROPOLITAN HOSPITAL SUNDAY FUND.

To the Editors of THE LANCET.

SIRS,—Referring to your special supplement circulated in the churches on Hospital Sunday, which is an excellent *résumé* of the position of medical charities, I beg to call your attention to the following statement in the closing sentence of the paragraph on the Prince of Wales's Hospital Fund: "The objects of *each* fund are the same." You may not be aware of the fact that dispensaries and other medical charities are *entirely excluded* from any benefit from the Prince of Wales's Hospital Fund; only hospitals *pure and simple* get grants. The Sunday and Saturday Funds benefit all medical institutions that are willing to conform to certain regulations made by the committee of the funds. I am a director of, and much interested in, the Marylebone Dispensary, 77, Welbeck-street, W., and regret to find that this institution is excluded from any benefit from the Prince of Wales's Fund, *not* being a hospital. I am certain we are losers by this new fund, as subscribers to it, in many cases I know, thought we would get our share at the Marylebone Dispensary and have therefore not given as formerly.

In the interest of charity I think this point ought to be clearly stated in favour of the Sunday Fund as distinct from the Prince of Wales's Fund in all future appeals.

I am, Sirs, yours faithfully,

GEORGE CUNNINGHAM.

Junior Athenæum Club, Piccadilly, W., June 13th, 1898.

THE COMING ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—As the election for the Council of the College of Surgeons is approaching it seems reasonable that the electors should know the opinions of those for whom they are to vote. It has been urged that it is undignified for candidates for the Council to canvass for support on account of any special line of policy, as the selection depends rather on their professional eminence. Against this I would say that professional eminence by no means implies sound medical policy, as recent meetings of the General Medical Council have very clearly shown, nor do candidates for any other responsible position expect to be elected without some

[1] Lectures on Rest and Pain, THE LANCET, vol. ii., 1862, p. 497.

general indication of the line of policy which they intend to pursue. The Council of the College of Surgeons is far too much under the control of the large London schools, and until this domination is broken there will be no reasonable reform. It is no sufficient guarantee of the fitness of a candidate for the Council that he is a junior member of a London hospital and may find employment on the examining board of the College. As to the existing members, they have remained silent when they should have protested and it is time that things were a little improved. The Government of the day is expected to defend its actions in terms which its outside constituents can understand and it is inconceivable that any elected body except the College of Surgeons' Council should treat its electors in the contemptuous manner which this body has always assumed. As some points on which I would be glad to hear the opinion of candidates I may mention the following: the defence of the rights of Fellows and Members of the College, the performance of the ethical parts of its duties, and the restitution to the corporation of its lawful right to elect a representative on the General Medical Council.

I am, Sirs, yours faithfully,

June 14th, 1898. F.R.C.S.

A CASE OF SEPARATION OF THE LOWER EPIPHYSIS OF THE FIBULA.

To the Editors of THE LANCET.

SIRS,—On June 13th I was called to a boy who had fallen from a horizontal bar. I found a compound separation of the lower fibular epiphysis. Diagnosis was easy owing to the compound nature of the injury. The separation was through the cartilaginous zone. The foot was inverted. The lower end of the diaphysis protruded and its skin covering was tightly tucked in for a good inch beneath it. A single case only is on record in Mr. Pick's book on fractures, which makes the present one worth mentioning.

I am, Sirs, yours faithfully,

J. E. S. BARNETT, F.R.C.S. Eng.

Kingston-hill, June 14th, 1898.

"THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—Probably the individual experience of medical practitioners as to the working of the regulations of the General Medical Council *re* unqualified assistants would be of some interest and may be of some use in gauging the far-reaching consequences of such action. In my district the effect so far has been that a stimulus has been given to the practice of midwifery by midwives and to unqualified practice on the part of chemists and herbalists. I am myself unable to obtain the services of a qualified assistant either by advertisement or through an agent, and as the services of an unqualified assistant are no longer available for midwifery work I am placed at a serious disadvantage in my competition with the midwives who have largely increased in numbers in my district. And the point I wish to emphasise is that one at least of them to my knowledge is taking pupils to enable her to get through her work. I should like to suggest that it is a great hardship to qualified medical men that we are not allowed to take midwifery pupils in the same way.

I am, Sirs, yours faithfully,

Bethnal-green, June 9th, 1898. A MEDICAL PRACTITIONER.

To the Editors of THE LANCET.

SIRS,—If it is generally true, as "A General Medical Practitioner" states, that there is now a great dearth of qualified assistants I think it is a fact on which the whole medical profession is to be congratulated and for which the General Medical Council should be heartily thanked. It proves that the sad state of congestion of a few years back was due not to the existence of too many qualified men but to the unfair competition of unqualified assistants, who were paid starvation wages and did work for which it is only reasonable to suppose they were unfitted while their employers took the fees. Why should a man undertake more work than he can perform and pay another to do part of it for him? The custom in the medical profession now is for one man who happens to be the senior in the town or district to take all the appointments he can, often at an absurd remuneration, and hire an assistant to do the work. While the assistant was unqualified it was simply a fraud on the public, and even now it is a dog-in-the-manger method of preventing any other man from making a living unless he is willing to become a paid servant liable to dismissal at the whim of his employer. I believe the whole profession would gain in every way if there were no more assistants, except as probationers with a view to partnership, and no man undertook more than he could perform. The well-established practitioner would then think twice before he took a Poor-law or club appointment at a price that would not pay for good drugs, and the public would gradually learn that if they want experienced men they must pay for them. The vicious system of keeping out another man at any price would be knocked on the head and your correspondent would find more reasonable fees a better protection against "the wolf" than any number of underpaid assistants.—I am, Sirs, yours faithfully,

June 11th, 1898. ANOTHER G.P.

TANGIER AS A HEALTH RESORT.

(FROM A SPECIAL CORRESPONDENT.)

FROM Cadiz I sailed for Tangier and thence to Gibraltar. My stay in Tangier was of short duration and I have not much to add to what I wrote concerning this place in the year 1887.[1] The climate, needless to say, remains the same. The prevailing winds are sea winds, the north-west, west, and south-west being from the Atlantic and more suitable to British constitutions than the Mediterranean winds which, with the land winds, alone prevail on the French and Italian Riviera health resorts. The only land wind at Tangier is from the due south and the heat and unpleasantness of this wind are mitigated because it has to pass over the eternal snow of the Atlas mountains before it can reach the town and neighbourhood. Also there is not so great a change of temperature at sunset as on the Riviera but, on the other hand, the atmosphere is more damp. The description I gave when last writing on this subject of the vegetation clearly proved the climatic advantages enjoyed at Tangier and the beneficial effects of the atmosphere were set forth by evidence collected at the hospitals and from the local practitioners. But, above all, Tangier stands out pre-eminent as the nearest and the safest place where a complete change can be enjoyed. The dread of European interference is so great that all crime is most rigorously dealt with, so that the visitor or patient is as safe at Tangier as in any part of Europe and yet the change is complete.

In 1887 I wrote that at Tangier there were "no regular roads, no carriages, no railways, no inland post, no municipality, no rates and taxes for Europeans to pay, no standing army or drilled troops, no daily newspaper, no public opinion, but, under the capitulations, thirteen Christian and one Mahomedan constitutions having the force of law." To-day the position of affairs has been somewhat modified, and this picture is no longer accurate in all its details. First of all a municipality has now been created. It originated some nine years ago in a voluntary association of European subscribers. This self-created constituency elected its representatives and contributed the necessary funds. The first work done was the repaving of those portions of the town where the Europeans reside. Then, with a view to opening out for building purposes the highlands or plateau to the west of the town known as the Marchand, a good carriage road was built from the town to this outlying, well-exposed, and healthy district. It is true that there are not yet any carriages, but the good road makes it easier to take up provisions and to ride backwards and forwards. This road is 7 metres wide and has proper supports. Then a main system of drainage was built outside the town which discharges through pipes into the sea at low-water level. The foreign ministers or consuls preside over the meetings of the municipality, which has acquired such influence that it has been able to obtain from the Sultan of Morocco the permission to control the slaughter-houses, and the charge made for the slaughtering of cattle has now become a source of municipal revenue. Efforts are being made to

[1] See THE LANCET, May 7th, 1887.

obtain a similar control over the markets, but this is opposed by the Spanish Embassy, for the Moor who has the concession for the markets from the Sultan is under Spanish protection. This summer it is proposed to pave the larger "soko" or market outside the town, so that the natives who bring up cattle shall no longer have to sleep on the mud and manure of this picturesque but very filthy place. With regard to medical services, the municipality keeps anti-diphtheritic serum in stock and has made arrangements for the gratuitous treatment of all sufferers. Then, when there were some cases of cholera at Tangier in 1895 a soup kitchen was organised by the ladies of the town, with Mrs. Ion Perdicaris as the lady president. A bazaar was held which brought in £400, and this is a very large sum for so small a town. The natives were not only supplied with soup but with clothes, seed, &c. These charitable efforts were not merely useful in relieving distress but they helped to prevent the spread of the epidemic. There are likewise religious and medical missions and recently an effort has been made to establish a chair for teaching surgery to the native Moors. Thus it will be seen that some progress has been achieved and that European methods have been introduced in spite of the resistance and conservative instincts of the Moors. A jealous vigilance, however, should be exercised lest all the special charm and attractiveness of Tangier be improved out of existence.

It is from the psychological point of view that Tangier is to be especially recommended for the treatment of certain diseases. A sojourn in that town ensures a complete change to the eye and to the mind. Everything is—or rather was—different from what the dweller in a western European city is accustomed to see and hear. The dress, features, customs of the Moors and other native populations, the appearance of their houses and streets, their means of transit, the pack saddles, the mules, the camels, the absence of conveyances on wheels, and of the ordinary rules which govern and regulate a town—all this seems so strange, so interesting and picturesque, that it provides the complete mental diversion and rest which prove so often highly beneficial to patients suffering from the strain of our overwrought civilisation. Unfortunately, Tangier is losing these most interesting and useful characteristics. A large number of commonplace, ugly Spanish houses have been built on the Marchand, and on the opposite side of the town outside the old walls there is an entire street of Spanish cottages and houses. Formerly, the beach was reached on this side by clambering down in the bed of the moat under the grey walls and battlements which defended the city. It was a rough but romantic walk. Now we find a paved, ugly, commonplace Spanish street. It is not worth while to take the slightest trouble to see such an inartistic thoroughfare. Then, again, a European hotel has been built in the centre of the town, spoiling by its shapelessness and utter absence of appropriateness or of artistic sense the Moorish and picturesque aspect of the main street. If this sort of improvement continues travellers will abandon Tangier and will frequent Tetuan or some other place as yet undesecrated by the ugliness of European progress. A European town will always be better built and more handsome in Europe than in the midst of a Moorish community in Africa. If people travel all the way to Morocco it is to see Moorish architecture and buildings and not bad reproductions of what they have left behind them in Europe. Nor will it tend to strengthen the cause of sanitary reform if the fact that some ameliorations have been introduced in the drainage or the markets of Tangier means that the beauty of the place is to be destroyed. The modern changes alluded to above will not alter the climatic advantages of Tangier, but they will do away with its special attractiveness as a town more Oriental in appearance than Constantinople. It will no longer be, as at present, a veritable haven for artists and a place where the invalid may combine the advantages of a change of climate with a complete change of surroundings. As yet the mischief has not gone too far, but it must not go any farther. There is no reason why new houses should not be built in keeping with the style and with the genius of the country, particularly as the small European houses which are springing up in all directions are not only utterly devoid of artistic taste and in complete discord with the surroundings but are also very unsuitable to the climate. With an artist of such repute and skill as Mr. Ion Perdicaris acting as one of the leading members of the Tangier municipality it should be possible to check the present tendency to spoil the beauty of the town.

Tangier.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Hospital for Women, Shaw-street.

DR. E. T. DAVIES, who has been an honorary assistant medical officer at the Shaw-street hospital since its formation in 1883, has sent in his resignation to the committee. Owing to the resignations of Dr. Davies and Dr. Smart and to the promotion of Dr. Gemmell to the senior staff the junior posts are all vacant. I understand that a radical change will be made in the *personnel* of the junior staff and I am also informed that the committee contemplate the appointment of a non-resident stipendiary medical officer who will perform the duties of an assistant medical officer and will also act as anæsthetist. These changes appear to carry the approval of the medical staff and probably are about to take place on their initiative.

Hospital Saturday Fund: Annual Street Collection.

The annual street collection by ladies on behalf of the local hospitals took place on Saturday, June 11th. Last year the amount collected in a similar way reached the total of £623. As far as is at present known the amount collected on Saturday has exceeded £690.

The Stanley Hospital: Anonymous Munificence.

An anonymous donor has presented through the Lord Mayor of Liverpool the sum of £2000 for the extensions contemplated by the committee of the Stanley Hospital. The Lord Mayor suggests that this generous gift should be utilised for the erection of the south wing of the hospital. By this means accommodation would be made for 60 beds and the overcrowding in the administrative block would be also relieved, while at the same time the capacity of the institution would be increased to 100 beds or more.

Workmen's Compensation Act, 1897: Appointment of Medical Referee.

The Home Secretary has appointed Mr. George G. Hamilton, F.R.C.S. Eng., medical referee under the Workmen's Compensation Act for the Liverpool County-court Circuit. The remuneration will be at the rate of 2 guineas for a first examination and report and 1 guinea for a further report on the same case. Three guineas will be paid for attendance at the county-court or other place to be arranged at the request of the judge. Additional fees will be paid for mileage when the distance exceeds two miles, at the rate of 5*s.* per mile. No fee under 1 guinea will be offered for any subsequent reference to a case under dispute. Mr. Hamilton was formerly honorary surgeon to the Liverpool Northern Hospital and is now assistant surgeon to the Liverpool Royal Infirmary. The practical surgical experience gained at those hospitals ought to be a sufficient guarantee of the competence of Mr. Hamilton for the duties of this most delicate and responsible post. The position is one which will require the exercise of a calm judgment and a mind unbiased and free from any taint of prejudice.

Bootle Town Council: A Medical Officer of Health's Claim.

The Bootle Council have decided to recoup Mr. James Pearson, their medical officer of health, for a portion of the expenses incurred by him owing to his recent illness, alleged to have been due to his inspection of certain foul privies in the borough. The sum of 50 guineas (which does not represent the total loss sustained by Mr. Pearson) was voted by the Council to their medical officer; at the same time they did not admit their legal liability in the matter.

June 14th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University.

A REPRESENTATION was recently submitted to the Senatus of the University of Edinburgh by British practitioners of medicine in Italy requesting that the University should take steps to prevent if possible the passing of a law to prevent medical men with British qualifications from practising in Italy. The Senatus prepared a memorial in support of the existing conditions under which British graduates in medicine practise in Italy. This was submitted by the Scottish Office to the Foreign Office, from which a communication

has now been received to the effect that it has "been decided not to alter the existing law relative to foreign doctors in Italy," a decision which is in all respects satisfactory to many graduates of Edinburgh.

Faculty of Physicians and Surgeons, Glasgow.

At the June meeting of the Fellows Lord Lister was unanimously elected an honorary Fellow of the Faculty. The connexion of Lord Lister with the Glasgow school extends back to 1860, when he was appointed Professor of Surgery in the University and at that time he became an ordinary Fellow of the Faculty. It was in the Glasgow Royal Infirmary that the clinical basis of the modern practice of antiseptic surgery was laid and the recent action of the Faculty is a proclamation of their desire to do honour to one whose name they are proud to record upon their roll.

University College, Dundee.

A meeting of the council of the College was held on June 8th, when the Principal intimated that the Secretary for Scotland had paid over to the University of St. Andrews the grant for the year and all the arrears consigned to him by the Scottish University Commissioners. It is therefore probable that the appointments to the chairs necessary to complete the Medical School at Dundee will be made at an early date, in time to allow a full curriculum to be offered in the next winter session. The election to the new chairs is in the power of the University Court of St. Andrews. By the will of the late Mr. David Myles, C.A., the sum of £10.000 has been bequeathed to the College and £1000 to the Royal Infirmary, Dundee.

West of Scotland Consumptive Homes.

An anonymous donor has informed Mr. Quarrier that he is prepared to build the second block of the hospital for phthisical patients at Bridge of Weir, near Glasgow, at a cost of about £8000. The first of the hospitals has recently been opened. Whilst a policy which leaves so much responsibility in the hands of one man must always be open to criticism there can only be on the part of the profession a very earnest desire to see successfully in operation a scheme in which there appears to be so large a promise of practical good.

Medical Appointments.

Mr. J. F. Stevenson has been elected casualty surgeon to the St. Rollox police district, Glasgow, vice Dr. Glaister, resigned. At a recent meeting of the Glasgow City Parish Council the chairman referred in sympathetic terms to the death of Dr. Robert Orr, who had been one of the parochial medical officers for more than thirty years. Dr. Frederick Dittmar was elected to fill the vacancy.

June 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. Thomas Fitzpatrick of Dublin.

A VERY highly esteemed citizen of Dublin died on June 9th in the person of Dr. Thomas Fitzpatrick of Baggot-street. Dr. Fitzpatrick was in his ninety-second year, having graduated as M.D. of the University of Edinburgh in 1833, and become a Fellow of the Royal College of Physicians of Ireland in 1860. He was born in the county Meath in the early part of the century and was the eldest son of an eminent physician who practised there. As a medical student he had Graves and Stokes for his teachers and earned from them any prizes or distinctions in their power to bestow. He was engaged in practice in Dublin for nearly fifty years and was always highly trusted and respected. Any honours which the medical profession could offer him were at his disposal, but his habits were retiring and unostentatious. He was, however, elected not long ago to the list of Honorary Fellows of the Royal College of Physicians of Ireland of which he had been for so long a Fellow. Dr. Fitzpatrick's family were highly distinguished, his eldest surviving son being the present Sir Denis Fitzpatrick, lately Lieutenant-Governor of the Punjaub and now member of the Indian Council in London. The deceased physician's funeral was one of the most largely attended which has taken place in Ireland for many years.

Cork-street Fever Hospital, Dublin.

The managing committee of this hospital met in their board room on June 9th. The registrar reported that the admissions towards the end of May showed a considerable falling off, such as also took place during the corresponding period of last year, on both occasions the reduction being caused by the lessened prevalence of scarlet fever. Several cases of diphtheria were admitted, that dangerous affection having recently become more frequent in Dublin. Cases of enteric fever and of pneumonia were less frequent, while only one case of measles occurred. One case of typhus fever was admitted from a house which contributed several last year.

The Water-supply of Newtownards.

Dr. Clibborn, Local Government Board inspector, reports that the water-supply of Newtownards consists principally of pumps under circumstances which in the majority of cases must have unsatisfactory results. The sewerage is far from good, consisting principally of old flood sewers for county purposes and never meant for common sewers. He says that the sanitary authority should take into consideration in the first instance the providing of a good and sufficient supply of water for Newtownards. He points out that wells in towns must be liable to contamination from surface water drains and leakage from badly constructed sewers.

Portrush as a Health Resort.

The medical officer of health of Portrush, Dr. Martin, reports that the waterworks are in a satisfactory condition and the water free from pollution by sewage. The sewers have been very largely examined during the past winter and made right where defective, and during the past twelve months there have been no deaths from zymotic disease. The health of the town has been and is very good. This satisfactory report, presented to the monthly meeting of the Portrush Town Commissioners on June 7th, shows that this favourite seaside and golfing resort is in a most healthy condition.

The Belfast District Lunatic Asylum.

At the monthly meeting of the governors, held on June 13th, it was reported that a creamery had been fitted up at Purdysburn by which the institution was supplied with butter and milk without any additional cost or increase to the staff. There are 985 patients on the registers of the institution and Dr. Walter Smith, late Demonstrator of Anatomy at Queen's College, Belfast, has been appointed assistant medical superintendent, in succession to Mr. S. Graham, resigned.

Belfast Workhouse.

Mr. Agnew, the Local Government Board Inspector, in his report just issued, has drawn the attention of the ratepayers very markedly to the Belfast Workhouse. It would appear that owing to a reduction by the guardians of the rate estimate there will be an apparent deficit of £13,000 on March 25th, 1899, when the financial year ends, assuming that the grants in aid of local taxation are equal to those of last year. The guardians have increased their debt to the Belfast Bank for building purposes and other workhouse improvements by £4000 since the last report, so that the loans are now £23,000. But next year the guardians, when the new Local Government Board comes into force, will cease to be a rating authority; the corporation then as a county council will be vested with the sole power of making and collecting all the rates. Hence the only way by which the guardians can get out of their difficulty is to issue a supplementary rate to meet this threatened deficit. Further, Mr. Agnew says that the main infirmary building is overcrowded and in many of the wards there is insufficient cubic space for the sick. There is a want of lavatory and bathing accommodation for the healthy and infirm women, and the quality of the beef, as inspected by Mr. Agnew on two occasions in succession, was unsatisfactory. There is still a great scarcity of water in several portions of the workhouse. In the chief infirmary and in the convalescent wards the staff of nurses is insufficient both by night and by day, and of the 43 nurses only 5 are trained; of the remainder the large majority have only a few months' service. Mr. Agnew thinks that the nursing staff should be increased by the addition of 12 trained nurses and a few probationers. In the fever hospital the increase in the nursing staff has not been in proportion to the increased number of patients and 18 pauper inmates are employed more or less as attendants upon the sick, which is in violation of the Local Government Board's sealed order of Sept. 11th, 1897. Mr. Agnew recommends the guardians to appoint new attendants. At an inquiry held in the workhouse on June 2nd in reference to the discharge of an infant from the union infirmary who died some hours afterwards

at the residence of the parents Mr. Robert Hall, one of the visiting medical officers, stated that in his opinion the medical staff—by which he meant the resident and visiting medical officers—was not sufficient and with this view Mr. A. McConnell (another visiting medical officer) concurred. The guardians have appointed a sub-committee to consider Mr. Agnew's report and the public are awaiting their reply.

June 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Formation of a Joint between the Humerus and the Clavicle.

AT the meeting of the Academy of Sciences held on May 31st M. Ollier presented a report on the formation of articulations between bones which are in the normal condition independent of each other, the necessity for so doing having arisen from the natural articulations of such bones having been irretrievably destroyed. M. Ollier has succeeded in making joints possessing both strength and freedom of motion between bones which are not under ordinary conditions directly connected with one another. In thus reuniting the bones it is possible to preserve not only the tissues which form the junction but also all that remains of the muscles which moved the original joint and, in fact, to form a new joint (*néarthrose*) surrounded by muscles sufficiently powerful for active exertion. M. Ollier reported the case of a man who was in his forty-eighth year in 1893 and who had received a gunshot wound in the shoulder in 1870. The wound healed after seven months but opened again in 1883. Successive resections were made for the purpose of checking the suppuration, the head of the humerus being removed in 1884, a portion of the scapula in 1885, and the remainder of this bone in 1890. The suppuration stopped, but the arm was powerless and tended to fall lower and lower from the clavicle, to which it was attached (and that only in front) by some muscular bundles which were not strong enough to raise it. In 1893 M. Ollier fixed the humerus to the clavicle and surrounded the approximated ends of the two bones with what remained of the scapular muscles, which eventually, the deltoid especially, acted powerfully on the new joint. After the operation the patient had no need of artificial supports and used his arm for every purpose required. For instance, he could put it on the top of his head, on his right shoulder, behind him on the back of his right thigh, and could also fold his arms—movements which were impossible for him before the operation.

Carpus Curvus.

At the meeting of the Academy of Medicine held on June 7th M. Pierre Delbet showed casts of a deformity of the wrist. The hand retained its normal shape, but was displaced as a whole, giving the appearance of a dislocation of the wrist forwards. On the posterior aspect of the wrist there was a remarkable prominence of the head of the ulna, which had evidently lost its normal attachment to the cuneiform bone. On the radial side the arrangement of parts was quite different, for instead of there being a projecting part there was an unbroken gradual slope from the forearm to the wrist. The thickness of the wrist was less on this side; the articular surface of the radius was not accessible as was that of the ulna, neither had it lost its connexions with the scaphoid and semilunar bones, but it was curved forwards. M. Delbet thought that the curving of the radius was the first stage in the train of symptoms and that this bone drew the carpus after it, giving rise to the dislocation of the cuneiform bone from the ulna. Straightening of the radius by osteotomy immediately reduced the dislocation of the ulna. As the lesion is in its way identical with genu valgum M. Delbet proposes to call it carpus curvus. When the deformity is very marked the indication is to perform osteotomy, as was done in the case just described; the deformity and the functional disability which accompanies it are thereby completely removed.

Superficial Area of the Human Body.

At the meeting of the Society of Biology held on June 4th MM. Bergonié and Sigalas stated that they had made measurements for the purpose of ascertaining the area of the surface of the human body. They first estimated the differences of area which might exist between a given plane surface and the same surface after it has been forced to assume an irregular form. Starting from this experiment they covered one half of a body with strips of sticking-plaister cut to a known size. The result for the surface of the body was 16206 square decimetres (17·4 sq. ft.). The figures obtained by M. Bouchard are about one-tenth higher than this.

Agglutination of Löffler's Bacilli.

At the same meeting of the Society of Biology M. Nicolas gave a demonstration showing that agglutination is produced when serum from a horse immunised against diphtheria is added to bouillon cultures of Löffler's bacillus. This reaction, however, is not constant but varies according to the bacilli employed, the serum being the same. It occurs in about half the cases. There is probably some biological condition which will account for the differences which have been observed in the production of the phenomena.

The Responsibility of Medical Experts.

Public attention is once more directed to the case of Dr. Méloche whom the *tribunal civil* of St. Nazaire last year ordered to pay 1000 francs (£40) damages to a woman accused of abortion. Dr. Méloche, who was the expert entrusted with the duty of examining the accused, believed that in all probability abortion had recently occurred. The woman's refusal to answer certain questions and her contradictory statements induced him to make a guarded diagnosis and three days afterwards she was delivered of a five months' fœtus; she had been arrested after his report was presented, but was immediately released, and believing that his mistake carried with it responsibility for her arrest she brought an action for damages against him. The court in giving judgment against Dr. Méloche blamed him for not having made a chemical examination of the blood, entering thereby into scientific questions its imperfect knowledge of which led to absurd expressions of opinion. This judgment was reversed by the Appeal Court on several grounds. Firstly, because the medical man in question had acted with all necessary prudence and had only given an opinion that there was a great probability of abortion having occurred. Secondly, this judgment, by affirming the responsibility of medical experts, would render their action impossible for the future. The medical expert is fallible. When he is consulted by a magistrate it is his duty to give a candid opinion and it is for the magistrate to obtain further information by reference to another expert if the report of the first one leaves him in uncertainty. An expert who, like Dr. Méloche, describes an offence as being highly probable could not be responsible for the conclusions which the magistrate, irresponsible himself, draws from the medical man's undecided opinion. Under these circumstances the case came before the Appeal Court of Rennes on May 26th and judgment was delivered on June 3rd reversing the judgment of the *tribunal civil* and declaring that Dr. Méloche had acted prudently in not giving a positive opinion in a difficult case and in not committing himself to more than the probability of the condition referred to. Furthermore, it could not be said that the opinion given by Dr. Méloche was the immediate cause of the arrest. This belongs to the province of the magistrate and consequently the medical expert cannot be held responsible for it.

June 14th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Imported Plague at Moses's Wells.

THE ill-fated steamer *Mehallah* is still in quarantine and likely to remain so for some time to come. It is still unknown how she contracted plague and her crew continue to asseverate that no one of them had any communication whatever with Jeddah or even Ras el Aswed, while the only remaining port, Suakin, is still declared to be quite free of plague. After the original case of the stoker of this vessel, who had undoubted plague, suspicion fell upon one of the seamen with enlarged glands, but his case was soon certified as not being plague. Now, the Egyptian doctor of this same steamer, who originally failed to diagnose the stoker's case, has not only contracted plague but has actually died from it. These are the first known instances of plague on

Egyptian territory since 1844—more than half a century ago. The earliest symptoms of the medical officer did not appear until 18 days after the stoker was removed from the ship and 11 days after the case of the suspected individual. This therefore looks as if the doctor had caught the disease from something on board the vessel itself, in spite of its having been disinfected and attempts being made to kill all the rats on board. How does one disinfect the bilge water and all the interior economy of a large steamer? Where do steamer rats live and how does one get at them to kill them? These questions are just now of the highest importance and it must not be forgotten that in many of the most recent epidemics plague has appeared among the rats of a community about the same time as it has attacked the earliest human beings. The details of the doctor's case are as follow. It is quite certain that he was well on May 21st and had no enlarged gland when he was medically inspected on that day. The patient stated that he felt perfectly well until noon on May 22nd, when he began to feel very ill and sent for Dr. Mazaraki, one of the quarantine officials, who found a temperature of 104·9° F., a pulse of 150, and a swollen and painful left femoral gland of about the size of a pea. The patient stated that the swelling of the gland was the result of an injury to his knee, but no trace of this injury could be discovered. He was at once taken ashore and isolated in hospital. Later in the day his temperature rose to 105·1° and he had some rigors, while the following day he became delirious and prostrate with stinking breath. On the 24th the urine became albuminous for the first time, the spleen was enlarged, he had many rigors, and the original gland increased in size and in tenderness. In spite of devoted treatment on the part of Dr. Hodgson, Dr. Lochelongue, and Dr. Mazaraki the unfortunate man died on the early morning of the 27th, less than five days after the onset of the symptoms. His end may have been hastened by the presence of lupus and another constitutional disease. It is fortunate that both the cases so far have been of the bubonic type and not septicæmic or pneumonic, which are obviously more infectious varieties. The Egyptian pilgrims are now undergoing twelve days' quarantine at Tor, which will be succeeded by five days' extra inspection at Ras Mallap, before they are allowed to set foot in Egypt. For the first time a thorough inspection of the women pilgrims is to be made and Miss Cutler, an English midwife and nurse, has been specially sent to Tor to superintend the native women searchers.

Fevers in Egyptian Prisons.

At the spring of the year typhus and relapsing fevers always make their appearance in any crowded and very insanitary community, and as most of the Egyptian prisons, owing to poverty and carelessness of the Government, contain all the predisposing factors for promoting such diseases, they have for some years attained an unfortunate notoriety, even in Egypt. During the late spring months the following prisons have suffered from relapsing fever, in some cases complicated with typhus fever also: Tourah, Hod el Marsoud, and Zaptieh, all three being in Cairo; Ghizeh, Alexandria, Damanhour, Tantah, Benisouef, Zagazig, Kap el Zayet and Tel el Baroud. The only casualty among the medical officers is the much-regretted death of Dr. S. G. Kartulis from typhus fever at Alexandria, on April 27th. The published statistics for the month of March alone give 415 cases of these fevers in prisons with as many as 30 deaths. The number of deaths would probably have been greater had not Dr. Wilson temporarily placed himself at the service of the prisons department. He instituted satisfactory rules as regards hygiene, baths, food, and work which no doubt put an end to the various epidemics early in May. As a consequence of these outbreaks all over the country Coles Pasha has obtained leave to strengthen his administration by the new appointment of Dr. Parker, lately of the Eastern Fever Hospital, Homerton, London, as chief medical officer. The various natives now serving under him are quite ignorant of sanitation and preventive medicine, having been mostly educated in the prehistoric days, but none of them are too old to learn new ways. £13,000 were granted last year for building new prisons and £20,000 are to be spent this year, and every effort is being made to lessen the number of unnecessary prisoners. The prison department was one of the earliest of English reforms here in 1883, but it has of late years been pushed aside by more pressing claims.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Infectious Disease in Victoria.

TYPHOID fever still continues very prevalent in Victoria. At the meeting of the Board of Health held on April 20th the number of cases reported for the preceding fortnight was stated to be 475, with 40 deaths. Diphtheria is also prevalent, 62 cases with 8 deaths having been reported for the same period. Measles is epidemic and the schools are more than half emptied in consequence. The Government have at last granted a site for an infectious diseases hospital for the metropolis. At a meeting of the committee of the projected hospital held on April 19th a letter was read from the Chief Secretary stating that the Government would allow the hospital to be erected on a block 15 acres in extent in the ground reserved for the Yarra Bend Lunatic Asylum, provided that small-pox patients would not be admitted and that arrangements would be made for the adequate drainage of the block. The Government has also promised to give £2500 towards the erection of the buildings. It is to be hoped no delay will now take place, as the need of such an institution becomes daily more manifest, and also for proper ambulance arrangements. Quite recently public indignation was roused by a case in which a child dying from diphtheria could not obtain admission at a children's hospital. The father tried the Melbourne Hospital, but it was full. Next day he went to the hospital and was told that he could bring the child in. Then no ambulance could be obtained and the father carried the patient in his arms to the hospital, where the child soon afterwards died. At present the Health Act throws the responsibility of providing ambulances for infectious cases on the local authorities. These, however, with a very few exceptions, do not provide them owing to the expense and it is suggested that an ambulance should be kept at the hospital and maintained conjointly by the municipalities.

Health of Melbourne.

Dr. Jamieson, officer of health for the city of Melbourne, has just presented his report for the year 1897. The general mortality of the city was 13·6 per 1000, and the infant mortality was 119 per 1000 births. The mortality from typhoid fever was 2·85 per 10,000. Dr. Jamieson states that:

> The chief cause of infant mortality here, as in most parts of the world, is the prevalence of diarrhœal diseases, and that varies very markedly with the season of the year. This is very clearly shown by the fact that in all Melbourne the deaths of infants under one year numbered no fewer than 316 in December, as compared with 67 in October. The high summer temperature acts chiefly in causing easy deterioration of milk, which forms the staple food of infants artificially reared. Attention to the milk-supply is manifestly of the greatest importance in this connexion, and there has been distinct improvement in that respect of late years. The chief causes of death, other than the epidemics, which really occasion a small percentage of the total mortality, were: Tuberculosis, with 151 deaths; diarrhœal diseases, 110; pulmonary diseases (other than consumption), 95; diseases of the heart and great vessels, 86; nervous diseases, 84; renal system diseases, 75; and cancer, 32. The deaths from tuberculosis in all its forms were the same in number as last year, and with further close supervision of the meat- and milk-supply and other general sanitary improvements we may hope soon to see a steady diminution in the fatality. Though the typhoid mortality was at a comparatively low level all over Melbourne in 1897, it is unsatisfactory to find that it remains considerably higher than in the cities and towns of Great Britain. I doubt if there is any reasonable explanation to be found except in the fact that Melbourne over almost the whole of its area has still nothing better than surface drainage, and a pan system of nightsoil disposal.

A White Leper in Melbourne.

The Health Act in Victoria is very stringent in its provisions against leprosy. About six weeks ago a Russian Jew came to Melbourne from Western Australia to seek medical advice. Mr. Noyes discovered that he was suffering from leprosy. When the case was reported to the Board of Health the man was informed that he could not remain in Victoria except in isolation at the leper station. He was, however, permitted to leave the colony. He has been seven years in Australia, but is believed to have contracted the disease twenty years ago. At present there is only one leper in Victoria. He is an European and is segregated.

A New Medical Society.

The medical practitioners of Bendigo, Victoria, have established a local medical society as a branch of the Medical Society of Victoria. Mr. O. Penfold has been elected President and has delivered an opening address in which he expressed gratification at the formation of the society and

enlarged on the benefits to be gained from its existence. He also expressed the hope that the Bendigo Hospital would soon be recognised for clinical teaching by the university and that a children's hospital would be established in Bendigo.

Melbourne Hospital for Sick Children.

On April 20th was laid the foundation stone of the new buildings for the Children's Hospital, Melbourne. The ceremony was performed by three little children in the presence of the acting governor. Plans have been prepared for a completely new hospital at a cost of £60,000, but for the present the committee intend to expend only £16,000 upon a new out-patients' department, comprising a waiting hall and eight surgeons' rooms and examinations rooms, a kitchen block, steam laundry and disinfection plant, and a mortuary. Since the foundation of the institution in 1870 it has accommodated 14,007 in-patients and 559,267 out-patients have attended. In one week there have been as many as 1544 attendances of out-patients.

Sydney Hospital for Sick Children.

On April 18th the annual meeting of the Sydney Hospital for Sick Children was held, Lady Hampden presiding. The annual report stated that 516 in-patients had been treated during the year and 2860 out-patients. The medical report said that as much good work had been done as could be expected in the present buildings. The out-patient attendance had considerably increased, and there was little doubt but that this department was abused. The uniformity in the reduced death-rate from diphtheria since the introduction of the antitoxin treatment was very gratifying. The vacancies on the honorary staff were filled by the election of Dr. E. J. Jenkins and Dr. Chisholm, and to the two new positions on the out-patient staff Dr. E. H. Binney and Dr. G. H. Abbott were elected.

Allegations Against the Surgical Staff of Melbourne Hospital.

At the meeting of the committee of the Melbourne Hospital held on April 12th, the house committee brought up a report on the subject of admissions to the surgical wards, stating that the rules as to admissions had not been observed and recommending that in future a register be kept of surgical patients waiting for admission and they be admitted in the order in which they appear on the register. The report was adopted.

Deaths under Chloroform.

An elderly woman died recently at the Melbourne Hospital whilst chloroform was being administered. At the inquest the pathologist to the hospital stated that in his opinion the system of giving anæsthetics at the hospital was wrong and that the students were not properly taught. The cause of death was partly asphyxia and partly disease of the heart. Some apparently conflicting opinions were given by the surgeon who was about to operate and the anæsthetist to the hospital as to whether an anæsthetic should have been administered supposing the condition of the heart could have been ascertained during life. The anæsthetist said that the students did not avail themselves of his instruction because it was not compulsory.—An inquest was held at Sydney on April 18th concerning the death of a woman, aged thirty-eight years, who died while under the influence of chloroform administered for a dental operation. She had appeared to be perfectly healthy. Only a small amount of chloroform had been administered when a sudden spasm occurred and the pulse stopped.

Action against a Druggist.

At the Melbourne county-court on April 25th an action was brought against a druggist for £175 damages for negligence in dispensing a medicine from a written prescription. The prescription, it was alleged, was for a teaspoonful of cascara, and the druggist in writing out the label wrongly put one tablespoonful. The overdose it was alleged produced severe results, demanding surgical interference. The defence denied the mistake, but stated that if a mistake had been made the sufferings arose from the disease for which the prescription was ordered and were not produced by the prescription. Medical evidence was called for both sides and the jury found for the defendant.

Women as Resident and Honorary Medical Officers.

At the annual election of resident medical officers to the Melbourne Hospital Miss Violet May Plummer, M.B., was among those appointed. At the Sydney Hospital for Sick Children the board has passed a resolution that women were eligible for the position of honorary medical officers. This is the first hospital in the colonies which has made women eligible for honorary positions on the staff, although no one has yet been appointed.

May 4th.

Obituary.

HENRY LEE, F.R.C.S. ENG.,

CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

MR. HENRY LEE, F.R.C.S. Eng., senior consulting surgeon to St. George's Hospital and Honorary Fellow of King's College, London, died at his residence, 61, Queensborough-terrace, Hyde-park, on Saturday, June 11th, at the age of eighty-one years. Mr. Lee was the youngest son of Captain Pincke Lee of Woolley Firs, Maidenhead Thicket, and was born in 1817. In 1833 he commenced his professional studies at King's College and in 1834 entered as a pupil at St. George's Hospital. He became a Member of the Royal College of Surgeons of England in 1839 and a Fellow in 1844. In 1861 he was elected assistant surgeon to St. George's Hospital, prior to which he had filled the office of surgeon to out-patients at the King's College Hospital. He became full surgeon to St. George's Hospital in 1863 and retired with the rank of consulting surgeon in 1878. For a period he also filled the office of Lecturer in Pathology and Surgery to the Royal College of Surgeons of England, and was elected a member of the Council in 1870. He was also consulting surgeon to Queen Charlotte's Lying-in Hospital and to the Lock Hospital.

Mr. Lee was a sound, able, and original surgeon, his methods being always marked by great independence of thought and judgment and by singular fertility of resource. Though never a rapid or brilliant operator he was both a bold and a successful one, his success being largely due to a scrupulous attention to the details of after treatment—a thing which was far rarer in his day than at present. As a teacher Mr. Lee was painstaking, solid, and thorough. His was not the eloquence which shone in the lecture theatre so much as the power of clear demonstration of minute facts which appealed more especially to the senior students and most of all to his house surgeons, whose office was a greatly coveted one while he was on the staff of St. George's Hospital.

The following estimate of Mr. Henry Lee's surgical work is from the pen of his colleague, Mr. Holmes:—

"I have been favoured by the editors of THE LANCET with a request that I would give its readers an estimate of Mr. Lee's surgical work; and I look on it as a duty which I owe to the memory of an old and valued colleague and friend to try to do this, however imperfect my estimate may be. Henry Lee's surgical work must be looked at from three points of view—as a pathologist, a syphilographer, and a practical surgeon. I have put pathology first because it was the foundation of all which he accomplished in his after career. Nearly his first essay in pathology was an attempt to put the knowledge of the condition called phlebitis — then much misunderstood — on a sounder basis. Possibly he went too far in arguing that the obstructing material in the veins is not in any case secreted by their lining membrane, but at any rate his paper (in vol. XXXV. of the Transactions of the Royal Medical and Chirurgical Society) showed that sometimes it is not: and the paper had the great merit of calling attention to the large part which coagulation of the blood plays in many cases of so-called 'phlebitis' and it no doubt assisted in the production of a more correct understanding of the many conditions which were comprised under that name. His life-long researches on syphilis had also their foundation in sound pathological inquiry, meaning by pathology not morbid anatomy only (as the word is too often misused to mean), but the science of disease, founded on the histories of cases, on the symptoms of disease in the living and on its products in the dead body; and, I may add (especially in connexion with syphilis), on experiment, for some of the most valuable parts of Mr. Lee's writings on syphilis concern the results of inoculation. In dealing with syphilis Mr. Lee seems to me to be equally meritorious as

a pathologist and as a practical surgeon. In the former capacity he shows more clearly than any other writer whom I have consulted the great and essential difference between the local and constitutional forms of syphilis; and as a practical surgeon he gives, I think, the clearest and the wisest directions when and how to use mercury, which, when all is said and done, is the only known treatment in the constitutional form of the disease; and he, more clearly than any, or at any rate most, authors, traces the natural history of the disease when left to run its course uncontrolled, avoiding the erroneous and exaggerated estimate of the destructive power of syphilis into which John Hunter was betrayed. I do not say that Mr. Lee was entirely free from the besetting sin of specialists of seeing their speciality in every dubious case that falls in their way, but I do say that he was more free from it than almost any specialist that I have met with and that his writings on what he had made, or what had become, his speciality are a model of wide information, correct reasoning, and sound practical wisdom. But Mr. Lee was too great a man to remain merely a pathologist and a specialist in venereal diseases. His bent was towards practical surgery and he had a genuine pleasure in its operative branch. These tastes had little room for exercise at King's College Hospital, where Mr. Lee's subordinate position and Sir W. Fergusson's brilliant talents as an operator kept him in the background: and it was therefore with equal satisfaction on both sides that Mr. Lee and his old teachers and fellow students found themselves colleagues on the surgical staff of St. George's Hospital, where though he was only an assistant he was allowed by the kindness of his seniors to do practically what he pleased in selecting cases to be under his own care and to perform any operations which might be sanctioned by a consultation. And he used this liberty freely during the two years he remained assistant surgeon. Mr. H. C. Johnson's death in 1863 brought him on to the full staff and he could then not only carry out his own views still more freely but also expound them to the students in the wards and in the clinical theatre, and in this clinical teaching he excelled. It would be the exaggeration of a friend writing directly after his subject's decease to say that he was a great surgeon, but he was an admirable officer in a hospital school, keenly interested in his duties and unwearied in their discharge, ingenious and resourceful in the many exigencies of surgery, zealous in the instruction of the students, cordial in his intercourse with his colleagues, and, above all, solicitous for the welfare of his patients. His published works have stood the test of time and criticism. The chief are his treatise on Practical Pathology, his Lectures on Syphilis at the Royal College of Surgeons of England, and his treatise on Venereal Diseases in the "System of Surgery," which I edited. None of these books either are obsolete or are likely to become so, and I believe that I am giving utterance to the common opinion of surgeons in saying that in his own province he was unrivalled. This is high praise indeed for a man whose labours extend through half a century of constant change and progress, but I believe it is thoroughly well deserved. He was the last of the St. George's surgeons of the direct school of Brodie and far from the least distinguished of them. His colleagues and pupils there will long keep his name in honour."

Mr. Lee retained his vigour, both of body and mind, to an unusually late period, and it was only a few years ago that he retired at length from active practice and gave up his house in Savile-row. He was a man of strong character, of courage, and determination, but of a most kindly heart and genial disposition and was always regarded with great affection by his old pupils at St. George's Hospital. During his long professional career it may be said that he made many attached friends and no enemies. He was twice married and his second wife survives him as do daughters by both marriages.

THE LATIN-AMERICAN SCIENTIFIC CONGRESS.

(FROM A CORRESPONDENT.)

THE first Scientific Congress which has ever been held in South America, organised by the *Sociedad Cientifica* of Buenos Ayres, was opened in that city on April 11th, 1898. The members numbered about 600 and included delegates and visitors from every republic in South America and also several delegates from Mexico, so that the organisers have every reason to be proud of the success which has attended this the first effort to collect together men of science and learning from the continent of South America. In point of numbers the Argentine Republic heads the list with over 300 members, then follow Chili, Uruguay, Brazil, Paraguay, Peru, Ecuador, Mexico, &c.

The Congress was divided into seven sections, as follows: (1) Exact Sciences—(*a*) Pure and Applied Mathematics and (*b*) Astronomy, Topography, and Land Surveying; (2) Engineering Sciences, Civil and Military, including Architecture; (3) Physical and Chemical Sciences; (4) Natural Sciences, including Biology, Geology, and Palæontology; (5) Medical Sciences; (6) Anthropology; and (7) Sociology. But the first and second sections, the third and fourth sections, and the sixth and seventh sections were taken together, so that the Congress actually met in four sections.

The Medical Sciences section being that which will more particularly interest your readers I append a *résumé* of the several meetings, with a list of the principal papers read. It will be seen that many of the subjects discussed were of local interest chiefly, but some are of universal interest, such as Leprosy, Tuberculosis, Vaccination and Small-pox, Infectious and Contagious Diseases in Relation to Sanitary Works, Subsoil Drainage and Changes in Atmospheric Pressure, Inoculation in Carbuncle and the Preparation of Anti-carbuncular Serum, the Microbiology and Therapeutics of Whooping-cough, the X Rays in Surgery, Suicide and Mental Diseases, and Gonococcus—its Toxin and Serum, &c.

The President of the Medical Sciences Section was Dr. R. Wernicke, the secretary was Dr. Araoz Alfaro, and the meetings took place every afternoon from 2 to 7 P.M. The attendance was good and the members were fairly representative, the discussion being carried on chiefly by the younger professors and teachers in the medical faculty and schools.

Vaccination and Small-pox.

Papers were read by Dr. DIAZ (Buenos Ayres) and Dr. MURILLO (Chili). Historical evidence showed that small-pox has always been a terribly destructive scourge in these countries, whole tribes of aborigines being destroyed in the last and preceding centuries. Chili has now the most complete and effective system of vaccination on this continent, with a central board in Santiago and branch offices and vaccinators and inspectors all over the country. Glycerine extract of animal vaccine (calf) is almost universally used and in the Argentine Republic calf vaccine has been for some years exclusively used. But the organisation of the Vaccination Department is not nearly so complete in the Argentine as in Chili, there being at present no special and independent board. In Chili last year £10,000 were spent on the vaccination service, and 38,000 slides of vaccine were distributed; in the Argentine Republic over 1,200,000 slides were distributed free of cost. The mortality has notably decreased in Chili and the River Plate and is now insignificant, in fact almost *nil*, in Montevideo. It may be noted here that compulsory notification is applied in the Argentine Republic to small-pox, measles, scarlet fever, diphtheria, typhoid and typhus fevers, cholera, yellow fever, puerperal fever, and tuberculosis, and that a staff of official disinfectors is at the disposal of the public day and night.

Leprosy.

Dr. SOMMER (Buenos Ayres) and Dr. CANABAL (Montevideo) pointed out the relation of leprosy to the low-lying and swampy districts on the borders of our great rivers, where also the mean temperature is highest, notably Corrientes, where there are probably now over 200 lepers. The disease has been slowly but surely making headway in the Argentine. The tuberculous form is most prevalent, although the analgesic has been observed. The spread of the disease was said to be undoubtedly due to contagion. As regards etiology, Dr. Sommer suggested that mosquitoes and other insects might possibly convey the poison, but he was not prepared with experiments to prove it. This idea was combated by several speakers. The meeting resolved that the resolutions of the Berlin Conference (October, 1897) should be adopted for this country.

Tuberculosis in the Argentine.

Dr. GACHE showed that the death-rate from this disease was now from 7 to 8 per cent. of all deaths in Buenos Ayres and from 3 to 5 per cent. in the northern provinces, such as Mendoza, Catamarca, and Salta. The rate had notably decreased of late years. The inoculation with tuberculin was now compulsory with regard to all the cows of all the

dairies of the city and in 1897 over 1700 cows were inoculated, of which some 22 per cent. gave the reaction.

Dr. J. T. R. DAVISON, in an interesting paper on the Effect of Earth Removal and Atmospheric Pressure on Various Diseases pointed out that since 1889, when the surface drainage of the city of Buenos Ayres was finally completed, the prevalence of tuberculosis had decreased considerably, and he showed charts which proved that previously to 1874, when the sanitary works were first commenced, tuberculosis, typhoid fever, cholera, and diphtheria were far more prevalent and more fatal than they are now. He was also of opinion that when subsoil drainage was carried out, as he hoped it would soon be, there would be a still greater reduction in the prevalence of these diseases.

Microbiology and Therapeutics of Whooping-cough.

Dr. MONCORVO, jun., of Rio Janeiro, said that the micrococcus of whooping-cough is found alone or in chains; it grows best in peptonised agar-agar, giving a result in from twenty-two to twenty-eight hours of innumerable small, bright spots; in four days the evolution is completed. Inoculations in 50 animals of different species gave characteristic attacks of whooping-cough in 48. The toxin has no effect on the red corpuscles of the blood; hence its action is on the mucous membrane of the larynx. Dr. Moncorvo found that a 10 or 15 per cent. solution of citric acid applied locally to the larynx was the best remedy and he employed lemonade as a prophylactic. In these countries lemon juice is a favourite and old-established remedy in throat diseases, being especially useful in follicular tonsillitis.

Infantile Gastro-enteritis in Buenos Ayres.

Dr. A. ALFARO gave an interesting summary of the causes and death-rate of infantile diarrhœa, which showed that during the last ten years the certified death-rate from gastro-enteritis up to two years of age amounted to 32 per cent. of the general death-rate. In his own clinique at the San Roque Hospital of 1103 children applying for treatment 382 suffered from gastro-enteritis. The death-rate is lowest during the winter months, June, July, and August, but begins to rise in November, attaining its maximum—50 per cent.—usually in March, the fag end of the summer. Dr. Alfari's statistics showed in a marked manner the influence of the infants' diet, for of his 382 cases only 7 were at the breast and carefully nursed; 71 were also at the breast but badly nursed and under unfavourable hygienic surroundings; 129 were on artificial (cows', asses', goats') milk diet; and 175 were on mixed diet, such as milk, farinaceous materials, &c. Milk may be perfectly sterilised, but septic organisms get in through the rubber teats, and by the mother's and nurse's hands, &c. The prophylactic measures adopted included: (1) special regulations for the wet nurse; (2) properly organised "crèches" where infants can be accommodated and fed; (3) the establishment of special farms under municipal control; and (4) an arrangement that the ordinary dairies should supply a "special" milk for children, as in Denmark, Germany, &c.

The Gonococcus: its Toxin and Serum.

Dr. JULIO MENDEZ gave the following conclusions as the result of his investigations. 1. In 64 cases of blenorrhagia he found the gonococcus in 27. 2. The gonococcus is easily cultivated in the ordinary media. 3. The toxin put in contact with the healthy human urethra for from five to fifteen minutes produced in an hour irritation and heat about the neck of the bladder and in from 24 to 36 hours characteristic blenorrhœa. 4. Serum prepared from immunised dogs has strong antitoxin properties and retards the death of control animals. 5. The gonococcus is never found in blenorrhœa or blenorrhagic arthritis of more than 4 or 5 days' standing.

The Use of Expressed Juice of Maize.

Dr. LLOBET drew attention to the great alimentary value of the expressed juice or extract of young and tender maize. It has the advantage over wheat in that it contains a much larger proportion of fats; proteids and salts (which give it decided diuretic properties) are also in good proportion. He proposed to call this preparation "vegetable milk."

The Study of the Specialities.

The following motion (literally translated) was passed unanimously at one of the meetings of the Medical Sciences section: "It is strongly recommended to medical students not to commence the study of specialities until their general medical curriculum is completed, as such studies are likely to be very prejudicial to the obtaining of complete clinical knowledge in general medicine."

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having previously passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Fellows of the College in order of seniority as Member, in accordance with the provisions of the by-laws, viz.:—

Roll, Grahame Winfield, B.A., M.B. and B.C.Camb., L.R.C.P. Lond., Cambridge University, St. Thomas's and St. Bartholomew's Hospital, Jan. 29th, 1886.
Wright, Dudley D'Auvergne, L.R.C.P. Lond., University College Hospital and Vienna University, Aug. 2nd, 1888.
Tilley, Herbert, M.D., B.S. Lond., L.R.C.P. Lond., University College Hospital, July 28th, 1890.
Frazer, John Ernest Sullivan, L.R.C.P. Lond., St. Bartholomew's Hospital, July 30th, 1891.
Clarkson, George Aylwin, L.R.C.P. Lond., St. George's Hospital, Feb. 8th, 1894.
Cochrane, Archer William Ross, M.B. Lond., L.R.C.P. Lond. (Surgeon-Lieutenant I.M.S. Bengal), St. Bartholomew's Hospital, Nov. 8th, 1894.
Collard, Frederick Stuartson, L.R.C.P. Lond., St. George's Hospital, Nov. 8th, 1894.
Prain, John Leay, L.R.C.P. Lond., St. Thomas's Hospital, Nov. 8th, 1894.
Toye, Edwin Josiah, M.B., B.S. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital, May 9th, 1896.
Cooke, Arthur, M.A., M.B., B.Ch. Oxon., L.R.C.P. Lond., Oxford University and London Hospital, Nov. 14th, 1896.
Tod, Hunter Finlay, M.A., M.B., B.C. Camb., L.R.C.P. Lond., Cambridge University and London Hospital, Feb. 13th, 1896.
Benson, John Robinson, L.R.C.P. Lond., King's College Hospital, May 14th, 1896.
Briggs, John Arthur Oswald, M.B. Lond., L.R.C.P. Lond., St. Bartholomew's Hospital, May 14th, 1896.
Leicester, John Cyril Holdich, B.Sc., M.D. Lond., L.R.C.P. Lond., University College Hospital, May 14th, 1896.
Price, Henry James, L.R.C.P. Lond., University College Hospital and St. Bartholomew's Hospital, May 14th, 1896.
Godson, Alfred Henry, L.R.C.P. Lond., B.A., M.B., B.C. Camb., Cambridge University and Guy's Hospital, May 4th, 1898.
Mésiné, Hormasji Manekji, L.M. & S. Bombay, Grant Medical College Bombay, and St. Bartholomew's Hospital (not a Member).

One other gentleman passed, but not having attained the legal age of twenty-five years will receive his diploma at a future meeting of the Council; and 20 were referred, 15 for six months and 5 for one year.

UNIVERSITY OF CAMBRIDGE.—On June 9th the following medical and surgical degrees were conferred:—

Doctor of Medicine.—John Nachbar, B.A., Clare; Edmund Towers Fison, M.A., Corpus; Arthur Martin Mitchell, M.A., Queen's; Herbert William James Marks (also B.C.), M.A., Jesus; and Lewis Gwillim Davies, B.A., unattached.
Bachelor of Medicine and Bachelor of Surgery.—Robert Hamilton Bell, B.A., and the Hon. George Hepburn-Scott, B.A., Trinity; Henry Lonsdale Gregory, B.A., St. John's; Thomas Henry Brown, B.A., Pembroke; Percy Levick, B.A., Jesus; Barnard Roworth Turner, B.A., Emmanuel; and Alan Baldrey Green, M.A., Downing.

The Vice-Chancellor announces benefactions to the amount of over £6000, the greater number for the new medical and law schools.

THE VICTORIA UNIVERSITY.—At a meeting of the University Council held at Manchester on June 9th the following candidates were declared deserving of the degree of M.D.:—

W. C. Brown, Owens College; *F. J. H. Coutts, Owens College; J. S. Dockray, Owens College; and *F. C. Moore, Owens College.

* Awarded gold medal.

THE BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society was held in the board room of the Royal Mineral Water Hospital, Bath, on May 14th, Mr. Keetley being in the chair.—Mr. William Thomas showed a Shoe for the Treatment of Talipes and Mr. Pagan Lowe showed a Boot for Flat-feet which he had found useful in rheumatic and traumatic cases.—Mr. C. T. Griffiths opened a discussion on Rheumatoid Arthritis from a Surgical Standpoint and came to the conclusion that operative interference should be more often resorted to when osteophytes were present and the mushroom-shaped ends of the bones had become obtrusively evident.—The Chairman related various cases in which he had with advantage removed bony and cartilaginous prominences from the articular surfaces of chronic rheumatoid joints, substituting depressions. Ankylosis, he stated, had not followed.—Dr. Wohlmann produced a Cast showing Typical Rheumatoid Arthritis, which disease was, he said, quite distinct from rheumatism, gout, and osteo-arthritis. He deprecated early surgical interference other than aspiration.—Mr. Tubby thought that the disease was due to lesion of the central nervous system and held that surgical interference was only justifiable in the final stage.—

Mr. W. Thomas, Mr. Pagan Lowe, Mr. Jackson Clarke, Mr. Noble Smith, and Dr. Melsome also spoke.—A vote of thanks to the Governors of the hospital for allowing the use of the room closed the proceedings.

THE REGISTRATION OF MIDWIVES.—The annual general meeting of the Association for Promoting the Compulsory Registration of Midwives was held on June 9th at 3 Grosvenor-place. Lady Balfour of Burleigh, President of the association, took the chair and speeches were made by Mr. Heywood Johnstone, M.P., Dr. Annie McCall, Dr. Cullingworth, and others. Mr. Heywood Johnstone, in moving the adoption of the report said he feared there was no prospect of the Compulsory Registration Bill being read a second time during the present session. Interest in the subject had, however, increased very much during the past twelve months and that interest was rapidly growing. The report was adopted.

FREEMASONRY.—*The Rahere Lodge, No. 2546:* The installation meeting of this lodge was held in the great hall of St. Bartholomew's Hospital on Tuesday, June 14th, at 5 P.M., Bro. W. J. Walsham, W.M., being in the chair. Bros. Cecil Christopherson, P. V. Dodd, and H. Hind were elected joining members, and Messrs. W. J. C. Keats, E. W. Brewerton, and Harold Burrows were initiated into Freemasonry. Bro. Walsham then installed Bro. T. G. A. Burns as Worshipful Master for the ensuing year. The report of the Audit Committee was received and adopted. A vote of 12 guineas was confirmed to constitute the Lodge a permanent member of the correspondence circle of the Quatuor Coronati Lodge No. 2076. Bros. West, Gilbertson, and Cross were appointed members of the Standing Committee. The brethren afterwards dined together at the Trocadero Restaurant.

UNFOUNDED CHARGE AGAINST A MEDICAL MAN.—At the meeting of the Helston (Cornwall) Board of Guardians held on June 11th Mr. W. Wearne, M.R.C.S. Eng., L.S.A., the medical officer of the First District of the Helston Union, appeared to answer a charge of neglecting a male pauper. It was alleged that although the man several times visited Mr. Wearne he was unable to see him except on one occasion, when Mr. Wearne told him he had to see an urgent case. Mr. Wearne stated that he did not know the man had visited him until he saw the complaints in the papers and added that the man had since told him that he was sorry for what had taken place before the guardians, that he was made to go there and did not know what he was wanted for, and that he had nothing in the world against the medical man. After discussion the guardians passed a resolution entirely exonerating the medical officer from any blame and regretting that a member of the board should have brought such a groundless charge.

DIPHTHERIA IN LONDON.—The amount of diphtheria recorded in London in the four weeks ended on May 21st showed a slight increase upon that chronicled in the like period ended on April 23rd and thus caused a break in the decline of the disease which set in during the four-weekly period ended on March 26th. In the four weeks to Feb. 26th there had been 939 notified cases, in the succeeding similar period 813 cases, and in the four weeks to April 23rd a still further fall to 729. The period ended on May 21st witnessed 763 notified attacks. In the April period all the sanitary areas of London had been invaded, two of them had each upwards of 50 cases, and the weekly average for the period was 182; while in the May period one district escaped invasion, other 3 had only 4 cases in all, and but one area had more than 50 attacks. Still the weekly average was 191. But if the May period thus exceeded April in the amount of diphtheria, such was by no means the case as regards mortality from the disease. The deaths in the April period had been week by week 45, 29, 34, and 31, a total of 139, and a weekly average of 35, while the case mortality had been 19·1 per cent. But in May the weekly numbers of deaths were 39, 27, 20, and 21, or 107 in all, yielding a weekly average of 27, and a case mortality of only 15·3 per cent. Even more striking was the fall in mortality in the Outer Ring; in April the weekly numbers totalled to 65, an average of 16; in May they were only 14, 13, 10, and 8 respectively, a weekly average of 11 and 45 in all. Thus the amount of diphtheria was more than maintained in London in the May period as compared with April, while both in the county and in the suburban areas the mortality showed sensible decrease. In the week ended May 28th the deaths from diphtheria in London fell from 31 to 27 and were as many as 9 below the corrected decennial average for the corresponding weeks of 1888–97. Battersea was credited with three of the deaths and all 27 were in young persons aged under twenty years, two only being of infants, and 15 of children under five years of age. In the Outer Ring the deaths from diphtheria rose to 14, of which 6 occurred in West Ham, 4 in Edmonton, and two in Kingston registration districts. In the next week, ended June 4th, the deaths registered in London rose to 30, but were still 5 below the corrected decennial rate. 5 occurred in Hackney, and 3 in Islington, in Bethnal Green, and in Camberwell sanitary areas. None of the deaths were of infants, but 22 were of children in the first quinquenniad of life, and only one occurred of a person aged over twenty years. In the Outer Ring the deaths were 10 in number, there being 3 in Edmonton, 2 in West Ham, and 2 in Croydon registration districts. Last week the registered deaths from the disease in London fell to 23, being 12 below the corrected decennial average. The deaths, though few, were scattered over a wide area and were all, save one, of young persons aged under twenty years, only 1 being of an infant and 12 in all of children under five years of age. In the Outer Ring there were registered 11 deaths from the disease, including 3 in Dartford and 3 in West Ham registration districts. Hence, in London at any rate, there is seemingly some factor at work which is sensibly diminishing the mortality from diphtheria.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

'London University Commission Bill.

THIS measure having passed all its stages in the House of Lords is now in the House of Commons, where on Tuesday, June 14th, after a long and interesting debate, it was read a second time and referred to the Grand Committee on Law. Mr. George Harwood, seconded by Mr. Yoxall, moved the rejection of the Bill but did not press the motion to a division.

The Sick and Wounded in the Soudan.

General Russell has given notice that on an early date he proposes in reference to the recent operations in the Soudan to move "that in the opinion of this House it is the duty of Her Majesty's Government to take immediate steps to ensure that due provision is made for the care of the sick and wounded during the remainder of the campaign."

Poisons Bill.

In the House of Lords on Monday, June 13th, the Duke of Devonshire formally introduced "a Bill for regulating the sale of certain poisonous substances."

HOUSE OF COMMONS.

THURSDAY, JUNE 9TH.

Medical Arrangements in the Soudan.

General Russell asked the Under-Secretary of State for War whether the Medical Department attached to the British brigade at the battle of Atbara were insufficiently provided with chloroform or anæsthetics for the performance of operations on the battle-field, and if so what was the cause of such an omission; and whether a court of inquiry would be ordered to inquire into the circumstances.—Mr. Brodrick replied: The field medical equipment of each regimental unit, bearer company, and field hospital of the British brigade was fully equipped with chloroform and anæsthetics in accordance with the regulations, and there was an ample reserve at Wady Halfa. There is no reason to suppose there was any deficiency at the battle of Atbara.—General Russell asked whether there were no light ambulances attached to the cavalry in Egypt, and whether the only way of carrying the wounded after the cavalry reconnaissance before the battle of Atbara was by tying them on to gun limbers; and if so whether steps would be taken in future to have more attention paid to the medical arrangements.—Mr. Brodrick: No British cavalry were employed in the reconnaissance referred to. The medical arrangements for the cavalry who were present rested with the Sirdar.—General Russell asked whether the litters for the conveyance of wounded after the battle of Atbara were unprovided with sunshades such as were always attached to litters in hot climates, and, if so, if he would state the cause of this omission; and, whether any steps had been taken to ensure proper litters being provided for the wounded in future.—Mr. Brodrick: The stretchers hitherto provided for the British Army have not been fitted with covers. A supply of stretchers with folding hoods is, as I have already stated in the House, on its way to Egypt. The wounded at the battle of Atbara were carefully placed in the shade and only removed after dark.—General Russell asked whether no apparatus for the application of the Roentgen rays was carried with the field army during the recent operations in Egypt, whether there was every reason to believe that some lives of wounded officers and men might have been saved had these appliances been available, and whether in future the Government would take steps to prevent any question of economy in transport interfering with every precaution being taken to save valuable lives.—Mr. Brodrick: The Roentgen ray apparatus, which is a very recent invention, is very difficult to adapt for field service and was not carried with the field army in the recent operations. From the returns the medical authorities do not consider there was a single case in which

life could have been saved by the use of the apparatus. Two sets are now in Egypt and one more will be sent out shortly. Two have been adapted as far as possible for field service and one is for use in the base hospital.—Sir James Fergusson asked whether 400 men were not wounded by bullets, and whether the apparatus would not have been most useful in locating the bullets.—Mr. Brodrick: The senior medical officer has gone carefully into the cases and has been unable to trace any single case in which the apparatus would have been specially useful or in which an operation would have been carried out more successfully by the use of the rays.—General Russell asked the Under Secretary whether complaints had reached him that the medical arrangements for the reception of the wounded British officers at Cairo after the recent campaign were insufficient and unsatisfactory; that seven wounded officers were put into one small ward; and that the nursing staff was entirely inadequate; and whether the Government would order a searching inquiry to be made into this matter.—Mr. Brodrick: The ward in the Citadel Hospital, Cairo, in which the seven wounded officers were placed, is large and lofty and the cubic space and superficial area ample. The nursing staff consisted of five female nurses and over sixty men of the Medical Staff Corps, all of whom are trained as nurses. Every attention is being paid to the men wounded in the recent action.—General Russell: Is the right hon. gentleman aware that there was only one female nurse told off to attend to the officers?—Mr. Brodrick: I think my hon. and gallant friend is in error. What happened was that the superintendent nurse desired to wait on the wounded officers herself and for that reason the wounded officers got the idea that there was only one nurse able to attend upon them. No inquiry is needed. The staff of nurses is ample.

Petroleum Oil Accidents.

Mr. Ascroft asked the Home Secretary whether he was aware that since May 17th last there had been no less than three deaths in the metropolis and numerous fires caused by the use of dangerous low flash petroleum oil, and whether the Government intended to deal with the question and introduce a Bill at the earliest possible moment.—Sir M. White Ridley said in reply that no legislative proposals could be made until the report of the Select Committee on Petroleum had been received.

Rules for Dangerous Employments.

Mr. Tennant asked the Attorney-General whether it was in the power of the Secretary of State to make rules prohibiting the employment of any class of persons in a process certified by him to be dangerous or injurious to health, under Section 8 of the Factory and Workshop Act, 1891, as amended by Section 23 of the Act of 1895.—The Attorney-General said in reply: The Secretary of State has no power to make rules as suggested by the question. Rules can be proposed by the Secretary of State or the Chief Inspector, as the case may be, but they can only be established either by consent of the occupier of each factory or by arbitration.

Habitual Inebriates Bill.

After a short debate in which Sir M. White Ridley, Sir Walter Foster, Sir Charles Cameron, Dr. Farquharson and others took part, this bill was read a second time and referred to the Grand Committee on Law. The Home Secretary undertook to extend the operation of the bill to Ireland.

FRIDAY, JUNE 10TH.

Boots for the Soldiers in the Soudan.

Mr. Powell Williams, in reply to a question by Captain Bagot, said that boots made in strict accordance with the specifications sent home by the Sirdar will be issued to the British troops for the campaign in the Soudan.

The War Office and Artificial Limbs.

Sir Edward Hill asked the Under Secretary of State for War whether there was any ground for the allegation that soldiers who have had the misfortune to lose an arm or a leg in the service of the country were allowed to leave hospital without being furnished with an artificial limb; and, if so, whether he would take steps to cause the present regulations to be reconsidered.—Mr. Brodrick replied: Artificial limbs have hitherto been supplied to soldiers at the discretion of the Commissioners of Chelsea Hospital. Lord Lansdowne, however, considers that in every case where persons have lost a limb in the service of their country an artificial limb should be furnished at the public expense and a regulation will be issued on the subject.

MONDAY, JUNE 13TH.

Imported Milk.

Mr. Heywood Johnstone asked the Under Secretary of State for Foreign Affairs if any further report had been received from Mr. Gurney, Her Britannic Majesty's consul at Cherbourg, with regard to the import of fresh milk from that district by Messrs. Lepont and Son, and as to the nature of the antiseptic said to be employed by them to preserve the milk; and if any such information had been received when would it be published.—Mr. Curzon replied that a further report from Mr. Gurney had been received and had been communicated to the Board of Agriculture and the Local Government Board. The whole was not suitable for publication, but the more important parts would be published in the *Board of Trade Journal*.

Summer Clothing for the London Police.

Mr. Heywood Johnstone asked the Home Secretary whether summer clothing would be issued to the Metropolitan Police during the present month and if some lighter form of helmet or headgear could be issued to those on duty indoors.—Sir M. White Ridley replied that summer clothing had already been issued and taken into wear. New helmets, which were about 3oz. lighter than the old pattern, and the lightest it was possible to get consistently with being serviceable, were issued last year.

TUESDAY, JUNE 14TH.

The Treatment of Sick Soldiers

Captain Norton asked the Under Secretary of State for War whether it had been brought to his notice that one of the causes of the large number of old soldiers now to be found in workhouse infirmaries was due to the fact that until quite recently convalescent soldiers discharged from military hospitals had either to reside with their relatives or to return to full duty, with the result that they were not infrequently speedily back in hospital again, and that soldiers dying from incurable diseases had perforce to leave the hospitals; and whether he would consider the advisability of establishing convalescent homes where soldiers might be sent from the military hospitals, seeing that in the long run considerable economy would be effected and the efficiency of the Army increased.—Mr. Brodrick: The Secretary of State is not prepared to admit the premisses in the hon. Member's question. In certain cases sick soldiers are granted sick furlough for the purpose of residing with their friends when it is thought that the change will do them good, but otherwise they remain in hospital till cured. Soldiers suffering from incurable disease are not discharged from hospital unless it be at their own request or at the desire of their friends. There are convalescent hospitals at several stations in India, also at Malta, Ceylon, Hong-Kong, and Cyprus, while at home there is one at Eastbourne to which patients whose convalescence is not fully established may be sent.

Yellow Phosphorus in the Match Trade.

Mr. Steadman asked the Home Secretary whether his attention had been called to the Statement by Mr. Talbot, medical officer of health for Bow—viz., that he had visited the works of Bryant and May and was of opinion that unless the use of yellow phosphorus was prohibited these cases would continually occur. Under these circumstances would he bring forward an amendment to the Factory Acts having for its object the prohibition of the use of yellow phosphorus in the manufacture of matches, and would he prosecute either Bryant and May or their medical officer in consequence of the death of one of their workmen, Cornelius Lean.—Sir M. White Ridley, in reply, said that he had been informed by the District Board of Works that the medical officer had made a report to this effect and he (the Home Secretary) had asked for a copy of the report; without seeing that he could not, of course, judge of the value of his opinion. The whole subject of the use of yellow phosphorus was being thoroughly considered and active inquiries were being carried out in all directions. As far as the case of Lean was concerned he was informed that there were no grounds for instituting a prosecution for manslaughter. Messrs. Bryant and May and their medical man failed to notify the case, but there was no ground for thinking that their failure to do so was the cause of Lean's death.

Lead Poisoning in the Potteries.

Mr. Tennant asked the Home Secretary whether he had received any reports of the recent deaths from lead poisoning from the certifying surgeon for the Potteries District, and, if so, whether he would lay them upon the table.—Sir M. White Ridley replied: The hon. Member no doubt knows that the certifying surgeon has to report upon all cases of lead poisoning reported to him and not only the cases in which death occurs. His reports go to the superintendent inspector—in this case at Birmingham. I have not yet received all the reports and therefore I cannot give an answer at the present time.

THE VACCINATION BILL.

PROCEEDINGS IN GRAND COMMITTEE.

The Grand Committee of the House of Commons on Law met on Tuesday, June 14th, with Sir Henry Campbell-Bannerman in the chair, and began the consideration of the Vaccination Bill promoted by the Government.

Mr. Chaplin, President of the Local Government Board, took charge of the Bill, having beside him Sir Hugh Owen, Permanent Secretary of the Board, and Sir Richard Thorne, Principal Medical Officer of the Board.

Mr. Channing opened the proceedings by moving to insert at the beginning of the first clause words limiting the operation of the Bill to three years. He did so, he said, because he considered the measure to be experimental in character. Among other things it upset one of the vital recommendations of the Royal Commission which devoted seven years to the study of vaccination and took an enormous amount of evidence. The Royal Commission recommended that compulsion should be substantially done away with, but this measure reinstated compulsion and did so upon a distinct plea—the plea being the discovery of a form of lymph free from the risks and dangers which the Royal Commissioners found themselves compelled to recognise as associated with the present system of vaccination. As to this calf lymph he did not think that it had been absolutely ascertained to be free from risk. On the contrary there was credible evidence to the effect that it produced serious disorders in children and even caused death, and he used this as an argument why this Bill should be regarded as an experiment and limited in its operation.

Mr. Chaplin submitted that the speech of the hon. Member was appropriate to the second reading but not to the committee stage of the Bill. As to the merits of calf lymph he would only say that his study of the question led him to a totally different conclusion from that of the hon. Member, while as to the proposal that the operation of the Bill should be limited to three years he could not for a moment think of accepting it.

Sir Charles Dalrymple, one of the members of the Vaccination Commission, said he was at a loss to understand what Mr. Channing meant in his references to the report of that body. It was true they had made a very long report and that this Bill was a very short one, but in the Bill there were two recommendations of the Royal Commission—the extension of the age and the domiciliary visits—to which he attached very great importance. This proposal he regarded as one of the first lines of attack upon the Bill and he hoped the committee would reject it.

Sir Charles Dilke said he was in favour of the Bill, but all the same he thought it an experiment and as such it should be limited in its operation in the way proposed.

Mr. Monk took the view that to limit the operation of the Bill would be fatal to its success and increase the excitement in the public mind over the vaccination question.

Mr. Thomas Bayley insisted that glycerinated calf lymph was an experiment and that it was only right that the subject of its use should be reconsidered at the end of three years.

Mr. Logan said he was opposed to the Bill altogether and therefore could not approve of its being in operation even for three years. The people he represented in this matter were people who had conscientious objections to vaccination.

Sir Walter Foster intimated that he was prepared to vote for limitation of the period of operation.

Mr. J. Brigg thought that limitation would be calculated to overcome the feeling of opposition to the Bill.

Mr. Pickersgill declared himself an out-and-out opponent of the Bill

and desirous to defeat it. He insisted that if the Bill were passed in its present form it would not be the end but the beginning of public controversy and excitement.

After some further debate the vote was taken, when Mr. Channing's proposal was defeated by 21 to 14 votes.

The committee then proceeded to the consideration of Clause 1 which in the Bill as introduced was in the following terms, viz.:—"The period within which the parent or other person having the custody of a child shall cause the child to be vaccinated shall be *twelve months* from the birth of the child instead of the period of three months mentioned in Section 16 of the Vaccination Act of 1867, and so much of that section as requires the child to be taken to a public vaccinator to be vaccinated shall be repealed. The public vaccinator of the district shall, if the parent or other person having the custody of a child so requires, visit the home of the child for the purpose of vaccinating the child. If a child is not vaccinated within *nine months* after its birth, the public vaccinator of the district shall visit the home of the child, and shall offer to vaccinate the child with glycerinated calf lymph."

Mr. Carlile moved to substitute six months for twelve as the period from birth within which the vaccination was to take place. If his amendment were adopted he said it would make the law in England uniform with that in Scotland, it would reduce the difficulty of tracing removals, and it would get the vaccination over before the child began to move about and ran the risk of having the wound scratched and irritated.

Sir Walter Foster said that the difficulty of tracing removals was a serious business and made him prefer six months to twelve.

Sir William Priestley supported the amendment. He felt certain, he said, that between six months and twelve a great many of the children would be lost sight of. He further saw no reason why there should not be uniformity between Scotland and England in this matter. A great many people had residences in both countries, and it seemed an anomaly that in the one country there should be vaccination under six months, and in the other under twelve months. Another consideration was that between the age of six months and twelve months a great many infantile ailments came in, and it was most desirable that the vaccination should be over before they appeared. After six months a child left its mother's arms and began to move about, and there was great risk of the vesicles being broken and irritation caused. At present a great number of children now escaped vaccination. In 1893 out of 914,000 there were 133,000 unaccounted for by vaccination; in 1894 out of 889,000 there were 156,000; and in 1895 out of 921,000 there were 175,000, and if they extended the period for vaccination he felt certain that there would be a still further default in vaccination.

Mr. Chaplin said he could not hold out against this pressure of opinion and would accordingly accept the amendment.

The amendment was put from the chair and at once adopted by the committee.

Mr. Sydney Gedge moved to insert in the clause: "Every parent or other person having the custody of a child who shall take it or cause it to be taken to the public vaccinator within the said period of twelve months to be vaccinated, or shall within such period as aforesaid cause it to be vaccinated by some other medical practitioner shall be entitled to the sum of 1*s*. The public vaccinator or other medical practitioner who has vaccinated the child shall pay to such person as aforesaid the sum of 1*s*., and shall be repaid the same by the sanitary authority, and every such medical practitioner other than the public vaccinator shall also be paid a fee of 2*s*. 6*d*. in respect of each child vaccinated by him upon his sending to the sanitary authority a certificate that the child has been vaccinated and 1*s*. paid as aforesaid. The Local Government Board may prescribe a form for the purpose of certificate to be sent in pursuance of this section, and if such form be so prescribed it shall be used in all cases to which it applies. The sanitary authority shall gratuitously supply forms of certificates to any medical practitioner residing or practising in their district who applies for the same, and shall pay to every medical practitioner for each certificate a fee of 2*s*. 6*d*., and also the sum of 1*s*. so paid by him as aforesaid." The hon. Member expressed his confidence that this amendment would get over nine-tenths of the conscientious objections to vaccination.

Mr. Chaplin intimated that he could not accept the amendment, though he admitted it would give him a most powerful weapon against the anti-vaccinator.

Mr. Bayley suggested that the hon. Member should not stop at a shilling but give a larger bribe.

Sir Walter Foster scouted the idea that people with conscientious objections were to be bought over in this fashion.

Mr. Steadman spoke of the amendment as an insult to the working classes of England.

After some further debate the amendment was negatived without a division.

Sir Walter Foster then moved to add at the end of the first Subsection of the clause: Where a child is by this Act required to be vaccinated within a certain time (hereinafter called the appointed time) the parent or person having the custody of the child may, not less than two months before the expiration of the appointed time, make in the prescribed form a statutory declaration of conscientious objection to the vaccination of the child, and if the statutory declaration is within seven days after its date delivered to the registrar of births for the district in which the child resides the registrar shall register the same, and shall, if required, deliver to the parent or other person making the declaration a certificate of such registration and shall also send a copy of the certificate to the public vaccinator of that district, and thereupon an order shall not be made or proceedings taken with reference to the non-vaccination within that appointed time of the child mentioned in the certificate. The parent or other person registering a statutory declaration under this section shall, if he requires a certificate of such registration, pay to the registrar the prescribed fee for a certificate of registration." This amendment, Sir Walter Foster said, was based on the report of the Royal Commission and would, he thought, help to mitigate the feeling of irritation which existed in the country and would do away with the vaccination martyr. His aim was to save vaccination from discredit and make it general and effective. The medical press, he said, was prepared nowadays to accept a suggestion of this kind because they saw in it a likelihood of efficient vaccination and the possibility of a system of revaccination.

The amendment was under discussion when the committee adjourned on Friday, June 17th.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Outlines of Practical Surgery. By Walter G. Spencer, M.B., M.S., F.R.C.S. 1896. Price 12*s*. 6*d*. net.

BAILLIÈRE ET FILS, Paris.

Guide et Formulaire de Thérapeutique Générale et Spéciale. Par Dr. V. Herzen. 1898.

BLACKIE AND SON, London and Glasgow.

The Principles and Practice of Modern House Construction. Edited by G. Lister Sutcliffe. Div. Vol. I. 1898.

CARRÉ, GEORGES, ET C. NAUD, Paris.

Le Cancer. Maladie Infectieuse à Sporozoaires. Par Dr. F. J. Bosc. 1898.

CASSELL AND CO., London.

The Life of Wm. E. Gladstone. Edited by Sir Wemyss Reid. Illustrated. Part I. To be completed in 12 parts, price 6*d*. each. 1898.

"CHEMIST AND DRUGGIST," OFFICES OF THE, Cannon-street, London.

Pharmaceutical Formulas. By P. MacEwan, F.C.S. 1898. Price 8*s*.

CLOWES, WILLIAM, AND SONS, Charing-cross, London.

Stretcher Drill Illustrated, including Hand, Seat, and Wagon Drill. By Surgeon-Major J. J. de Zouche Marshall. 1898. Price 2*s*. 6*d*.

CONSTABLE, A., AND CO., Whitehall-gardens, Westminster.

Travels and Life in Ashanti and Jaman. By R. A. Freeman. Illustrated. 1898. Price 21*s*.

DE BAILLY-BAILLIÈRE É HIJOS, Madrid.

Tratado De Anatomia Filosofica. Por Dr. D. Ricardo Lozano Monzon. Primera Serie: Osteologia, Artrologia, y Miologia. 1898.

DIGBY, LONG, AND CO., Bouverie-street, Fleet-street, London, E.C.

Memoirs of a Young Surgeon. By Frederick Ashurst, M.B. Price 1*s*. 6*d*.

FIRMIN-DIDOT ET CIE., Paris.

Les Français d'Aujourd'hui. Par Edmond Demolins. Deuxième mille.

FISCHER, GUSTAV, Jena.

Die Zelle und die Gewebe. II. Von Professor Dr. Oscar Hertwig. 1898.

Handbuch der Therapie innerer Krankheiten. Von Dr. F. Penzoldt und Dr. R. Stintzing. Elfte und Zwölfte Lieferungen. 1898.

GRIFFIN, CHARLES, AND CO., Exeter-street, Strand, London.

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Compiled from official sources. 15th annual issue. 1898. Price 7*s*. 6*d*.

HOEPLI, ULRICO, Milano.

Raggi di Röntgen e loro Pratiche Applicazioni di Italo Tonta. 1898.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Charing-cross-road, London.

B. Bradshaw's Bathing-places and Climatic Health Resorts. 1898. With a Map. Price 2*s*. 6*d*.

KIMPTON, H., High Holborn, London.

Lectures on the Malarial Fevers. By W. S. Thayer, M.D. 1898. Price 12*s*. net.

KORNFELD, H., Berlin, W., 35.

Anatomie der Nervenzellen. Von Professor Dr. A. Goldscheider und Dr. E. Flatau. 1898.

LABOUR PRESS, Miller-street, Manchester, and the "Clarion" Office, Fleet-street, London.

Diary Notes of a Visit to Walt Whitman and Some of his Friends in 1890, with a Series of Original Photographs. By John Johnston, M.D. Edin. 1898. Price 3*s*. 6*d*.

LEHMANN, J. F., München.

Atlas und Grundriss der Traumatischen Frakturen und Luxationen. Von Professor Dr. H. Helferich und B. Keilitz. Band 8. 4. Auflage. 1898.

LEWIS, H. K., Gower-street, London.

Text-book of Diseases of the Kidneys and Genito-urinary Organs. By Professor Dr. P. Fürbringer. Translated by W. H. Gilbert, M.D. In two vols. Vol. II. 1898.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

Comfort and Cleanliness. The Servant and Mistress Question. By Mrs. Catherine M. Buckton. 1898. Price 2*s*.

MACMILLAN AND CO., London.

A System of Medicine. By many Writers. Edited by T. C. Allbutt, M.D., F.R.C.P. Vol. V. 1898. Price 25*s*. net.

PENTLAND, YOUNG J., Edinburgh.

The Nervous System and its Diseases. By Chas. K. Mills, M.D. Illustrated. 1898.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.

An American Text-book of Genito-urinary Diseases, Syphilis, and Diseases of the Skin. Edited by L. Bolton Bangs, M.D., and W. A. Hardaway, A.M., M.D. In 2 Vols. Illustrated. 1898. Price 42*s*.

Treatment: A Journal of Practical Medicine and Surgery. Vol. I. 1898. Price 12*s*.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.

Twentieth Century Practice. Edited by Thos. L. Stedman, M.D. Vol. XIII., Infectious Diseases. 1898.

SCIENTIFIC PRESS, Southampton-street, Strand, London.

Burdett's Hospitals and Charities, 1898. By Sir H. Burdett. Price 5*s*.

SEEKWOOD, A. G., AND Co., New York.

Transactions of the American Pediatric Society, Ninth Session, held in May, 1897, in Washington. Edited by Floyd M. Crandall, M.D. Vol. IX. Reprinted from the Archives of Pediatrics, 1897.

STANFORD, EDWD., Cockspur-street, Charing-cross, London.

Patented Geological Model of London and Suburbs. By Jas. B. Jordan. 1898. Price in frame, 15s.

STEINHEIL, G., Paris.

Massage Gynécologique (Méthode Thure Brandt). Par Gustave de Frumerie. 1897.

SWAN SONNENSCHEIN AND Co., London.

Practical Plant Physiology. By Dr. W. Detmer. Translated from the second German edition by S. A. Moor, M.A. Camb., F.L.S. Illustrated. 1898. Price 12s.

The Wonderful Century: its Successes and its Failures. By A. R. Wallace. 1898. Price 7s. 6d.

THACKER, W., AND Co., Creed-lane, London.

Notes and Appendix to the Fourth Edition of Friedberger and Fröhner's Lehrbuch der Speciellen Pathologie und Therapie der Hausthiere. By M. H. Hayes, F.R.C.V.S. With a Chapter by Dr. G. Newman, D.P.H. 1898.

TROW DIRECTORY PRINTING COMPANY, New York.

Medical and Surgical Report of the Presbyterian Hospital in the City of New York. Vol. III. January, 1898. Edited by A. J. McCosh, M.D., and W. B. James, M.D.

WARWICK BROS. AND RUTTER, Front-street, West, Toronto,

Sixteenth Annual Report of the Provincial Board of Health of Ontario for the year 1897.

WERNER COMPANY, Cockspur-street, London.

Schenk's Theory. The Determination of Sex. By Dr. Leopold Schenk. Authorised Translation. 1898. Price 5s.

WRIGHT, J., AND Co., Bristol.

Rheumatoid Arthritis: Its Pathology, Morbid Anatomy, and Treatment. By G. A. Bannatyne, M.D. Glasg., M.R.C.P. Edin. Second Edition. Illustrated. 1898. Price 7s. 6d. net.

Bad Kreuznach und seine Umgebung in Vergangenheit und Gegenwart. Herausgegeben vom Kurverein (R. Voigtländer, Kreuznach. 1898).—Der Kraftverbrauch beim Radfahren. Von Stabsarzt Dr. Sehrwald (Separatabdruck aus dem Archiv für Hygiene, Band xxxii., Heft 4).—Catalogue of Lewis's Medical and Scientific Library, including a Classified Index of Subjects. New Edition. 1898. Price 5s.—Handbook on the Workmen's Compensation Act, 1897. By Mr. Roberts-Jones, Barrister-at-Law. Fifth Edition. 1898. Price 2s. 6d.—La Protection et la Santé de l'Écolier et les Colonies Sanitaires de Vacances. Conférence de M. le Dr. Delvaille, de Bayonne, faite à "Biarritz Association" le 10 Juin, 1897 (A. Lamaignère, Biarritz, 1897).—Autour d'une Épidémie: Bayonne 1837-1897. Par Dr. C. Delvaille (A. Maloine, Paris. 1898).—Magazines, &c., for June: Strand Magazine, Boy's Own Paper with Summer Number, Girl's Own Paper with Summer Number, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, Humanitarian, Wide World Magazine, St. Peter's Magazine, Fashion and Fancies, and The Home Magazine.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARLING, A. STANLEY, M.R.C.S., L.R.C.P., has been appointed by the Home Secretary Medical Referee under the Workmen's Compensation Act for the Lancaster County Court District.

BLUMFELD, J., M.D., B.C. Cantab., has been appointed Anæsthetist for the Grosvenor Hospital for Women and Children, Vincent-square, Westminster.

BOYCE, Professor R. W., has been appointed an Analyst for the City of Liverpool.

BROWNE, ADA M., L.S.A. Lond., has been appointed Assistant Anæsthetist for the New Hospital for Women, Euston-road, London.

CANTLIE, JAMES, M.A., M.B., F.R.C.S., has been appointed Surgeon for the West-end Hospital for Nervous Diseases, Welbeck-street, London, vice Edward Cotterell, deceased.

CHRISTOPHERS, S. R., M.B., Ch.B. Vict., has been appointed Assistant Medical Officer for the Mill-road Infirmary of the West Derby Union.

DAVIES, W. J. E., L.R.C.P., M.R.C.S., has been appointed an Assistant Medical Officer for the Infirmary of the Parish of St. Luke, Chelsea, vice A. E. Druitt, resigned.

DAVIES, W. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second and Third Sanitary Districts of the Hertford Union.

FORBES, F. G., M.B., C.M. Edin., has been appointed an Assistant Resident House Surgeon for the Cardiff Infirmary.

FULLER, E. BARNARD, M.B., C.M., F.R.C.S. Edin., has been appointed an Honorary Medical Officer for the Somerset Hospital, Capetown, Cape Colony, vice C. F. K. Murray, resigned.

GOUGH, BERNARD B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon for the Infirmary, Burton-on-Trent.

GREENWOOD, T. PARKER, M.B., C.M., B.Sc. Edin., has been appointed Third Assistant Medical Officer for the County Asylum, Fareham, Hants.

HUNT, J. W., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the No. 7 Sanitary District of the Hackney Union.

KNOTT, CHAS., M.R.C.P. Edin., M.R.C.S., has been appointed Medical Superintendent for the Infirmary of the Portsea Island Union.

LEADER, C. R., M.B., C.M. Irel., has been appointed Medical Officer pro tem. by the Wem Rural District Council, vice C. A. Corke, resigned.

MACPHERSON, H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Bere Ferrers Sanitary District of the Tavistock Union.

METCALFE, G., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eastville Workhouse of the Bristol Union.

MORLEY, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Assistant Medical Officer for the Infirmary of the Portsea Island Union.

SANDALL, T. H., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Alford Sanitary District of the Spilsbury Union.

TABB, J. F., M.R.C.S., L.S.A., has been re-appointed Medical Officer for the Greenwich East Sanitary District of the Greenwich Union.

THORNE, MAY, M.D. Brux., L.S.A., has been appointed Assistant Anæsthetist for the New Hospital for Women, Euston-road, London.

WIGGINS, W. D., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse and Infirmary of the Greenwich Union.

WILLIAMS, JOHN D., M.D., C.M., B.Sc. Edin., has been appointed Honorary Consulting Gynæcologist for the Cardiff Provident Dispensary.

WOOD, T. JASON, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon for the Bradford Royal Infirmary.

WRIGHT, F., L.S.A. Lond., has been appointed Medical Officer for the York (Escrick Out-Relief) Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £50, with board, apartments, and laundry. Applications to Mr. F. H. Carver, Hon. Sec., 5, Rumford-place, Liverpool.

CARDIFF INFIRMARY.—Assistant House Physician for six months. Board, apartments, and washing, and an honorarium of £10.

CLAYTON HOSPITAL, Wakefield.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, lodging and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per year, with board, apartments, and laundress.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator. Honorarium £50 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

GLOUCESTER COUNTY ASYLUM.—Locum Tenens for about three months. Terms £2 2s. per week and all found (except liquors).

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with board, lodging, and washing in the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Non-Resident Medical Officer. Stipend £70 per annum.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House Physician for two years, unmarried. Salary £60 per annum, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Anæsthetist for twelve months.

PARISH OF ST. LEONARD, Shoreditch.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary £120 per annum, rising £10 annually to £150 per annum, with rations, furnished apartments, and washing in the Infirmary, subject to statutory deductions. Applications to the Clerk to the Guardians, 213, Kingsland-road, N.E.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner in Dental Surgery.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per year up to £100, with residence, board, and washing.

ROYAL INFIRMARY, Sheffield.—Vacancy on the Honorary Surgical Staff.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon. Also Junior House Surgeon. Salary £50, with board and residence in the hospital.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon.

SALISBURY INFIRMARY.—Assistant House Surgeon for six months, unmarried. Board, lodging, and washing provided, and an honorarium of £10 given.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and residence provided.

SUNDERLAND BOROUGH ASYLUM, Ryhope, near Sunderland.—Clinical Clerk (qualified), for three or six months. Salary at the rate of £20 per annum, with board, lodging, and washing.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80, rising £10 annually to £100, with board and residence.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House Surgeon, unmarried. Salary £30 per annum, with board and residence in the hospital.

UNIVERSITY COLLEGE, London.—Resident Medical Officer.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W., and the VICTORIA CONVALESCENT HOME, Broadstairs.—House Physician for twelve months. Board and lodging in the hospital provided, and an honorarium of £50 will be given.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon and Anæsthetist in the Out-patient Department for six months. Honorarium £20, and luncheon at the hospital provided.

WEST RIDING ASYLUM, Wakefield.—Pathologist. Salary £150, increasing to £200.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon and to act as Surgical Registrar. Salary £100 a year, with board, lodging, and washing. Also Assistant House Surgeon for six months. Board, lodging, and washing provided, and a small honorarium will be given.

Births, Marriages, and Deaths.

BIRTHS.

ARNOLD.—On June 11th, the wife of Ernest Charles Arnold, M.B., F.R.C.S. Eng., of Park-road, Forest-hill, of a daughter.

BERRIDGE.—On June 8th, at Enderby, Leicestershire, the wife of William Robert Berridge, M.R.C.S., L.R.C.P. Lond., of a daughter.

RANSOME.—On June 7th, at Chase Side, Southgate, the wife of A. Sidney Ransome, M.B., B.C., D.P.H. Cantab., of a daughter.

SIMS.—On June 12th, at The Hollies, Green-hill, Derby, the wife of G. S. Sims, M.R.C.S., L.R.C.P., of a daughter.

SOUTH.—On June 9th, the wife of Richard E. E. South, L.R.C.P., M.R.C.S., of Church Close, Boston, Lincolnshire, of a son.

WYNNE.—On June 5th, at Leigh, Lancashire, the wife of Fred. H. Wynne, M.B., of a daughter.

MARRIAGES.

AUSTIN ROBINSON—ROGERS JENKINS.—On May 10th, at S. Augustine's, Durban, Natal, by the Rev. Canon Booth, M.D., assisted by the Rev. Hayes Robinson and the Rev. J. Walton, Frederick Augustine Robinson, L.R.C.P., M.R.C.S., District Surgeon, Nondweni, Zululand, to Lilian Agnes Rogers Jenkins, L.R.C.P. & S. Edin., L.F.P.G., &c., late of Lucknow, N. India.

BOWER—SHERINGHAM.—On June 9th, at Tewkesbury Abbey, by the Rev. H. A. Sheringham, Vicar, brother of the bride, assisted by the Ven. the Archdeacon of Gloucester and the Rev. Ernest Dykes, Vicar of Barrow-in-Furness, cousin of the bridegroom, Ernest Dykes Bower, of Elton House, Gloucester, to Margaret Dora Constance Sheringham, youngest daughter of the Archdeacon of Gloucester and Canon of Gloucester Cathedral.

BUTLER—GULLICK.—On June 7th, at Christ Church, Bath, Arthur George Butler, M.B. Lond., of Trevose, Beckenham-road, Penge, to Maude Corallina, eldest daughter of T. Gullick, Esq., of Heathfield, Bath.

FRIPP—HAYWOOD.—On June 8th, at the Parish Church, Reigate, Alfred Downing Fripp, M.S., F.R.C.S., of Portland-place, W., to Margaret Scott, only daughter of Thomas Burt Haywood, of Woodhatch, Reigate.

GRAHAM—BLACKBURN.—On June 14th, at Batley Parish Church, Vyner Graham, M.R.C.S., L.R.C.P., of Westbrook House, Aston, Birmingham, to Sarah Alice (Sissie) eldest daughter of J. W. Blackburn, J.P. (Mayor of Batley), Field House, Batley.

HEDGES—MCCAUL.—On June 8th, at St. Pancras Church, Charles H. Hedges, M.B. Camb., elder son of Thomas Hedges, of Heywood House, Stewkley, Bucks, to Ella Mildred, youngest daughter of J. C. C. McCaul, Taviton-street, Gordon-square.

JOHNSTON—BAKER.—On June 9th, at St. Peter's Church, Earley, Reading, by the Rev. F. J. Greenham, assisted by the Rev. C. B. Adams, Vicar of St. Peter's, David Richmond Johnston, B.A. T.C. Dublin, L.R.C.P. Edin., and of Reading, youngest son of the late Rev. Thos. Johnston, of Killarney, co. Kerry, Ireland, to Maud, eldest surviving daughter of Edward Edmund Baker, Esq., C.E., of Stoneleigh, Eastern Avenue, Reading.

SIBSON—POLLARD.—On June 1st, at the Friends' Meeting House, Tottenham, Arthur B. Sibson, M.R.C.S., L.R.C.P., L.D.S. Eng., youngest son of Daniel Sibson, Esq., of Stockton-on-Tees, to Henrietta Louise, eldest daughter of Henry J. Pollard, Esq., of Essex Lodge, Tottenham.

WEBB—HOPWOOD.—On April 5th, at Christ Church, North Adelaide, by the Ven. Archdeacon Farr, M.A., LL.D., James Ramsay, M.B., B.S., F.R.C.S., son of Richard John Webb, late of the Victorian Police Force, to Mabel Emma, eldest daughter of James Cuthbert Hopwood, of Stoke Newington, London.

DEATHS.

BARREN.—On June 8th, in London, Brigade-Surgeon-Lieutenant-Colonel William A. Barren, Bombay Sappers and Miners, aged 43 years.

CASE.—On June 15th, at 5, Langhorne-gardens, Folkestone, Henry Case, M.R.C.S. Eng., for twenty-two years Medical Superintendent of Leavesden Asylum, King's Langley, Herts, aged 53 years. (Funeral at Folkestone Cemetery on Saturday at 2 o'clock.)

FOSTER.—On June 10th, at the British Hospital, Port Said, Frans F. Foster Foster, M.R.C.S., L.R.C.P. Lond., only surviving son of the late Colonel Foster Foster, aged 33 years.

LEE.—On June 11th, at his residence, Queensborough-terrace, Hyde-park, Henry Lee, F.R.C.S., late of Savile-row, W., Senior Consulting Surgeon to St. George's Hospital, aged 81 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 16th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 10	30·03	N.E.	0·10	81	63	56	56	58	Raining
" 11	30·11	S.E.	0·07	118	76	53	56	61	Fine
" 12	30·25	N.E.	...	66	57	52	52	54	Overcast
" 13	30·25	N.E.	...	72	58	49	49	52	Overcast
" 14	30·27	N.E.	...	80	57	50	48	52	Overcast
" 15	30·27	N.E.	...	104	63	49	47	51	Overcast
" 16	30·23	N.E.	...	84	59	49	49	52	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West. London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (20th).—CHARITY ORGANISATION SOCIETY (Theatre of the Royal United Service Institution, Whitehall, S.W.).—4.30 P.M. Papers:—Mr. C. Dent: Proposed Arrangements for Out-patients at the New Belgrave Hospital for Children.—Mr. W. H. Kesteven: The General Practitioner and Out-patient Department.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (20th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Impaired Movements of the Vocal Cords.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. Lennox Browne: Acute Inflammation of the Accessory Sinuses of the Nose.

TUESDAY (21st).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. Martin: The Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Pemphigus and Dermatitis Herpetiformis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Tooth: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Mr. D. Grant: On Disorders of the Ear in their relation to Diseases of the Nervous System.

WEDNESDAY (22nd).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: Disinfection and Disinfectants.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Habershon: The Diagnosis of Pleural Effusion.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Robinson: Gynæcological Cases.

THURSDAY (23rd).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. S. Martin: The Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Intestinal Flux.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Barlow.
CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.)—5 P.M. Dr. D. Grant: Diseases of the Frontal Sinus.
CHARING-CROSS HOSPITAL.—4 P.M. Dr. Mott: Demonstration of Medical Cases. (Post-graduate Class.)

FRIDAY (24th).—LONDON POST-GRADUATE COURSE.—King's College 3 to 5 P.M., Dr. Wilkinson: Tetanus, Rabies, and Cholera.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

HOME-NURSING OF PAUPER PATIENTS.

AT a meeting of the Loughborough Board of Guardians held on June 7th, Mr. P. Phelps, a medical member of the board, brought forward the question of the nursing of the out-door sick poor of the union. The system at present in use is that the relieving officer employs any one who is willing to undertake the work, entirely without reference to her knowledge or suitability. He argued that the sick poor ought to be attended to quite as well outside the workhouse as inside, but it was impossible to expect proper nursing for 1s. 6d. a week, the sum paid in one particular case which Mr. Phelps described, and he moved that the board should provide a properly qualified nurse to attend on the sick poor of the union. The chairman remarked that the matter had been brought before the board several times and the decision come to was that they could not support the Queen's Nursing Association. After a discussion the motion was lost by a considerable majority.

TOUTING OPTICIANS.

WHEN does a practitioner accept the services of a tout? The question is not always an easy one. For example, a patient goes to an optician to have her eyeglasses repaired and he recommends her, without being asked, not to see her own medical man but to consult another practitioner in the same town, who sees the patient and does not communicate with her medical man. The consultant is blamed by the practitioner, but he admits no offence and has been informed that any optician whose advice is asked by a customer is justified in giving the advice which he thinks best for the customer. Clearly the medical profession has no power of stopping the mouths of opticians, except through the agency of those gentlemen who are by their recommendations placed in the somewhat delicate position of taking the patient of another medical man. It is alleged by the aggrieved practitioner that the optician's advice was not asked. At any rate it was given, it was acted on and for this occasion the patient was transferred. We are not disposed to blame the consultant too much. But he should, we think, give the friendly optician a hint against volunteering advice to the patients of other medical men, and when he is so consulted by those whom he has reason to know are the patients of another practitioner he might put himself in friendly communication with the practitioner. There is nothing in which the courtesy of the profession is more shown than when one of its members does his best to neutralise the officious patronage of indiscreet friends.

"THE LATE ARTHUR JEFFARES BARLOW."

To the Editors of THE LANCET.

SIRS,—Please acknowledge in THE LANCET the enclosed sums on behalf of this fund. I am, Sirs, yours faithfully,

179, Hither-green, Lewisham, June 13th, 1898. R. H. CAPPER.

	£ s. d.		£ s. d.
Per Dr. Clibborn:—		Per Dr. Moore:—	
Dr. S. MacLaughlan (Strangford)	1 1 0	Sir Francis Cruise, M.D., Dublin	1 1 0
Dr. J. M. Elliott (Rathfriland, Co. Down)	1 1 0	Professor A. V. Macan (Dublin)	1 1 0
		"G. P." (Woolwich) ...	1 1 0

HOLY WATER AND INFECTION.

A CORRESPONDENT writing to the *English Churchman* points out the danger of infection from holy water, and relates what he saw at Milan Cathedral a little more than a month ago: "At the entrance of the cathedral," he says, "is a basin containing holy water, around which I saw a group consisting of a poor man, a Sister of Mercy, and probably his mother or wife. The poor man, suffering from a terrible affliction of the eyes, was having his bandages taken off, dipped in the water, and readjusted with many invocations." He concludes: "Oh, for faithful, earnest men who, before it is too late, would sound a warning voice against the spread of such rank superstition and physically dangerous error!" and we heartily join with him in his plea.

A QUESTION OF FEES IN A CORONER'S COURT.

To the Editors of THE LANCET.

SIRS,—The following short account of a recent inquiry at a coroner's court presided over by a legal gentleman may be of interest to some of my medical *confrères*. Briefly the facts are as follows. I was called to a case one morning and when I arrived about noon I found a child aged sixteen months in a state of profound collapse and passing loose stools mixed with blood. I was informed that the child had been quite well up to that morning. There was no evidence of intussusception. I informed the mother of the child that the condition was very serious and might prove fatal. I saw the child again about 3 P.M., when the collapse was more profound, and the child died about 5 P.M. At the inquiry which was held the mother gave evidence that a considerable quantity of blood followed a rectal examination that I made, and that when some brandy and barley-water which I had ordered were given the child immediately passed into convulsions and died in that state. I gave in my evidence that the child was in a state of collapse when first seen and had not shown signs of convulsions, that I made a rectal examination to try to determine the existence or not of intussusception, that the examination made carefully could not produce bleeding, and that as a matter of fact the same blood-stained matter came away from the bowel after the examination as before, and that a post-mortem examination was desirable to determine the cause of death. The coroner entered minutely into the question of rectal examination, discussed in detail the doses of brandy I had thought fit to prescribe, and informed the jury that he considered that a very grave imputation had been made on me, and discussed the matter in such a way as to make it plain to the jury that he considered it quite possible that I had seriously injured the child by the rectal examination, and that I might have sent the child into fits by giving it the brandy. It was determined to postpone the inquiry until a post-mortem examination had been made, the examination to be made not by me but by the police-surgeon, and I was ordered personally by the coroner to be present at the examination of the body and to appear at the adjourned inquest. The examination disclosed acute inflammation of the whole of the large intestin

and also a tuberculous condition of the abdominal glands and the verdict was given accordingly after the police-surgeon had been subjected to close examination by the coroner on the subject of rectal examinations and the dosage of brandy; but the coroner refused me a fee for attendance at the post-mortem examination, although I had been expressly ordered by him to attend, on the ground that charges had been made against me and that he ordered me to attend in my own interests. Now, Sirs, I have been many years in practice, and have attended many inquests, but I am a new-comer in this town, and it is a new experience for me to come into contact with a coroner so ignorant of ordinary medical procedure as to allow a charge to be bolstered up against a qualified medical man upon such a frivolous basis, and I consider that as I was instructed to attend at the post-mortem examination I am entitled to a fee for the same. I should be glad to know your opinion in the matter. I am, Sirs, yours faithfully,

June 7th, 1898. M.D. EDIN.

*** Our correspondent has our sympathy, for he has not received pleasant treatment, but we doubt if he could justify a claim for a fee. Circumstances were made to wear an appearance which would have necessitated his presence at the post-mortem examination whether he was ordered to be there or not. In every walk of life a man may have to defend himself against imputations which can be shown to be quite unjust and to do so at personal inconvenience and loss. The coroner being a lawyer had not the necessary knowledge to understand the child's condition, but that, though regrettable, was not his fault.—ED. L.

NURSING INSTITUTIONS AND THEIR CHARGES.

To the Editors of THE LANCET.

SIRS,—It may be of some interest to many of my *confrères* to know my experience of nursing institutions. Recently my wife contracted typhoid fever and I employed nurses from the Hanover Institute, the charges per week for each nurse, besides extras, being £3 3*s*. Being under the impression that some reduction was usually made to medical men and their wives, I wrote to ask if any reduction could be made in my case, and received a negative reply. I then wrote to another institution, the London Association of Nurses, asking if any reduction was made to the medical profession and received the following answer: "We do try to make a reduction in the nurses' fees when sent to a medical man" and "would be pleased to reserve you a nurse suitable for a typhoid case whose fee would be £1 11*s*. 6*d*. per week." I have no doubt other institutions do the same except the one in question. I think it my duty to make it known, as this must be a serious matter for many a struggling practitioner.

I am, Sirs, yours faithfully,

Balham, S.W., June 15th, 1898. LEWIS JONES, M.D. Dub.

*** Medical men are generally asked to attend nurses gratis or at greatly reduced fees. We believe they invariably accede to the request, so that we think it quite reasonable that a nursing institute should be prepared to make corresponding reductions to medical men.—ED. L.

ETIQUETTE FOR THE ANÆSTHETIST.

To the Editors of THE LANCET.

SIRS,—Would you kindly give me your opinion on the following case. A lady who has been under the care of a chiropodist for several months for ingrowing toe-nail decides under his advice to have the nail removed, which he agrees to do in the presence of a qualified man who gives chloroform. Is the medical man justified in giving the anæsthetic? and should anything happen at the operation or afterwards does the chiropodist render himself or his employer liable to legal proceedings? I am, Sirs, yours faithfully,

June 11th, 1898. J. D. B.

*** A medical man should not give an anæsthetic for a chiropodist. An anæsthetist's attention should be devoted to giving the anæsthetic: his presence in the room does not make him responsible for any details of an operation. If he were to assume legal responsibility for a chiropodist's manœuvres he would be guilty of covering and would be removed from the Medical Register.

VESALIUS.

A FREQUENT correspondent writes:—"An American medical journal some time last year published an article on Vesalius, with facsimile reproductions of 'The Lesson of Anatomy,' by J. Van Calcar, which forms the title-page, and a portrait of Vesalius from his treatise of anatomy, as well as other engravings. I should be much obliged if you or any of your readers could give me the name of the author of the articles as well as that of the journal and its date."

AN IMPROVED MACHINE FOR MOVING BEDS IN THE SICK-ROOM.

FROM Mr. Hermann Blass, of 155, Camden-road, N.W., we have received a pamphlet describing an improved form of bed-carriage. In construction it is similar to some machines already in use and is simply a skeleton iron frame on rubber castors. It is placed under the bed and by means of a lever the bed is raised from the floor while being supported by the framework of the machine. The advantages claimed for the invention are (1) easy manipulation by one person of ordinary strength; (2) rapidity of action without shock or vibration; (3) the ease with which a patient can be transferred from one floor to another; (4) the placing of a bed in a good light quickly for the purposes of operation, &c.; and (5) the facility with which a ward or room can be disinfected and cleaned. Mr. Gustav Allzeit of Koenigsberg, Germany, is the inventor of the bed-carriage.

ARTIFICIAL LIMBS FOR WOUNDED SOLDIERS.

MESSRS. ARNOLD AND SONS of West Smithfield have received orders to supply the artificial limbs specially ordered by Her Majesty the Queen for the soldiers recently wounded in action, and we are informed that the Queen herself has expressed a wish that these artificial limbs shall be of the best construction.

Subscriber.—Our correspondent does not say if the man's wages will be continued during his illness. A man on such wages cannot afford remuneration in any way adequate to the services he has received. Unless he is insured against accident or has a sum laid by for such emergencies we do not see how he is to pay more than two guineas. Our correspondent is advised not to send his bill in for a less sum even if he have to take less.

Portlade.—We cannot say for certain that the General Medical Council would adjudge the action as "an infamous one in professional respects," but they might take that view and we believe they would. It would anyhow be an unfortunate thing for a medical man to do and one which, if it became known to his fellow practitioners, would damage him irretrievably in their eyes.

N. M. O.—We have thought it wiser not to print our correspondent's query as the case might be recognised. The medical officer of health would be wrong to report the matter to the guardians, but if it comes otherwise to their ken he must answer their inquiries. He runs no risk in doing so, as in the face of the death certificate there can be no doubt about the facts.

H. A. F. is right to safeguard his interests. The patient has a month in which to find another attendant if the reasonable request cannot be acceded to, so that our correspondent's conduct cannot possibly be construed as inhuman. The people are clearly not in a position to ask for or to expect credit.

Nitro-monas has not our experience or the advertisement would not come on him as such a shock. We cannot notice the case if only because while he mentions the name and address of the offending practitioner he withholds from us similar information with regard to himself.

J. A. R.—Public Health Laboratory Work, by Henry R. Kenwood, M.B. Edin., D.P.H. Second edition. London: H. K. Lewis. Price 10*s*. 6*d*. For further information our correspondent should consult the Students' Number of THE LANCET, Aug. 21st, 1897.

Memo.—No. Mr. Alfred Haviland's maps showing the distribution of cancer in the United Kingdom combined with geological knowledge give grounds for theorising.

Epsom.—We see no reason to depart from our rule, which is apparently known to our correspondent. The family medical man will be able to give all necessary help.

M.R.C.S. Eng.—The Report of THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps appeared in THE LANCET of Jan. 4th, 1896.

Rally will find all the information he requires given with detail in the various Students' Numbers of THE LANCET.

ERRATUM.—Mr. H. Gold, the inventor of the window-cleaner's chair recently noticed in THE LANCET, writes from 31, Great Eastern-street, to say that the price of the chair is 5*s*. 6*d*., not 4*s*. 6*d*. as stated.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received: *Newcastle Chronicle, Western Mail, Louth Times, Grantham Journal, Hereford Times, Manx Sun, Penrith Observer, East Anglian Daily Times, Sun, Times of India, Pioneer Mail, Glasgow Herald, Derby Telegraph, Scotsman, Citizen, Hull News, Bath Chronicle, Wigan Examiner, Sheffield Telegraph, Eastern Morning News, Leeds Mercury, Builder, South Wales Daily News, Dundee Advertiser, Birmingham Gazette, Bedford Observer, Malton Gazette, Mid Devon Times, Leicester Post, Sussex Daily News, Lincoln Gazette, Hampstead Express, Blackburn Standard, Architect, Driffield Observer, Lynn Advertiser, Essex Telegraph, Manchester Guardian, Bristol Mercury, Forfar Herald, Yorkshire Post, Brighton Gazette, Kentish Mercury, Indian Mirror, Hastings and St. Leonards News, Local Government Chronicle, Reading Mercury, Mining Journal, Pontypool Free Press, City Press, Hertfordshire Mercury, Hackney Expresss, Hove Echo, Nottingham Daily Express, Wheels, Kentish Observer, Weekly Free Press and Aberdeen Herald, Devon and Exeter Gazette, Surrey Advertiser, China Mail, Hong-Kong Weekly Press, Birmingham Daily Post, Irish Times, Nottingham City News, Liverpool Daily Post, Northern Daily Telegraph, Brighton Herald, Westminster Budget, West Middlesex Herald, Preston Guardian, Norwich Mercury, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. Adam, West Malling; Messrs. Arnold and Son, Lond.; *Archives des Sciences Médicales*, Paris; Surgeon B. Arkwright, H.M.S. *Seaflower*, Portland; Messrs. Allen and Hanburys, Lond.; Dr. J. Althaus, Lond.; Mr. F. W. Alexander, Lond.; Annan's Anti-Accident Apparatus Co., Lond.; A. K. Bunbury.

B.—Mr. C. A. M. Bailey, Guildford; Mr. J. Bland, Lond.; Mr. A. E. Barrett, Lond.; Mr. C. W. Baylis, Evesham; Mr. L. A. Bidwell, Lond.; Mr. G. H. Browne, Brynmawr; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. C. A. Brugman; Mr. W. Stroom, South African Republic; Dr. R. Barnes, Lyss; Mr. C. Beesley, Darton; Mr. F. Dillon Bennett, Lond.; Mr. J. W. Barrett, Melbourne; Messrs. C. Barker and Sons, Lond.; Burton-on-Trent Infirmary, Secretary of.

C.—Dr. C. W. Chapman, Lond.; Mr. Mayo Collier, Lond.; Sir Daniel Cooper, Lond.; Cortland Wagon Co., Lond.; Chalmer's Hospital, Banff, Matron of; Mr. W. J. Chamberlain, Lond.; C. J. D.; Messrs. E. Chaloner and Co., Liverpool; Central London Throat and Ear Hospital, Lond., Secretary of; Messrs. Cameron, Commin, and Martin, Exeter; Mr. T. Cooke, Lond.

D.—Mr. T. Domela, Macolin, Switzerland; Messrs. Domeier and Co., Lond.

E.—Messrs. Eason and Son, Dublin; E. M. F., Lond.

F.—Messrs. Fannin and Co., Dublin; F. W. G., Broomhill.

G.—Messrs. R. W. Greeff and Co., Lond.; G. P., Liverpool; Guest Hospital, Dudley, Secretary of; Great Eastern Railway, Lond., Continental Traffic Manager of; G. H. G.; Dr. W. H. Gilbert, Baden-Baden; Gloucester County Asylum, Medical Superintendent of; Dr. C. D. Green, Lond.

H.—Dr. R. Hartley, Lond.; Mr. C. Heneage, Eastbourne; Hospital for Epilepsy and Paralysis, Lond., Secretary of; Dr. W. K. Hunter, Glasgow; Mr. A. Haviland, Farnborough; Dr. V. D. Harris, Lond.; Mr. C. H. Hulah, Lond.; H. G.

I.—Messrs. J. G. Ingram and Son, Lond.

J.—Mr. J. Jessop, Sheffield; Mr. P. N. Jones, Lond.; Dr. Lewis Jones, Lond.; J. J. M.; Jenner Society, Gloucester, Hon. Secretary of.

K.—Dr. G. C. Kingsbury, Blackpool; Kent County Temperance Federation, Maidstone; Mr. C. Krohne, Lond.

L.—Mr. C. S. Loch, Lond.; Messrs. Lorimer and Co., Lond.; Mr. G. Ley, H.M.S. *St. Vincent*, Portsmouth; Liverpool Hospital for Consumption, Secretary of.

M.—Dr. S. Martin, Lond.; Metropolitan Provident Medical Association, Lond., Secretary of; Mr. J. McCleery, Nottingham; Dr. C. D. Musgrove, Penarth; Mr. F. H. Maberly, Lond.; Mrs. S. E. Mackintosh, Chesterfield; Male Nurses' (Abstainers) Coöperative Association, Lond.; Mr. H. W. Mills, Ruardean; Milk Preparations Co., Brentwood; Dr. R. Moir, St. Andrews; Dr. Montgomery, Manchester; Dr. H. McLaren, Govan; Dr. F. R. Mallett, Bolton; Mr. W. Marriott, Lond.

O.—Mr. F. Orchard, Lond.; Messrs. Orridge and Co., Lond.

P.—Mr. B. B. Pastor, Asaba; Mr. C. F. S. Perowne, Lond.; Mr. Y. J. Pentland, Edinburgh; Mr. M. Perceval, Cambridge, New Zealand; Dr. L. A. Parry, Lond.

R.—Mr. H. M. Ramsay, Lond.; Royal Halifax Infirmary, Secretary of; Messrs. Rock Bros., Lond.; Dr. R. M. Ralph, Lond.; Mr. R. Redpath, Newcastle-on-Tyne.

S.—Dr. R. H. Shaw, Brighton; Sunderland Borough Asylum, Medical Superintendent of; Messrs. Spiers and Pond, Lond.; Smith's Advertising Agency, Lond.; Sussex County Hospital, Brighton, Secretary of; Sanitas Co., Lond.; Mr. J. L. Sardy, Lond.; Sunderland Infirmary, Secretary of; Messrs. Samson, Clarke, and Co., Lond.; Messrs. W. H. Smith and Son, Manchester; Messrs. E. Shaw and Co., Manchester; Messrs. Smith, Elder, and Co., Lond.; Society for the Suppression of Street Nuisances, Lond.

T.—Mr. J. C. Taylor, Cronville; T. E. M.; Mr. J. Thompson, Macclesfield; Messrs. R. H. Thomson and Co., Leith.

U.—University College, Liverpool, Registrar of; University of Edinburgh, Dean of.

V.—Mr. H. de P. Veale, Leeds; Mr. G. C. Veale, Leeds; Mr. J. W. Vickers, Lond.

W.—Mr. M. M. Wills, Lond.; Mr. F. C. Wood, Ripley; Mr. F. F. White, Birmingham; W. H. B. C.; Weston-super-Mare Hospital, Secretary of; Messrs. Welford and Sons, Lond.; Miss Weir, Mont Dore; Dr. A. T. Wyard, Chatham.

Letters, each with enclosure, are also acknowledged from—

A.—A. M.; A. W. R.; A. G. M. H.; A. V. W.

B.—Mr. F. Bauermeister, Glasgow; Mr. H. D. Bower, Keswick; Dr. W. J. Brown, Chester-le Street; Bristol Electric Safety Lamp Works, Lond.; Dr. F. W. Burton-Fanning, Norwich; Birmingham, &c., Free Hospital, Secretary of; Dr. G. Brown, Manchester; Mrs. S. A. Bennett, Lond.; Messrs. Battle and Co., Paris; Bouverie-street (15), Lond.; B. J. L.

C.—Dr. Colenso, Lond.; Mr. W. R. Cumming, Mill Hill; County Borough of Salford, Treasurer of; C. W. M. G.; Central Stationery Co., Liverpool; Mr. D. Cooper, Hoyston; Mrs. Carter, Eastbourne; Dr. W. S. Carroll, Pontypridd; Clayton Hospital, Wakefield, Hon. Secretary of; Mr. A. M. Cato, Lond.; Dr. Cotton, Darsham.

D.—Dr. S. Delépine, Manchester; Messrs. Dixon and Hunting, Lond.; Denneyer's Peptonoids Co., Lond.; D. M. S.; Dispenser, Lond.

E.—Messrs. Elliott, Son, and Boyton, Lond.; Edward, Lond.; Mr. F. G. Ernst, Lond.; E. M. C.

F.—Mr. F. C. FitzGerald, Hanley; F. W. G.; Mrs. Finch, Groombridge; Messrs. Farrer and Sons, Reading; Messrs. Fletcher, Fletcher, and Co., Lond.; Mr. P. J. Freyer, Lond.; F., Lond.; F. L. C.; F. H. L.; F. H.; Dr. F. D. Fisher, Bury St. Edmunds.

G.—Mr. J. H. Goldwin, Rochester; Mr. F. R. Greenwood, High Wycombe; G. G. R.; Dr. J. W. Geddes, Ferry Hill; G. F. T.; Mr. A. C. Grylls, Lond.; G. A. S.; Granville, Leytonstone.

H.—Mr. P. Harrison, Lond.; Dr. H.; Hall, Stoke; H. C. P.; H. M.; H. G. D.; H. H. B. W.

I.—Mr. A. T. Ilott, Lond.; Dr. W. W. Ireland, Polton.

J.—Mr. G. Jenkins, Glengarnock; J. C.; J. C. B.; J. W. H. J.; J. H.; J. A.; J. W.; J. McN.; Mr. F. F. Jones, Llanfyllin; J. H. W.

K.—Dr. R. L. Knaggs, Leeds.

L.—Mr. B. W. Lamb, Albrighton; Mr. H. K. Lewis, Lond.; Mr. H. B. Long, Charing; L. F. D.; Lamb, Brechin.

M.—Dr. B. G. A. Moynihan, Leeds; Male Nurses' Temperance Coöperation, Lond., Secretary of; Mountjoy Brewery, Dublin; Mental Nurses' Coöperation, Lond., Lady Superintendent of; Dr. M., Mexborough; M. W.; Mr. S. Mackey, Hodnet; Mr. A. Mottram, Norwich; Dr. A. G. Macdonald, Coppull; J. McC.; Mr. L. Mackay, Pitlochry; Mr. H. Marmion, Lond.; Messrs. Macmillan and Co., Lond.

N.—Nottingham Children's Hospital, Secretary of.

O.—Dr. W. O'Neill, Lincoln.

P.—Dr. H. B. Pope, Kington; Mr. J. W. Pratt, Wivelscombe; Dr. W. H. Packer, Cressage; Mrs. E. M. Perrott, Luppitt.

R.—Dr. F. M. Robertson, Lond.; R. G.; R. C., Birmingham; R. R.

S.—Mr. B. S. Sanders, Ilfracombe; Mr. D. Sibson, Stockton-on-Tees; Dr. S.; Dr. A. J. Sharp, Whitby; Dr. J. A. Shaw-Mackenzie, Lond.; Dr. R. Sevestre, Leicester; Mr. F. Sydenham, Lond.; South Australian Government Bonded Depôt, Lond.; Surgeon, Manchester; Dr. W. A. Shillito, Wilsden; Mr. C. Sandfield, Folkestone; S. R. A.; S. W.

T.—T. O. H.; T. Mc. C.

W.—Dr. P. W. Williams, Clifton; Messrs. W. Woollams and Co., Lond.; Mr. J. R. Webb, Footscray, Australia; Miss Walton, Wem; W. S. R.; W. W., New Romney; W. B. P.; W. H.; W. L.; Mr. J. C. Woodside, Ballycastle.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

The Croonian Lectures

ON

THE CHEMICAL PRODUCTS OF PATHOGENIC BACTERIA CONSIDERED WITH SPECIAL REFERENCE TO ENTERIC FEVER.

Delivered before the Royal College of Physicians of London on June 14th, 16th, 21st, and 23rd, 1898,

BY SIDNEY MARTIN, M.D. LOND., F.R.S.,

FELLOW OF THE COLLEGE; PROFESSOR OF PATHOLOGY, UNIVERSITY COLLEGE; AND ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR CONSUMPTION, BROMPTON.

LECTURE II.[1]

Delivered on June 16th.

MR. PRESIDENT AND GENTLEMEN,—We now pass to the consideration of the investigation more recently made on the chemical products of the typhoid bacillus, of the bacillus coli communis, and of a form allied to these—viz., the bacillus enteritidis of Gärtner. These three micro-organisms are in culture closely allied to each other. They all grow in broth, forming a cloudiness and a sediment, not commonly a scum on the surface, although this is present sometimes in cultures of the bacillus coli. The growth on agar is very similiar in all three forms, being more fluorescent with the bacillus coli than with the other two forms. On gelatin they grow without producing any liquefaction of the medium. Their differences are as follows: in glucose-gelatin and glucose-agar the bacillus coli and Gärtner's bacillus form numerous bubbles of gas, while the typhoid bacillus, although it grows copiously, produces no bubbles. The bubbles are due to the formation of gas from the sugar present. On potato the bacillus coli gives a copious, yellowish brown growth, the Gärtner's bacillus a slightly coloured, and the typhoid bacillus gives a filmy, almost transparent, growth. Milk is coagulated by the bacillus coli, but is not coagulated by the typhoid bacillus or by Gärtner's bacillus. Indol is formed in a broth culture by the bacillus coli, not at all by the typhoid bacillus, and only a slight indol reaction can be obtained, and that not constantly, in cultures of the Gärtner's bacillus. Some varieties of the bacillus coli do not appear to form indol. These cultural characteristics are slight, but are sufficient for the purpose of diagnosis, inasmuch as the bacillus coli can always be distinguished from the other two by the gas it forms in glucose gelatin, by its coagulation of milk and by the indol it produces, whereas Gärtner's bacillus is distinguished from the typhoid bacillus by the fact that it forms gas in glucose gelatin. In any of the media the growth of the bacillus coli and of Gärtner's bacillus is much more copious than that of the typhoid bacillus. The bacillus coli is further distinguished from the typhoid bacillus by not giving the "serum reaction" with the blood of a typhoid fever patient or with typhoid "antitoxic serum." Dr. Durham states that Gärtner's bacillus sometimes gives a sedimenting reaction with typhoid blood or serum. All these organisms are flagellated, the typhoid bacillus containing the most numerous flagella, the bacillus coli the smallest number, and Gärtner's bacillus being intermediate. The close similarity in vegetative properties of these three micro-organisms rendered it advisable that they should be investigated together. They probably play very different rôles in the production of disease. The typhoid bacillus is the cause of enteric fever, the bacillus coli plays a great part in the production of peritoneal lesions proceeding from the intestine and inflammatory conditions connected with the pelvic and other abdominal organs, and Gärtner's bacillus was originally found in the body of a man who had been poisoned by beef which also contained the bacillus. Dr. H. E. Durham thinks that it may be the cause of some cases of food poisoning. Both the typhoid bacillus and Gärtner's bacillus may therefore be considered as micro-organisms chiefly infecting the intestinal tract and the bacillus coli, though it is not known to produce any gross lesion in the intestinal tract, is a natural habitant in that region and may aid in intestinal infections.

THE TYPHOID BACILLUS.

The typhoid bacillus is found in enteric fever in the intestinal lesions, in the mesentery glands, and in the spleen. It is present in some cases in the motions of typhoid fever patients and also in the urine, and has been occasionally found in the liver and in the blood. It is also present in some of the abscesses of remote parts which may be observed in the course of typhoid fever or during its convalescence. It is most readily separated from the spleen and in the following manner: after the spleen has been removed wholly from the body it is washed on the surface with boiling distilled water, followed by absolute alcohol. It is then incised with a sterilised knife. By means of a sterile platinum rod inserted into the substance of the spleen inoculation of broth tubes or the surface of agar plates is made, and within twenty-four hours there is a copious growth of the typhoid bacillus.

Another method is to remove a small portion of the splenic pulp by means of sterile instruments and place it in 200 c.c. of sterile distilled water in a flask which is incubated for twenty-four hours. The liquid is then brushed over the surface of agar plates and in twenty-four hours a copious growth of the typhoid bacillus is obtained. I have examined four spleens in this manner—one from the Middlesex Hospital, kindly sent me by Mr. Fardon; one from St. Thomas's Hospital, sent by Dr. Hawkins; one from Homerton Hospital, sent by Dr. Goodall; and one from University College Hospital, from a case under the care of Dr. Ringer. With the exception of one case all gave a pure and abundant culture of the typhoid bacillus. The exception showed a great preponderance of colonies of the typhoid bacillus on the agar plate, but one or two colonies appeared rather different from the others, being more opaque and fluorescent. These were separated and proved to be the bacillus coli. All the remaining colonies, as well as those from the other three cases, gave all the typical reactions of the typhoid bacillus, including the serum reaction (Widal's). The presence of this pathogenic organism in pure culture in the spleen and its invariable presence is one of the arguments in favour of the typhoid bacillus being the cause of enteric fever.

Increase of virulence of the bacillus.—In the investigation of the products of a pathogenic bacterium it is not of much value working with non-virulent cultures. None of the ordinary cultures of the typhoid bacillus obtainable in laboratories will kill an animal. I obtained cultures from various laboratories in England and found them all incapable of causing death. Although, as will appear, the action of the chemical products of these non-virulent forms are of some significance, yet much progress was not made until a virulent culture was obtained. Chantemesse and Widal[2] rendered the typhoid bacillus virulent by injecting 4 c.c. of a broth culture under the skin of the guinea-pig and at the same time injecting into the peritoneal cavity from 8 to 10 c.c. of the sterilised chemical products of the streptococcus. The animal died and the typhoid bacillus was found in the blood, in the organs, and in the peritoneal cavity. A culture was made from this in broth and used for a second experiment of a like character, using rather less of the streptococcus products. When proceeding in this way it was found that less and less of the streptococcus products could be used, the animal still dying, until finally it was found that the culture of the typhoid bacillus obtained could in subcutaneous doses of ¾ c.c. kill the animal without the aid of the streptococcus products. Similar results have been obtained by using the products of the bacillus coli or of the bacillus prodigiosus instead of the streptococcus products. I attempted this method, using the bacillus coli products, but found that although the virulence of the bacillus was undoubtedly increased, yet I could not obtain it in a virulent enough condition to cause death of itself. I obtained, however, an extremely virulent typhoid bacillus by utilising cultures made from the spleen of one of the cases examined.

The virulence of the typhoid bacillus as obtained direct from the spleen after death or during the course of the disease varies somewhat. In one of the cases a small amount of splenic pulp was ground up with salt solution and 2 c.c. of this mixture were injected into the peritoneal cavity of a guinea-pig. Death occurred in the course of eight days, and a pure growth of the bacillus was obtained from the peritoneum, but not from the blood of the heart or the

[1] Lecture I. was published in THE LANCET of June 18th, 1898.

[2] Annales de l'Institut Pasteur, vol. vi., p. 755, 1892.

spleen. From another case a small quantity of a similar mixture was injected into two guinea-pigs and both died in under twenty-four hours, and a pure growth of the bacillus was obtained from the peritoneal cavity and from the blood of the heart. The first of these cases was used for obtaining a virulent bacillus. 4 c.c. of a four-day-old culture of the splenic pulp in broth were injected into the peritoneal cavity of a guinea-pig; death occurred in under twenty-four hours. There was slight effusion into the peritoneal cavity, from which a pure culture of the bacillus was obtained. ½ c.c. of this effusion was injected into the peritoneal cavity, of another guinea-pig. Death occurred in under twenty-four hours, and in the subsequent procedure the effusion from the peritoneal cavity of one guinea-pig was injected into the peritoneum of another, death occurring in the twenty-four hours. At the eleventh successive inoculation $\frac{3}{10}$ c.c. of the peritoneal effusion killed the guinea-pig in two days. At the thirteenth inoculation $\frac{1}{10}$ c.c. diluted in salt solution killed in less than twenty-four hours, and at the sixteenth inoculation half a platinum loopful of a twenty-four-hour-old agar culture injected into the peritoneal cavity killed a guinea-pig in under twenty-four hours.

During the course of these inoculations it was observed that there was almost constantly an exudation of turbid fluid of greater or less amount into the peritoneal cavity. There was occasionally a little lymph on the surface of the intestines and sometimes there were ecchymoses in the spleen. The peritoneal exudation was highly albuminous, coagulating solid on heating. Under microscopical examination it showed large numbers of short rods, more or less actively motile. In the first inoculations some leucocytes were present in the exudation, showing phagocytosis. Later, however, as the bacillus became more virulent the cells and phagocytosis were not observed and the exudation consisted simply of a highly albuminous fluid containing enormous quantities of typhoid bacilli, sometimes in clumps, usually singly. As the virulence of the bacillus increased so did the time of death diminish and at the twenty-eighth inoculation 2 c.c. of the peritoneal exudation were injected into the peritoneal cavity of a rabbit, causing death in five and a half hours—a result which cannot be attributed solely to bacterial action but must be ascribed to the chemical poisons present in the peritoneal fluid. This was very evident in the experiment on a rabbit weighing 590 grammes, which received 0·25 c.c. of the peritoneal fluid into the left marginal vein. Symptoms of collapse soon supervened and death occurred in two and a half hours. The peritoneal exudation produced by the introduction of virulent typhoid bacilli is therefore highly poisonous, and these properties were investigated.

In all these cases the typhoid bacillus was obtained in pure culture in the peritoneal cavity, whether there was much or little effusion, and it retained throughout its typical cultural characteristics. There was no case in which there was a mixed infection with any other micro-organism, so that the effects were those of the bacillus itself. An examination was made of the distribution of the bacillus in the various organs of the body. In the earlier inoculations during the increase of virulence it was found that although the animal died the bacillus was limited to the peritoneal cavity and was not present in the spleen or the heart's blood, showing that death was produced by absorption of the poisons formed by the bacillus in the peritoneal cavity, which acted as a sort of living test tube. In the later experiments, however, the bacillus did not remain in the peritoneal cavity, although its distribution throughout the body was not constant. Thus in one experiment (peritoneal injection) at death it was found that the heart's blood, spleen, and liver all gave pure cultures of the typhoid bacillus as well as the fluid in the peritoneal cavity. This was confirmed by the next experiment, but in the one following a pure growth was obtained from the peritoneal effusion and from the spleen and not from the liver or the heart's blood. There is a tendency, therefore, more with the weak virus than with the strong, for the typhoid bacillus to limit itself in its growth to the seat of inoculation, although a general distribution of the bacillus throughout the body usually occurs with the virulent form. This limitation of the bacillus to the site of injection is well marked when it is subcutaneously injected. Thus in a guinea-pig which received subcutaneously ½ c.c. of virulent peritoneal fluid there was a swelling at the site of inoculation which ended in a slowly-forming abscess pointing in eleven days; a pure culture of the bacillus was obtained from it. The animal was killed on the twelfth day and a pure culture of the bacillus was obtained from the abscess, but the heart's blood, the spleen, the liver, and the peritoneum were sterile; the heart muscle was not degenerated. Chantemesse and Widal and others have, however, found that infection of the body can occur after subcutaneous injection of the bacillus, and this occurs readily if the process of infection be aided in the manner previously described.

It is interesting to note in this series of experiments the absence of leucocytes in the peritoneal exudation as the bacillus became more virulent, and the formation of an abscess and the limitation of the growth of the bacillus when the virulent virus was injected under the skin.

Toxic action of the peritoneal fluid.—It has been stated that the cause of death when the virulent peritoneal fluid is injected into a rabbit or a guinea-pig was due more to the action of a chemical poison than to the growth of the bacillus, since this occurred so rapidly—in one case in five and a half hours and following intravenous injection in two and a half hours. The effects of this chemical poison were examined by filtering the peritoneal fluid through porcelain in a small apparatus improvised for the purpose. In the first experiment ½ c.c. of this filtered sterile peritoneal fluid was injected into the marginal vein of a young rabbit. A moderate degree of fever followed the injection for several hours. Subsequently the temperature fell to the normal and no symptoms were observed in the animal, which died at the end of thirty days. The heart's blood was sterile and the heart muscle showed well-marked degeneration of the fibres, there being loss of striation, longitudinal fibrillation and the presence of numerous small granules staining black with osmic acid. Other experiments were performed in a similar manner, using 1 c.c., 1·5 c.c., and 2 c.c. of the filtered peritoneal fluid. In all cases some degree of fever followed the injection, but no effect was subsequently observed and death did not occur. The filtered peritoneal fluid was therefore not nearly so poisonous as the unfiltered, evidently the porcelain filtrate had kept back the greater part of the chemical poison, whether this was present in the albuminous fluid or in the bodies of the bacilli.

Examination of the poison in the fresh state in the spleen.—Before continuing this part of the subject we must return to the consideration of the poisons present in the spleen of typhoid fever patients. In all the cases examined, as has been stated, the typhoid bacillus was present in large quantities, and in only one was there an admixture with another bacterium, the bacillus coli. The splenic pulp was rubbed through sterile wire gauze and treated with about 500 c.c. of sterile normal salt solution. This was allowed to stand a short time and an attempt was made to filter it through porcelain. This was a matter of great difficulty, only a small amount of the liquid passing through. It was thin and deeply blood-stained. It was injected into the marginal vein of a rabbit on two successive days—4 c.c. on the first day and 3·5 c.c. on the second day. No appreciable effect on either the temperature or the body weight followed the injection on either day or on the subsequent two days; but on the fifth day of the experiment the temperature was found to have fallen to 97·6° F., and the animal was collapsed and had profuse and mucoid diarrhœa. The temperature remained subnormal the whole of that day and at 10 o'clock on the sixth day it was 95·4° and the animal was lying motionless on its side but breathing regularly. It was killed with chloroform. At the post-mortem examination there was subcutaneous hæmorrhage over the lower third of the abdomen extending down over the upper third of the front of the thighs. In the abdomen there was a soft blood-clot matting together the omentum and the adjacent coils of the intestine. There was no peritonitis. The thoracic organs were normal and the intestines were empty except the upper part of the colon and cæcum, which contained soft fæces. There was no enlargement or redness of the Peyer's patches or of any other part of the mucous membrane. From the peritoneal cavity was obtained a growth of the bacillus coli, but the spleen contained no micro-organisms. What is interesting in this experiment is that following the injection of the poison there was a period of incubation during which no effect on the body temperature or the weight was to be observed, and that a fall of temperature associated with great bodily prostration and mucoid diarrhœa supervened somewhat rapidly. This fall of temperature and the collapse and diarrhœa observed are, as will be seen, to be ascribed to the action of the chemical poison of the typhoid bacillus.

A more extensive chemical examination of the spleen was

made by means of the precipitation of the extract with alcohol, in order to obtain any albumoses which might be present as well as to separate the alcoholic extract. The method has already been described. The amount of albumoses obtained from each of three spleens was 0·652 gramme, 0·37 gramme, and 0·369 gramme. When dried they formed a fine whitish-yellow and very light powder, soluble in water, and giving a brownish solution, which gave a distinct biuret reaction. The alcoholic extract was yellowish in colour and was separated from the fatty bodies by precipitation with a large excess of ether. It contained a very large quantity of leucin and tyrosin, which separated out in the form of crystals on evaporation. The final alcoholic extract was a yellowish, sticky, resinous-like substance when dried over sulphuric acid. The injection of the alcoholic extract into the vein of a rabbit did not seem to produce any effect on the temperature and no appreciable effect on the body weight. In one case 0·112 gramme was injected and the animal appeared as well after the injection as before. There was no diarrhœa nor were there any symptoms to be noted. The injection of the albumoses also had but slight effect on the animal. In one case 0·2785 gramme was injected in three doses into a rabbit weighing 790 grammes, a dose of 0·352 gramme per kilo. of body weight. After the first injection of about 0·4 gramme there was no effect on the temperature. After the second injection of about 0·12 gramme there was a rise of temperature, the highest point reached being 105° during the day. After the third injection on the following day of the same amount there was only a slight rise of temperature, but on the succeeding days it was again normal. No symptoms were produced in the animal by these injections except a slight rise of temperature. This effect, therefore, is a very different one from that observed after the injection of the saline extract of a fresh spleen. It may have been, of course, that the poison was destroyed by the alcohol during the course of preparation. This, however, is unlikely, inasmuch as the manipulation was very rapid, the products being separated within three days and the alcohol being allowed to act on the albumoses less than eighteen hours.

The Ingleby Lectures

ON

EXTRA-UTERINE PREGNANCY.

Delivered at Mason College, Birmingham, on May 11th, 18th, and 25th, 1898,

BY JOHN W. TAYLOR, F.R.C.S. ENG.,

PRESIDENT OF THE MIDLAND MEDICAL SOCIETY; SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN; CONSULTING SURGEON TO THE WOLVERHAMPTON HOSPITAL FOR WOMEN, ETC.

LECTURE III. (*concluded*).[1]

TREATMENT.

THE treatment of extra-uterine pregnancy is essentially operative. This fact is set forth very strongly in the well-known assertion of Werth, who declares that "ectopic gestation must be considered as a malignant new growth and therefore should be removed by operation at every stage of its development." This is a sweeping assertion, and one or two exceptions must be made to it. For example, in the latter half of a tubo-abdominal or tubo-ligamentary pregnancy, when no sign of danger is present, it may be better practice to wait for operation until a time at or about the usual period of delivery when the child is viable and strong than to operate earlier when the life of the child is certain to be sacrificed. Some surgeons have advised that we should go beyond this and wait for operation until after the death of the child so as to have if possible a less vascular placenta to deal with. For my own part, in all cases of later extra-uterine pregnancy with a living fœtus and without any special sign of imminent danger I would choose whenever practicable the most convenient date in the ninth month on which to operate. I would not wait for any sign of spurious labour or seek after exact correspondence with the natural term, but I would endeavour to perform the operation under the best conditions for both lives concerned. Again, occasionally here and there a case of ruptured tubal pregnancy or of tubal mole with peri-tubal hæmatocele recovers without operation, and the fact must be recognised and dealt with. I have seen five or six cases of such recovery and there could be no doubt of the genuineness both of the disease and of the recovery; indeed, in one of these cases, as we have seen, the rupture in the tube and the traces of the old hæmatocele were plainly visible on opening the abdomen some two years later. If my own experience can be regarded as at all general or typical this would give a proportion of about 5 per cent. of all cases observed which may be expected to terminate by process of natural recovery. Is there anything to mark these cases out from all the rest? Not much, I think, for the swelling of the tube, followed by the further tumour of the hæmatocele, the acute attack of abdominal pain and the peritonitic sequel, may all be quite as marked as in the majority of cases. But if the case recovers without operation the pregnancy is usually destroyed by the first (and only) bleeding, and the hæmorrhagic discharge from the uterus, which during the period of abdominal hæmorrhage and pain has probably been irregularly abundant, absolutely ceases with the definite termination of the pregnancy and beginning of absorption, and the patient becomes free from pain. Under these circumstances—cessation of growth, cessation of hæmorrhage, cessation of pain—notwithstanding the pelvic tumour of the distended tube and hæmatocele—it may be right to withhold operation and to give the patient, by rest in bed, by a liberal but non-stimulating diet, and by attention to all excretory functions, an opportunity of natural cure. It is worthy of note, however, that this natural cure is rarely very satisfactory and that it contrasts somewhat unfavourably with operative methods. It requires many weeks or even months of rest for complete absorption to take place and at the close of the process the distortion and fixity of adjacent organs (due to the prolonged presence of the hæmatocele) may still be marked and possibly permanent. In some cases, too, the fœtus may have arrived at a stage of development in which complete absorption is impossible, and if so, although apparent recovery should follow, there may be no finality about it. Months or years afterwards suppuration may occur about the retained fœtus and the evils connected with this prove very much greater than those encountered at the earlier disturbances. Finally, in all cases the danger of waiting—the danger of temporising when any symptom of collapse or pain is present—should be thoroughly recognised and appreciated. So far as we know at present if 5 patients may possibly weather the storm by months of rest 95 patients will die if surgical aid is withheld. Now, what is the prospect or prognosis after surgical treatment? In my own series of cases 37 cases of all kinds are reported with 36 recoveries and 1 death. In Mr. Tait's list published in 1888 we find 42 cases with 40 recoveries and 2 deaths, and in Mr. Mayo Robson's cases recently reported 23 cases with 22 recoveries and 1 death. I have some reason to know that while these results are all very good they are not specially exceptional. If I turn to the statistics of the chief hospital with which I am connected, the Birmingham and Midland Hospital for Women, I find in the decade from 1886 to 1896 that 62 cases of ectopic gestation were operated on with 61 recoveries and 1 death; and smaller series of cases are being frequently reported in the medical journals none of which show any high mortality. The mortality of all cases is not probably more than 5 per cent.

The operative treatment of extra-uterine pregnancy may be considered under two divisions—viz.: (1) operations in the earlier half of pregnancy; and (2) later operations. (1) In the first we must consider—operations for diffuse hæmorrhage and operations for localised tumour, either an intact pregnancy or hæmatocele; and (2) in the second division we shall have to deal mainly with the operative delivery of the mother at or beyond the period of term under tubo-abdominal and tubo-ligamentary pregnancy.

1. Operation for diffuse hæmorrhage may be required in—(*a*) early rupture of the tube; (*b*) later rupture of the tube; (*c*) intra-peritoneal rupture of broad-ligament pregnancy; (*d*) rupture of a peri-tubal hæmatocele; and (*e*) rupture of a tubo-uterine or interstitial pregnancy. The operation here will of necessity involve abdominal section. It will be an operation of emergency. It will have

[1] Lectures I. and II. and the first part of Lecture III. were published in THE LANCET of May 28th, June 4th, and June 18th, 1898, respectively.

to be done at the patient's home—very possibly at night—under uncomfortable conditions and often without skilled assistance. None of these difficulties must be allowed to excuse any laxity in surgical asepsis and therefore the operator must himself be prepared to act as his own chief assistant and by order and method reduce his dependence on others to a minimum. Some kind of operation table is an absolute necessity, for the abdominal cavity will need washing out with warm water. Plenty of boiling water must be available. The operator arranges his portable steriliser, his instruments and his sterilised pads (some of which should be of large size) within easy reach of his right hand so that he can help himself to anything he wants. No time must be lost. When the diagnosis has once been made the operation must be performed at the earliest possible moment consistent with a prepared and cleanly *entourage*. While the patient is passing through the later stage of narcosis the abdominal wall is carefully cleaned with soap-and-water and afterwards with methylated spirit. The incision—made in the middle line—will probably at once disclose some confirmation of the diagnosis, the black colour of the blood within the abdomen showing darkly through the transparent peritoneum. On opening this blood and blood-clot pour out freely. The fingers of the left hand are inserted into the abdomen, seize the uterus, and feel at once for the site of pregnancy, the source of bleeding. If, as usually happens, this can be identified by touch it is immediately withdrawn out of the abdomen, the parts below the tube being firmly held so as to stop any further bleeding. The operator then—with his disengaged right hand—takes the needle armed with ligature silk from the steriliser, transfixes the broad ligament below the tube with Staffordshire knot or linked double ligature, ties off the pregnant tube and finally removes it. The abdomen is now thoroughly washed out with blood-warm water, the pelvis is specially cleared of blood-clot, a drainage tube is placed in the pouch of Douglas, and the abdominal incision is closed. After the wound is dressed a binder is applied tightly round the abdomen and if the patient be nearly pulseless she is placed in bed on an inclined bedstead with the lower extremities raised.

The operation itself is often an easy one, but there are difficulties which may interfere with its ready performance. The most important is the impossibility of seeing what one has to do. The blood continues to well up from the pelvis and vigorous sponging may only afford momentary glimpses of the pedicle or broad ligament. In this case pouring clear warm water over the wound and packing some of the larger pads into the pelvis and round the affected tube will often prove of service. Sometimes this difficulty of vision has a more serious bearing. If the pregnancy has already escaped from the ruptured tube it may be no easy matter to detect which is the affected side and where is the source of the hæmorrhage. Under these circumstances the temporary control of the circulation with one or two pairs of Doyen's lighter elastic forceps will allow of the washing out of the abdomen and enable the operator to search for and to find the tubal rent without fear of further loss while the search is still in progress. I always take these forceps to any abdominal operation of emergency; their pressure can be nicely adjusted so that intestine even need not suffer any injury in their temporary grasp, while the higher grades of pressure are sufficient to control the broad ligaments in a case of hysterectomy. Occasionally, when a ligature is difficult or impossible to place, a pair of these forceps may be left on the broad ligament or on the side of the uterus at the close of the operation. A compression of from eighteen to twenty-four hours is usually sufficient. In diffuse hæmorrhage from the rupture and extrusion of a tubo-ligamentary pregnancy the temporary or more lasting use of forceps may be of signal service. The bleeding points may be entirely hidden, furnished largely by branches of the uterine artery; and this or firm plugging with iodoform gauze may be the only way of arresting the hæmorrhage. In tubo-uterine or interstitial rupture with diffuse bleeding—a condition in which surgery has still to win its laurels as victor—the quick recognition of the condition on opening the abdomen will be the first element of success, and the rent on one side in the upper part of the uterus and the different levels at which the tubes appear to enter the uterus should guide the operator to a quick decision. In this case the uterus should be drawn out of the wound, two transfixion pins passed, first through the peritoneum on one side of the incision, then through the uterus well below the tear, and finally through the peritoneum of the opposite side (as in the method described by myself in 1893), a "wire-clamp" applied below these, and the latter screwed thoroughly "taut." The hæmorrhage is then absolutely controlled, and if the clamp be always ready for use the time occupied in effecting this control need scarcely be longer than that which has been used in briefly describing the method. The operator can wash out the abdomen through the upper part of the incision above the clamp, doing this carefully and thoroughly, and if drainage be considered necessary the tube can be adjusted at the upper angle of the wound. When the latter is closed the clamp is again screwed up tightly, the parts above the clamp are cut off and the stump is surrounded with iodoform gauze. The only caution necessary to mention is the danger of any slipping of the broad ligament out of the grasp of the wire before the latter is finally tightened. This is easily avoided by transfixing the broad ligament with the pins or by holding up the appendages with forceps (if these are removed) and by screwing the clamp thoroughly tight before the parts above the wire are finally removed.

Washing out of the abdomen in a simple case of diffuse hæmorrhage, as in early rupture, can often be done by pouring water from a jug directly into the abdomen, but in such a case as I have been considering and in a patient with a deep pelvis containing much blood-clot the use of a syphon tube is more handy and more efficient. By this the stream of water is carried directly to the lowest part of the pelvis and the upward returning stream washes out the blood-clot. This "washing out" should never be omitted in cases of diffuse bleeding. Besides cleansing the peritoneum it is probably a means of conveying some fluid into the depleted blood-stream—and this, followed (after the operation is over) by a nutrient injection containing brandy, and by temporary elevation of the pelvis and lower extremities, is, in my opinion, more useful in overcoming shock and in restoring the pulse than is any attempt at transfusion.

In diffuse hæmorrhage the quickest and directest route to the bleeding vessels is an absolute *sine quâ non* of operative treatment and there can be no doubt that this is attained by abdominal section above the pubes. In localised hæmatocele and in intact extra-uterine pregnancy up to mid-term other methods of operation may be employed besides abdominal section and we shall have to consider vaginal section under its two aspects of posterior and anterior celiotomy and also the sub-peritoneal incision in cases of anterior tubo-ligamentary invasion. In true retro-uterine hæmatocele, in which the pouch of Douglas is itself distended with blood, posterior vaginal celiotomy — the direct opening of the pouch of Douglas from the vagina—is obviously the proper method of treatment and no surgeon would probably dream of any other. Under this condition the operation is very simple. A free incision is made in the middle line, the contained blood and blood-clot are gently washed out by a stream of warm water carried within the cavity, nothing is done to interfere with the upper limiting adhesions or roof of the hæmatocele, and after free evacuation the pouch is drained by a tube or by iodoform gauze. In peri-tubal hæmatoceles which occupy the whole or a greater part of the pouch of Douglas an extension of the same method may be employed with advantage, especially if the bulk of the swelling be evidently within the pouch of Douglas. In this case, however, every aseptic precaution is just as necessary as in an abdominal section and before beginning to operate the hair of the vulva is shaved and the vulva and vagina are thoroughly cleansed and disinfected. For this and for the subsequent operation the patient is placed in the "lithotomy" position on a good table and the vagina is kept open by the valuable self-retaining speculum of Auvard. The surgeon sits facing the vulva of the patient and there should be a good light directly behind his head. The patient is anæsthetised previously and is therefore unconscious before any of this preparatory work is begun.

Operation.—The uterus is steadied by volsella applied to the posterior lip of the cervix and the posterior vaginal vault is opened behind the uterus with scissors curved on the flat. On reaching the pouch of Douglas blood and bloody serum will probably be found within it. There are, as a rule, no adhesions at the lowest part of the pouch. On inserting the fingers the tumour of the hæmatocele will be plainly felt and all the lower part of it may be very thoroughly explored especially if the disengaged hand be placed on the abdomen above the pubes and the examination of the mass be conducted "bimanually. During this examination the blood-clot is usually broken down and the

main part of the hæmatocele is cleared away by the vaginal opening. This may be assisted by irrigation from within the pouch of Douglas if the opening be very free and the return current unobstructed. If not it may be wise to restrict oneself to manual or digital removal only. During the process the remains of the pregnancy itself, fœtal and placental or molar, may be evacuated, and sometimes the tube containing a mole of pregnancy may be detached from its adhesions, brought outside, ligatured, and removed. It is, however, rarely necessary to do this or to strive after this unless hæmorrhage be still going on. If the pouch of Douglas be thoroughly plugged and drained by a thick pledget of iodoform gauze after the hæmatocele is broken down and cleaned away nothing more is needed to ensure the conditions essential for the safe and complete recovery of the patient. A few cautions may be necessary with regard to the conduct of this simple operation. It should be an operation of election for certain cases—those are most favourable for its employment in which the vagina is capacious and the tumour is mainly posterior to the uterus. The bladder should be thoroughly emptied immediately before the operation is begun. No violence should be used, the blood-clot and débris should be extracted gently. The gauze drain should rest one half within the peritoneal cavity and the other half in the upper part of the vagina, and no portion of it should protrude or be visible at the vaginal entrance. The urine is better withdrawn by the catheter until the drain is removed on the fourth or fifth morning. The posterior vaginal incision is so direct in its guidance to the seat of pelvic disease in so many cases of retro-uterine tumour that we cannot but wonder sometimes that it has been so little employed. Perhaps one reason may be that its employment is sometimes followed by temporary and occasional neuralgic pain in the back which is rather difficult to account for as it does not occur in vaginal hysterectomy when the incision is wider and circular. I am inclined to think that this is excited by the dragging of the uterus on the partially divided utero-sacral ligaments (or muscles) and that a median antero-posterior opening (when practicable) may be preferable (on this ground only) to a broad transverse incision.

Anterior vaginal cœliotomy or, as it is sometimes called, anterior colpotomy has been extensively used during recent years in the treatment of peri-tubal hæmatocele due to tubal pregnancy. The vaginal vault is opened between the uterus and bladder, the vesico-uterine fold of peritoneum is divided, and the fundus is drawn forwards by volsella out of the abdomen through the opening thus made. The uterus and uterine end of the tube on either side are then under the complete control of the operator and the tube together with any contained pregnancy can, as a rule, be ligatured and removed without much difficulty. But the space in which one has to work is cramped and confined and while the tube may be easy to remove it is not so with the hæmatocele. This often separates from the tube with traction on the latter and it may be very difficult or impossible to remove it afterwards. Some operators appear to regard this as quite immaterial and leave a considerable quantity of blood and blood-clot in the pelvis and abdomen at the close of the operation, providing no drainage, but trusting solely to the absorptive powers of the peritoneum itself for its removal. If the operation has been performed with perfect cleanliness this confidence may be rarely misplaced as regards the final result, but the patients do not recover easily, there being often considerable pyrexia for several days before convalescence is thoroughly established. The main objections to anterior vaginal cœliotomy as a routine method of treatment are the following: (1) occasional insufficient space for operative work; (2) frequent inability to remove thoroughly and cleanly all products of the misplaced pregnancy; (3) inability to wash out the abdomen satisfactorily; (4) inability to drain through the anterior opening; and (5) occasional inability to extract the uterus without injury, the uterus being enlarged and softened by the changes consequent on the associated pregnancy. It may be noticed that most of these objections will lose a great deal of their importance if the operator, the patient, and her friends be prepared and ready to accept the possible sacrifice of the uterus in the course of the operation. If the uterus be already diseased or damaged, justifying its removal as an initial step, the space and opportunities thus acquired are ample for all ordinary requirements; there is room for thorough and careful work, the pregnancy and hæmatocele can be completely removed, the pelvis and lower abdomen may be washed out, and at the close of the operation the most perfect drainage of the pelvic peritoneum can be established by the adjustment of a well-fitting plug of iodoform gauze.

It is, of course, of considerable advantage to the patient to be able to relieve her of her disease without making an abdominal incision and especially so in cases where drainage is a desideratum, abdominal drainage being frequently followed by hernia. But I am inclined to think that abdominal section, in spite of this drawback, is still the better operation, or rather the better route for operative work in every case in which a posterior colpotomy is inapplicable or insufficient. By abdominal section the extent and connexions of the hæmatocele can be accurately explored, the limiting adhesions to omentum and intestine can be carefully separated or broken through, and the whole of the operation from beginning to end can be performed under the most favourable conditions for manipulation and cleanliness. When operating by the abdominal method the diseased tube must invariably be thoroughly defined, ligatured, and removed. It will often have to be unrolled from the back of the uterus after the main tumour of the hæmatocele has been taken away, but the adhesions are almost always light and easy to separate. The adhesions of the hæmatocele-capsule to bowel and omentum are, on the other hand, often especially intimate and when this is the case it is better practice to leave a considerable portion of the hæmatocele capsule adhering to bowel than to make any attempt at their separation.

Dr. Berry Hart has recently described a method of operating in intact anterior tubo-ligamentary pregnancy at mid-term which is sound in principle and may be followed with advantage whenever the conditions permit of its application. In this pregnancy, as we have already seen, the anterior layer of the peritoneum is raised and at mid-term as well as at a later stage there is a space either mesially or above the groin on one side which is uncovered by peritoneum. This can be accurately defined by a preliminary incision in the middle line which opens the abdomen. When this has been done a direct incision is made into the sac of pregnancy below the peritoneal reflexion. This extra-peritoneal wound should be large enough to admit four fingers. The fœtus is removed at once, the sac tamponaded with iodoform gauze, and the placenta allowed to separate and come away slowly with the discharge.

In tubo-abdominal pregnancy at term there is no difficulty in the removal of the child by an abdominal incision. The crux of the operation is the treatment of the placenta. If this be left, sooner or later it will almost certainly become septic and putrid and I have come to the conclusion—contrary to the opinion I formerly held—that in all cases of true tubo-abdominal pregnancy it is wise to remove the placenta. A clear idea of its probable relations and attachments will, I feel sure, do much to make this part of the operation easier and to rid it of much of its otherwise alarming features. Wherever the placenta is, there is the Fallopian tube and it is from this it receives the greater portion of its blood-supply. As we have already seen, sometimes the placenta is still within the tube, absolutely surrounded everywhere by tube, and nothing can be easier than to ligature it off and ensure its complete removal without any loss of blood. When it is within the gestation-sac and mostly covered by reflexions of the amnion, no method, I think, can be better than that I employed in the case (No. 33) already reported under this heading. Accessory vascular attachments to the omentum or abdominal wall are first ligatured and divided, the placenta is slightly tilted up at the most accessible part of its circumference, and forceps are used to clamp its tubal attachments below. The placenta is then removed and the tubal attachments are subsequently ligatured. The most difficult and dangerous form of attachment is that when the amniotic membrane only lines the upper surface of the placenta and all its under surface is attached not only to the tube and broad ligament but also to the parts adjacent (the condition found in Case 3). Still in this case a modification of the plan already described will afford the best chance of success. Sometimes the deeper attachments (uterus and broad ligament) may be seized before separation by the fingers of an assistant. If not, the most accessible route to the under surface of the placenta is searched for and separation is begun. As soon as possible the tubal and uterine attachments are clamped by the lighter elastic forceps of

Doyen, the placenta is peeled off and two or three large sterilised pads are packed into the cavity from which the afterbirth has been removed. Ligatures are applied to the broad ligament and tube and wherever it is possible by so doing to control the bleeding. Where these are useless packing with iodoform gauze will prove, I believe, the best alternative method for control of hæmorrhage. When this is necessary if the original abdominal incision—probably mesial—be decidedly to one side of the placental site, it will be wise to finish the operation by making a secondary abdominal incision immediately above the gauze from which the packing may be readily removed some four or five days later. The very rare condition when the child is abdominal and the placenta intra-ligamentary belongs to a very different category. From a surgical standpoint this pregnancy remains tubo-ligamentary throughout and is governed by the same laws of treatment which apply to tubo-ligamentary pregnancy. And in tubo-ligamentary pregnancy there is no necessity for the operative removal of the placenta. If the sac be drained the placenta will itself separate and come away with the discharges; this usually takes place without any pyrexia or constitutional disturbance.

Let us take the simpler form of tubo-ligamentary pregnancy first—the posterior or retro-peritoneal variety—and consider the operation necessary for its relief. In this the peritoneal cavity is always opened by the abdominal incision. Within the abdomen full and bulging like a pregnant uterus is the sac of pregnancy. This is opened by an incision directly underneath the abdominal wound, the edges of this are held against the edges of the abdominal incision, the child is extracted and after ligature and division of the cord is entirely removed. Now it may be possible to remove the placenta with safety from the interior of the sac, especially when the infant has been dead for weeks or months, and by so doing, if no serious hæmorrhage is occasioned, convalescence may be very much shortened. If there be any doubt, however, if the placenta be full of blood and firmly attached, no interference is necessary. The incision in the sac is sewn to the abdominal wound, the cord is left hanging out of its lower angle and the sac is drained. I am aware that many modern writers have advised a much more radical and sweeping method of treatment. Dr. Dunning, in the case I have already quoted, proceeded to extirpate the sac and very naturally, as anyone who studies the specimen depicted in Fig. 22 will easily understand, had to complete his operation by removal of the uterus. Fortunately the patient recovered, but I cannot agree with the practice adopted. It is altogether unnecessary and any temporary advantage secured by it is dearly purchased at the cost of increased danger and extensive mutilation. In the similar case reported by myself (Case 4) and treated by the simpler method of drainage the patient not only made a good recovery, but has since had a normal pregnancy with safe delivery of a healthy child. In the anterior or sub-peritoneal-abdominal form of broad ligament pregnancy the same remarks apply, but the sac may sometimes be opened at a part uncovered by peritoneum. If some part of the child is obviously almost subcutaneous (and that is most likely to be found on one side of the middle line) the sac may be opened at once and the operation of removal of the child and drainage of the sac conducted without opening the abdominal cavity or seeing the peritoneal membrane. More frequently, perhaps, if the incision has been median, the peritoneal cavity will be opened at the beginning of the operation. If so the displacement of the peritoneum can be accurately estimated (as in the operation for mid-term ligamentary pregnancy) and a secondary incision can be made directly opening the sac, through which the child is removed and drainage established. The mesial exploratory incision is closed by suture.

Now we can return to the consideration of the complicated form of pregnancy in which the child is abdominal and the placenta intra-ligamentary. The main indication in this form would be, as I believe, to convert the complex "tubo-ligamentary-abdominal" pregnancy[2] into a simple tubo-ligamentary one. After the fœtus has been removed this may, perhaps, be effected by sewing the laceration of the sac to the abdominal wound. If the opening in the sac be inconveniently situated for this the (divided) cord may be dropped inside the sac, the edges of the laceration turned in, and the abdominal opening in the sac closed by suture. Then either before or after closure of the abdomen a large opening is made by vaginal section into the most dependent part of the sac, the cord is drawn down into the vagina, and the rest of the wound and the lower part of the sac are plugged with iodoform gauze.

[2] See THE LANCET, June 4th, 1898.

Bibliography.—Champneys: Transactions of the Obstetrical Society, vol. xxix., p. 456. C. J. Cullingworth: Discussion on Intra-peritoneal Hæmatocele, British Gynæcological Journal, 1894; Pelvic Hæmatocele considered from the Modern Standpoint, THE LANCET, June 19th, 1897; Extra-uterine Pregnancy at Term, &c., British Medical Journal, 1894; Tubal Gestation, Clinical Journal, Dec. 8th, 1897. Dührssen: Ueber Operative Behandlung, ins besondere die Vaginal Cœliotomie bei Tubalschwangerschaft, nebst Bemerkungen zur Aetiologie der Tubalschwangerschaft und Beschreibung eines Tuben-polypen, Archiv für Gynäkologie, Band liv., Heft 2, 1897. Dunning: Ectopic Gestation, American Journal of Obstetrics, July, 1897. Berry Hart: On Extra-peritoneal Incision in Extra-uterine Gestation, Scottish Medical and Surgical Journal, August, 1897. Berry Hart and Carter: Edinburgh Medical Journal, vol. xxxiii., p. 322. J. T. Ingleby: Remarks on Extra-uterine Pregnancy with Cases and Engravings, Edinburgh Medical and Surgical Journal, 1834. Jessop: Transactions of the Obstetrical Society, vol. xviii., p. 261. John S. Parry: Extra-uterine Pregnancy, Lewis, 1876. Mayo Robson: Ectopic Pregnancy, Medical Press and Circular, Jan. 25th, 1898. Strassmann: Beiträge zur Lehre von der Ovulation, Menstruation, und Conception, Archiv für Gynäkologie, 1896. J. Bland Sutton: Extra-uterine Gestation, Allbutt and Playfair's System of Gynæcology, pp. 451-485, 1896; Surgical Diseases of Ovaries and Falloplan Tubes, Cassell and Co., 1891. Lawson Tait: Lectures on Ectopic Gestation and Pelvic Hæmatocele, Birmingham, 1888; Case of Ectopic Pregnancy, Transactions of the Obstetrical Society, 1892, p. 192. John W. Taylor: Intra-peritoneal Hæmatocele, British Gynæcological Journal, 1894; Diagnosis of Extra-uterine Pregnancy, THE LANCET, Sept. 17th, 1892. Intra-peritoneal Hæmorrhage due to Tubal Pregnancy, British Gynæcological Journal, 1895; Cases of Ectopic Gestation, ibid., 1892; Case of Extra-uterine Pregnancy at Full Term, Transactions of the Obstetrical Society, 1891; Second Case of Abdominal Pregnancy, ibid., 1897. Clarence Webster: Ectopic Pregnancy, 1895. Winter und Ruge: Lehrbuch der Gynäkologischen Diagnostik, Hirtzel, Leipzig.

BLOOD-PRESSURE IN THE INSANE.

BY MAURICE CRAIG, M.A., M.D. CANTAB., M.R.C.P. LOND.,

ASSISTANT MEDICAL OFFICER, BETHLEM ROYAL HOSPITAL, LONDON; LECTURER IN MENTAL DISEASES, POST-GRADUATE COURSE, LONDON.

PATHOLOGICAL conditions in the brain and elsewhere in patients suffering from insanity furnish a most important field for research, but up to the present results can hardly be said to adequately correspond to the time and labour expended. There are seen clinically, cases of intense mental disturbance which after death macroscopically and microscopically show, with the methods at present at our disposal, little or no pathological change. The fact that in an asylum it is far from uncommon to see some patients recover from marked mental aberration to apparent health within a few hours, and also in other patients the fact that after death often nothing abnormal can be discovered, has suggested to me that perhaps some light might be thrown upon the pathology of mental disease by making a systematic study of the blood-pressure in the insane. I cannot help thinking that sufficient stress has not been laid upon the important part that vaso-motor disturbances play in acute types of insanity. That vascular disturbances do exist has doubtless been long recognised, but the forms which the disturbances take have so far not been successfully worked out. The subject being a very large one I must confine myself to viewing it in a broad light and propose to discuss in this paper: (1) whether certain forms of insanity fall under definite heads so far as blood-pressure is concerned; (2) if, as seems probable, they can be arranged in such definite groups, whether in a given case the nature of the insanity is the result of the altered blood-pressure or the cause of it; and (3) if the insanity be caused by the altered blood-pressure what line of treatment suggests itself?

I have examined a large number of insane patients at Bethlem Royal Hospital as to their blood-pressures and have found that they show a marked tendency to fall under two large groups—namely, Group I.: Persons with excitement who have a low blood-pressure; and Group II., persons with depression who have a high blood-pressure.

In making these investigations I have used Barnard and Hill's sphygmometer. In all cases the metal band was placed round the left arm of the patient and in those cases in which the arms were very thin I placed a folded towel along their extensor surfaces in order to equalise as nearly as possible

the circumference of the arms in every case. All investigations, with the exception of a few to be mentioned later, were made at the same time of day, namely, between 11 A.M. and 12 noon, in order that meals might falsify the results as little as possible. No drugs were administered for some time before the investigation. The condition of the bowels was noted in all cases. In all cases I had each reading verified by one or two other persons. I find that the blood-pressure in the ordinary healthy individual taken at the time mentioned is usually about from 120 to 125 mm. of mercury, but here again variations exist—viz., an excitable active person has a lower blood-pressure than the apathetic individual. The patients upon the examination of whom I have based my investigations are all individuals whose vascular systems, so far as I could discover, were normal and in whom I could make out no definite organic disease or degeneration to account for the blood-pressure changes.

The following is an abstract from my data:—21 female patients suffering from acute melancholia give an average of about 150 mm., the range being between 140 mm. and 160 mm. of mercury. Usually the more profound the depression the higher the blood-pressure. In 15 cases of acute melancholia in male patients the average for the blood-pressure was from 140 to 145 mm., the range being from 135 to 160 mm. This is not quite so high as with the women, but the depression was as a rule less marked in the men than in the women. The depression improved as the day went on in a certain number of cases and in these cases the blood-pressure was lower towards evening, as is well shown in Table I.:—

TABLE I.

Case.	Time.	Blood-pressure.	Pulse.	Remarks.
Mr. A. ...	Morning.	160 to 170 mm.	72	Bowels open; very depressed.
	Evening.	150 mm.	72	Bowels open; less depressed.
Mrs. B....	Morning.	155 mm.	74	Bowels open; very depressed.
	Evening.	135 mm.	72	Bowels open; less depressed.
Mr. C. ...	Morning.	160 mm.	74	Bowels open; very depressed.
	Evening.	140 mm.	74	Bowels open; less depressed; employing himself reading.
Mr. D....	Morning.	165 mm.	68	Bowels open; very depressed.
	Evening.	140 mm.	69	Bowels open; less depressed; will converse readily.
Miss E....	Morning.	150 mm.	76	Bowels open; very depressed.
	Evening.	135 mm.	74	Bowels open; less depressed; working.

A certain number of depressed patients whose blood-pressure I have been investigating have now recovered or have greatly improved and it is instructive to note the changes in the blood-pressure. (See Table II.)

With regard to cases of stupor I regret to say that I have only been able to examine the blood-pressure in two instances and these were not well-developed cases. Miss A.: Blood-pressure, 150–160 mm.; bowels open; pulse, 62. Mrs. B.: Blood-pressure, 150 mm.; bowels open; pulse, 72. This latter patient is now nearly well and has been for some weeks, and the records at present are:—Mrs. B.: Blood-pressure, 125 mm.; bowels open; pulse, 73.

Turning to cases of excitement I have investigated the blood-pressure in 11 male patients with acute mania and they give an average of from 105 to 110 mm. of mercury pressure; 5 of the cases were about 105 mm. The 22 cases of female patients with acute mania likewise give an average of from 105 to 110 mm. Some of the cases were as low as from 95 to 100 mm. One patient who was very excited and restless gave a blood-pressure of 180 mm., but she was found to be suffering from chronic renal disease.

A certain number of patients have recovered or improved during the period of investigation and I will give the figures showing the improvement in the blood-pressure. (See Table III.)

There is one interesting case of a woman who was depressed for a long time and whose blood-pressure was always about 150 mm. She then improved and was apparently well and went to our convalescent hospital. At this time her blood-pressure was 125 mm. After being in the country for about six weeks she became excitable and sleepless and was brought back to the hospital, when I found that her blood-pressure was from 105 to 110 mm.

Up to the present time I have not had a case of circular insanity, but judging from the last patient and from the data of those cases which are at one time excited and at others depressed it seems more than probable that the blood-pressure will vary with the mental condition; that is, that it will be raised when the person is depressed and the reverse for excitement, but that during the period of apparent health it will be about normal.

The general paralytics whose blood-pressures I have investigated have not been especially suitable cases, as, except for six, they have been rather far advanced in the disease. (See Table IV.)

TABLE II.

Case.	Date.	Blood-pressure.	Pulse.	Remarks.
Mr. A....	Nov. 11th, 1897.	145 mm.	72	Bowels open; depressed.
	March 20th, 1898.	120 mm.	72	Bowels open; well.
Mr. B. ...	Jan. 18th, 1898.	160–170 mm.	72	Bowels open; very depressed.
	March 20th, 1898.	135 mm.	70	Bowels open; discharged relieved.
Mr. C. ...	Jan. 24th, 1898.	150 mm.	64	Constipated; very depressed.
	April 27th, 1898.	125 mm.	76	Bowels open; discharged well.
Mr. D....	Jan. 18th, 1898	140 mm.	77	Bowels open; depressed.
	April 11th, 1898.	120 mm.	72	Bowels open; nearly well.
Mr. E. ...	March 20th, 1898.	150 mm.	72	Bowels open; depressed.
	April 22nd, 1898.	130 mm.	70	Bowels open; nearly well.
Mrs. F....	Dec. 9th, 1897.	150 mm.	78	Bowels open; very depressed.
	April 28th, 1898.	120 mm.	76	Bowels open; much better.
Miss G....	Dec. 9th, 1897.	140 mm.	110	Constipated; depressed.
	April 22nd, 1898.	120 mm.	78	Bowels open; much better.
Mrs H....	Jan. 6th, 1898.	150 mm.	68	Bowels open; very depressed.
	March 3rd, 1898.	125 mm.	70	Bowels open; nearly well.
Mrs. I. ...	Jan. 6th, 1898.	140 mm.	78	Bowels open; very depressed.
	April 11th, 1898.	130 mm.	76	Bowels open; much better.
Miss K....	March 3rd, 1898.	150 mm.	72	Bowels open; very depressed.
	April 22nd, 1898.	125 mm.	74	Bowels open; much better.
Mrs. L....	March 17th, 1898.	150 mm.	72	Bowels constipated; very depressed.
	April 28th, 1898.	120 mm.	70	Bowels open; well.

Thus it appears clearly that in most acute forms of insanity the blood-pressure is markedly altered, the greatest variation being between an excited patient and one who is profoundly depressed. In depression with motor restlessness, the so-called agitated melancholia, so far as my evidence goes, the results are somewhat varied. When the restlessness becomes extreme sometimes the blood-pressure gives a low reading.

In stupor it would appear from my data that the blood-pressure is high, even more so than in ordinary melancholia, but in those cases of stupor which are secondary to mania, when the condition is due to exhaustion, the blood-pressure is inclined to be low. This also applies to depression following upon an acute attack of mania, when the depression is more exhausting in character and is not a true melancholia and the blood-pressure is usually low. In delusional insanity, when the mental disorder is ideational, in contradistinction to the affective or emotional forms of insanity, the blood-pressure does not always seem to greatly differ from the normal blood-pressure of a healthy individual.

The tendency is for it to be raised, but this is only to a marked extent when the patient is troubled and worried. For instance, at present there is residing in the hospital a man who is a paranoiac with delusions of persecution. These delusions are always present but vary in intensity. When he is fairly comfortable his blood-pressure is about from 130 to 135 mm., but when much worried by his delusions his blood-pressure rises to from 160 to 180 mm.

In general paralysis of the insane, as I have already mentioned, the cases which I have had at my disposal have not been very favourable for investigation. Excited general paralytics seem to follow the ordinary rule for excited cases

TABLE III.

Case.	Date.	Blood-pressure.	Pulse.	Remarks.
Mr. A.	Oct. 26th, 1897.	105 mm.	100	Bowels open; excited.
	Dec. 20th, 1897.	125–130 mm.	76	Bowels open; nearly well.
	Jan. 18th, 1898.	110 mm.	70	Bowels open; relapsed; excited.
	Feb. 10th, 1898.	125 mm.	76	Bowels open; convalescent.
	Feb. 26th, 1898.	105 mm.	88	Bowels open; excited again.
	April 11th, 1898.	110 mm.	86	Bowels open; still excitable.
Mr. B.	Oct. 20th, 1897.	110 mm.	90	Bowels open; excited.
	April 11th, 1898.	120 mm.	74	Bowels open; nearly well.
Mr. C.	Dec. 20th, 1897.	105 mm.	86	Bowels open; excited.
	April 27th, 1898.	125 mm.	76	Bowels open; nearly well.
Miss D.	Oct. 15th, 1897.	105–110 mm.	100	Bowels open; very excited.
	Jan. 14th, 1898.	125 mm.	78	Bowels open; well.
Miss E.	Jan. 14th, 1898.	110 mm.	86	Bowels open; excitable.
	Feb. 20th, 1898.	130 mm.	76	Bowels open; well.
Miss F.	Jan. 20th, 1898.	100 mm.	92	Bowels open; very excited.
	April 28th, 1898.	125 mm.	86	Bowels open; quiet and better.
Miss G.	Jan. 20th, 1898.	105 mm.	110	Bowels open; excited.
	April 28th, 1898.	120 mm.	86	Bowels open; better.
Miss H.	Jan. 6th, 1898.	110 mm.	100	Bowels open; excited.
	Jan. 20th, 1898.	140 mm.	94	Bowels open; depressed and weeping.
	Feb. 8th, 1898.	115 mm.	90	Bowels open; excitable.
	April 28th, 1898.	120 mm.	76	Bowels open; nearly well.

and have a low blood-pressure and when the excitement passes off the blood-pressure is found to be normal. In very exalted general paralytics the pressure is high in the cases which I have investigated, but this requires more investigation as the number of exalted cases was limited. The blood-pressure of general paralytics in the later stages, whatever may have been the previous mental condition, as in the acute maniacal general paralytics, is low. Dr. Mott[1] has been working at the cause of the degeneration in general paralytics; he considers that there is a source of auto-intoxication in those patients from the products of the disintegration that is going on in the nerve tissue of the brain. Cholin is the poison to which he attaches much importance. Now it has been found by experiment that cholin lowers the blood-pressure and this may be the cause of lowered blood-pressure in advanced general paralytics and in those early cases of general paralysis where there is much waste of brain substance going on.

Hence from the foregoing it would seem that the blood-pressure is most disturbed in affective forms of insanity—that is to say, where there is some disturbance of the emotions. Further, in all cases which have recovered during the period that I have been making these investigations I have found that the blood-pressure has been normal when the patient was considered well enough to leave the hospital. This statement also applies to general paralytics who have passed into a condition of remission and who for the time being must be considered well; when the remission terminates and the symptoms of general paralysis again establish themselves the blood-pressure once more follows the general rule of being high for depression and low for excitement.

I now pass to the second question: Is the insanity the result of the altered blood-pressure or the cause of it? Of the importance of this question there can be no doubt, for if perchance we could prove that the altered blood-pressure in any way may produce mental disorder in certain individuals we have at once the golden key for the treatment and possible cure of those forms of insanity where the change is purely functional in character. When we begin to weigh the evidence which we have at our disposal we find that that in favour of the altered blood-pressure being responsible for mental disorder is not only abundant but in many respects weighty. I shall therefore deal with this first. We are all cognisant of those cases of mental disorder in which a patient within a few hours passes from marked insanity to apparent health. It is more common in states of excitement than in states of depression and it is extremely difficult to explain except from the standpoint of some very mobile mechanism. Now the vascular system is an apparatus of this nature. Dr. Leonard Hill[2] has shown that the arterioles in the splanchnic area are the regulators of the blood-pressure in the brain and to a large extent the question whether the blood-pressure be increased or not in the cerebral area depends upon whether

TABLE IV.

Case.	Date.	Blood-pressure.	Pulse.	Remarks.
Mr. A.	Oct. 9th, 1897.	100 mm.	86	Bowels open; excited.
	Nov. 11th, 1897.	110 mm.	68	Bowels open; better.
	Dec. 14th, 1897.	115 mm.	66	Bowels open; in remission.
Mr. B.	Nov. 1st, 1897.	110 mm.	78	Bowels open; excitable.
	April 11th, 1898.	120 mm.	70	Bowels open; remission.
Mr. C.	Oct. 9th, 1897.	100 mm.	86	Bowels open; very excited.
	Nov. 1st, 1897.	115 mm.	80	Bowels open; remission.
	April 17th, 1898.	105 mm.	84	Bowels open; excited.
Mr. D.	Nov. 11th, 1897.	150 mm.	74	Bowels open; ataxic, quiet, and depressed.
	Dec. 14th, 1897.	105 mm.	100	Bowels open; excited.
	April 2nd, 1898.	115 mm.	86	Bowels open; better.
Mr. E.	Nov. 11th, 1897.	160 mm.	76	Bowels open; very exalted.
Mr. F.	Jan. 18th, 1898.	140 mm.	70	Bowels open; exalted.
	Dec. 14th, 1897.	105 mm.	80	Bowels open; excited.
	April 11th, 1898.	120 mm.	72	Bowels open; remission.
Mr. G.	Dec. 14th, 1897.	140 mm.	72	Constipation; depressed.
Mr. H.	Nov. 1st, 1897.	106 mm.	78	Bowels open; depressed case last stage.
Mr. I.	Nov. 1st, 1897.	100 mm.	72	Bowels open; depressed case last stage.
Mr. K.	April 11th, 1898.	100 mm.	80	Bowels open; exalted last stage.

they are relaxed or contracted. Everyone is probably acquainted with the feeling of depression which accompanies a loaded bowel and in the mental relief when the constipation is overcome. Some would say that the feeling of depression was autotoxic in origin, but surely the mental relief is too rapid for it to be due to any such cause. Again, in the insane, especially with melancholia, constipation is often the prevailing symptom and frequently by attending to the bowels regularly with salines, mild

[1] Vide Annual Report, Asylums Committee, London County Council, 1896.

[2] Vide Cerebral Circulation: L. Hill.

laxatives, and enemas the depression soon disappears. May it be that the mere mechanical effect of a fæcal accumulation upon the splanchnic vessels causes the rise of cerebral blood-pressure? At the end of February we admitted a man into this hospital who was suffering from marked depression, this being his third attack within the last thirty years. The day after admission I took his blood-pressure and found it to be 190 mm. and the pulse slow. The bowels were very constipated and acted but slightly to a soap-and-water enema. Two days later he had a severe convulsion. Not having any physical signs of general paralysis the convulsion seemed to be due to constipation. A large oil enema was administered and he passed a huge amount of fæcal matter; three hours later the blood-pressure was 140 mm. and he was much better and remained so for the next few weeks, but the depression unfortunately returned again later and with it increased blood-pressure. In this case probably sensory irritation was the cause of the convulsions. Dr. Leonard Hill has observed that stimulation of any sensory nerve causes a rise of general arterial pressure and intracranial or cerebral venous pressure passively follows this rise. May this not be the explanation of the feeling of depression which occurs with some cases of constipation, especially those which are at once relieved by a free purge? Professor Clifford Allbutt has laid stress upon this important point in a paper read before the Hunterian Society in 1895 upon Senile Plethora. He reports some cases of high blood-pressure in which there was a certain degree of depression and insomnia, and all the patients improved upon laxaties and salines. My observations were made before my attention was drawn to Professor Allbutt's paper, and I find that in every respect my investigation corroborates this work. In my cases, as with those of Professor Allbutt, I have confined myself to those patients whose altered blood-pressure did not in any way seem to be due to any arterial degeneration. Though I have not been able to corroborate this by post-mortem examination the fact that most of my cases were comparatively young persons and that many of the patients recovered and that the blood-pressure returned to normal is strong evidence that there was no organic cause for the altered blood-pressure. If a patient had albumin in his urine or any suspicion of vascular degeneration I rejected any observation that I made from him at once. We may have a functional psychosis occurring at any period of life and I find that the blood-pressure is raised alike in all. Again, an argument in favour of the altered blood-pressure being a determining cause in mental disorders is the action of drugs; nitro-glycerine, which I have tried in a few cases, lowers the blood-pressure. In one, that of a woman actively depressed and a victim to that symptom so common in melancholia, a feeling of weight and oppression upon the top of the head, I found before commencing to administer nitro-glycerine that her blood-pressure was constantly about 150 mm. Two days after taking $\frac{1}{200}$ gr. of nitro-glycerine three times a day the blood-pressure had fallen to 135 mm. and she was feeling better and the head was relieved. The dose being increased to $\frac{1}{100}$ gr. three times a day she improved further and the blood-pressure fell to 120 mm. and the feeling of weight was gone. If the medicine was left off she soon relapsed and the head symptoms returned. In another case I obtained similar results, but I found, as others have described, that the effect of nitro-glycerine soon passes off, that it cannot be always relied upon, and that it is not easy to keep the blood-pressure low. In other cases I have treated with erythrol tetra-nitrate, a drug the value of which as a vaso-dilator has been demonstrated by Professor Bradbury, many seemed to get immediate relief from its use, both so far as the head symptoms were concerned and also the depression lessened with the fall of the blood-pressure.

Passing for a moment from cases of depression to maniacal cases in which the blood-pressure is low I have observed the effect of the prolonged bath upon the blood-pressure in 3 cases. The prolonged bath as used here is an ordinary bath with a lid fitting upon the top. The patient sits in the bath, the head being the only part above the lid. The temperature of the water, to begin with, is about 97° F. The patient is in the bath for half an hour the first day, and the time is steadily extended up to seven or eight hours per diem, meals being taken while in the bath. It has long been observed that certain patients who are usually excited and incoherent will converse rationally and calmly during the period in which they are in the bath.

In one case before commencing the bath the blood-pressure was 105 mm. and the patient was very excited; after the bath her blood-pressure was from 120 to 130 mm. and she was quiet and reasonable; after having the bath regularly for nine days she began to keep well between the baths and they were consequently stopped. She subsequently continued to make progress and her blood-pressure remained about 130 mm.

In the second case the patient before the bath used to be each morning excited, the blood-pressure was 100 mm., and the pulse was 80. Upon being taken out of the bath in the evening she was quiet and the blood-pressure was 120 mm. Unfortunately the improvement did not last and she left the hospital uncured.

In the third case the blood-pressure before the bath was 100 mm. and after 105 mm.; little good was thus done and the excitement did not abate much. But this case was a chronic one, the patient had been ill some years, with, I fear, little chance of recovery.

From time to time we have had rapid recoveries in the past from the use of the prolonged bath; the cases which do well are always maniacal cases, and this agrees with what I have found, that the prolonged bath raises the blood-pressure. Melancholiacs do not do well with the prolonged bath and it is what we should now expect, as it merely raises the blood-pressure higher instead of relieving it.

Again, bearing upon the effect of blood-pressure on the mental condition, we have the interesting cases of insanity developing in persons suffering from cardiac disease. When the patient is a victim to aortic regurgitation and the blood-pressure is low and ill-sustained the general rule is for the form of insanity to be maniacal in character, whereas when the cardiac trouble is due to disease of the mitral valve the blood-pressure is raised and the patient is usually depressed. Looking through the case books of Bethlem Hospital I find that out of 7 patients recorded as suffering from aortic regurgitation during the last three years there was excitement in 5 cases and that, on the other hand, out of 23 patients affected with mitral disease 20 showed melancholic symptoms. As these patients, except for unstable heredity in some cases, had no other cause for insanity save the cardiac trouble, they rather lend support to the view that alteration of blood-pressure in certain individuals may assist in some way in producing mental disorder.

Further, how often has it been noted that sudden profuse hæmorrhage as the result of an accident produces delirium, and what is delirium but a temporary insanity? Now if infusion with saline solution is performed the delirium at once ceases. With profuse hæmorrhage there is a rapid fall of blood-pressure, but the pressure is re-established after infusion.

With regard to the effect of gout upon the blood-pressure the evidence is conflicting and personally I have not been able to test any cases with the sphygmometer. But if those observers are correct who say that owing to the blood condition the blood-pressure is raised we have further support in favour of the effect of blood-pressure upon mental states. For not uncommonly an attack of gout is ushered in by insomnia, depression, and irritability.

Again, it has been observed that the blood-pressure falls physiologically during the day, as if, as Dr. Leonard Hill says, the vaso-motor centre was less able to maintain splanchnic constriction. If this were the case the melancholiac should improve as the day advances and the maniac grow worse, and this is precisely what does happen. Depression is always more profound in the morning and suicides are common about 6 A.M., whilst toward evening the misery is less or gone and the patient employs or amuses himself, but this is only temporary, as the depression returns with the break of day. On the other hand, the maniac in the morning is at his best, for throughout the day the excitement increases, and how often about 4 P.M. are we requested by attendants or nurses to permit them to put a maniacal patient to bed because he or she has become so very excited and restless.

Finally, in a few cases I have observed the blood-pressure to be low for a day or two before excitement supervened.

Against the view that altered blood-pressure may cause mental disorders we have the fact that the blood-pressure may be high or low in a number of individuals who never become insane. But is this not what we should expect? A large number of persons drink, but comparatively few develop insanity as the result of alcohol; syphilis is common, but syphilitic insanity and general paralysis of the insane are comparatively rare. Like many other diseases we must have a predisposing cause which lowers the resistance of the

individual in some important particular before a given stress can act with harmful result. In insanity we legitimately anticipate that the most common predisposing cause is heredity, for it is a factor that a neurotic inheritance is present in a vast majority of cases. I do not for one moment believe that any amount of altered blood-pressure could, *per se*, produce insanity in a perfectly stable person, for the causation of insanity is no such simple problem; but given an individual with an unstable nervous system the probabilities are reversed, and we may now have the vascular mechanism more readily affecting mental states. On the other hand we may have to come to the conclusion that the blood-pressure has little or nothing to do with the production of insanity; they may have no relationship, but may each be dependent upon a common cause. In support of this latter view is the following interesting case which was recently admitted into Bethlem Hospital. A woman with a neurotic inheritance, who had had a previous attack of insanity and had recovered, applied for admission as a voluntary boarder as she was suffering from insomnia and a feeling of irritability. The blood-pressure was about 130 mm. Next day she was more restless and the blood-pressure was 110 mm. The following day the excitement had greatly increased, she was destructive and very restless and talkative, and the blood-pressure was 105 mm. In this patient the blood-pressure fell almost *pari passu* with the increase in excitement.

The next question, Can insanity cause an alteration in the blood-pressure? is a much more difficult problem to discuss. That the two—insanity and altered blood-pressure—co-exist we cannot doubt, but there is but little in favour of the view that insanity causes the altered blood-pressure. Some support is lent to this view by the fact that though in a case of delusional insanity the blood-pressure has for some period continued normal, an access of worry on the score of delusions and a corresponding emotional disturbance is found to affect the pressure of the blood. From this it may be argued that emotional forms of insanity may produce an alteration in the blood-pressure, a conclusion which appears to be corroborated by the fact that those persons who physiologically are excitable have a comparatively low blood-pressure, whilst the normally lethargic individuals have a comparatively high pressure. Again, there is the record of the case of the voluntary boarder whose blood-pressure fell steadily as the excitement developed. Also, those cases which I have recorded where the blood-pressure varies with the mental condition somewhat favours the view that the altered blood-pressure is due to the emotional disturbance. Against this theory that insanity may produce alteration of blood-pressure is the action of drugs, such as erythrol tetra-nitrate, nitro-glycerine, laxatives, &c., for by improving the blood-pressure not uncommonly the mental state likewise improves. Farther, the improvement which takes place in melancholiacs as the day advances and the reverse in maniacs might indicate that the physiological fall of the blood-pressure towards evening in some degree produces this result.

We must now turn to the treatment of the insane as indicated by the observations I have made as to altered blood-pressure. Whether the variation in blood-pressure in any way produces disorders of mental state we are not at present able to make any dogmatic statement. But I feel that it is not too much to say that probably the general lines of treatment can be indicated to no small an extent by observing the blood-pressure in any given case. This statement is borne out by the fact that I have found that a certain number of patients have improved, and others have recovered, by directing the treatment to re-establishing a normal condition of blood-pressure. Sulphate of magnesia has been described as an excellent tonic, and so it is, especially when we have to deal with a case of incipient melancholia. I have seen a number of young persons who were on the verge of melancholia who have been saved from crossing the line which separates sanity from insanity by sulphate of magnesia. Professor Allbutt has already reported some cases of senile plethora which recovered with salines and aperient waters and other treatment directed to lowering blood-pressure. If the case is an early one aperient treatment coupled with a liberal allowance of light diet and regular exercise will be all that is required. If the patient has passed into deeper depression the lowering of blood-pressure by aperients may be with advantage amplified by other medication. There is one symptom which perhaps distresses the patient more than any other, and that is the headache and constant feeling of pressure upon the top of the head. Now this symptom seems certainly to be vascular in origin and often the higher the blood-pressure the more severe the distress. This symptom I find is greatly relieved by nitro-glycerine. Unfortunately, as I have already pointed out, the relief obtained by nitro-glycerine is often very temporary and an hour or two after taking the drug the pain has returned. Professor Bradbury, in his Bradshaw Lecture of 1895, in commenting on the evanescent action of this drug, has pointed out that erythrol tetra-nitrate is more reliable and also that its effect as a vaso-dilator is more permanent and that the benefit derived by its use is present for some hours after. So far I have only tried its action upon a few patients, but the results are most encouraging, as a relief is undoubtedly more lasting and greater than with nitro-glycerine. In some instances the improvement has been most marked; a man who had spoken but little, after two ½ gr. tabloids of erythrol tetra-nitrate volunteered remarks to the attendants and has steadily improved since. Another man says that he has felt much clearer and better since he "started the new medicine" and now reads and employs himself. A woman who was very agitated and depressed, two days after commencing to take erythrol tetra-nitrate was found employing herself at needlework, a thing which she had never previously done since admission, and she told me that she felt much better and has continued to be so up to the present time. Morphia has long been known as a useful drug in some cases of melancholia; but its use has always been very restricted in maniacal cases, as little benefit seemed to be derived from its administration. The explanation has, so far as I know, never been given, but the fact is interesting, though it is now what we should expect in the light of my recent observations, as morphia lowers the blood-pressure by relaxing the arterioles in addition to its action as a hypnotic.

While working at the subject of blood-pressures I have observed that in a few cases the amount of blood in some patients seemed to be much below normal, and it was absolutely impossible to obtain a reliable reading of what the actual blood-pressure was. If these individuals are ordered large quantities of warm water daily the improvement is at once most marked. In some cases I have ordered half a pint of water to be injected into the rectum night and morning with good results. So far I have not tried infusion, but I believe that this might be most beneficial in some cases. Two years since we admitted a patient into Bethlem Hospital who upon admission was in a comatose condition and who died a few hours later. At the post-mortem examination we found that there was a great scarcity of fluids in the organs of the body. Everything was dry and there was no cerebro-spinal fluid in the various cavities. Probably if infusion had been performed in this case, life might have been prolonged, or may-be the patient cured.

To turn to the treatment of those patients whose blood-pressure is sub-normal I have already mentioned the use of the prolonged bath in certain excited individuals. So far I have not observed the action of the prolonged bath upon the blood-pressure of a sufficient number of cases to derive any very reliable data, but the action seemed very definite in two out of the three patients and the effect more than suggests why the prolonged bath should be beneficial to maniacal persons but useless as a rule to the depressed. The latter fact has been observed at Bethlem Hospital for some years, but we had never been able to obtain any satisfactory explanation.

In conclusion, to summarise the foregoing observations I find: 1. That the blood-pressure varies in different forms of insanity. 2 That the blood-pressure is raised in persons who are depressed or who are suffering from melancholia. 3. That the blood-pressure gives varied results in persons suffering from melancholia with motor excitement—so-called agitated melancholia. 4. That the blood-pressure is found to be normal upon the recovery of a patient whose blood-pressure has been raised during the period of depression. 5. That the blood-pressure is lowered in persons suffering from excitement or acute mania. 6. That the blood-pressure is found to be normal after the excitement has passed off and the patient has recovered. 7. That the blood-pressure tends to fall as the day advances, hence melancholiacs tend to improve and excited patients become more excited. 8. That the depression following upon an attack of acute mania is not necessarily an active depression, but rather more exhaustive in type, and that the blood-pressure in these cases may remain low until it finally returns to normal upon recovery. 9. That the blood-pressure is probably raised in

stupor. 10. That the blood-pressure is not always altered in delusional insanity except in those cases where there is also some emotional disturbance. 11. That the blood-pressure in healthy, active, and excitable persons is low as compared with healthy but apathetic individuals. 12. That from this it would seem that the blood-pressure is chiefly affected in emotional or affective insanities in contra-distinction to the affective or ideational forms of mental disorder. 13. That the blood-pressure is raised in general paralysis of the insane when there is depression, whereas in the excited types of this disease the blood-pressure is low, as it is also in the later stages of all types. 14. That there is evidence to prove that the altered blood-pressure may in certain individuals induce mental aberration, but that it is so far not complete enough to enable me to state definitely that mental disease is usually caused by altered blood-pressure. 15. That the altered blood-pressure in different forms of insanity suggests the line of treatment which may be adopted in the various kinds of mental diseases. 16. That the feeling of weight and pressure upon the top of the head, so common a symptom in melancholia, is apparently vascular in origin and is lessened or disappears when the blood-pressure is lowered. 17. That certain depressed patients improve with nitro-glycerine but that there is difficulty in keeping the blood-pressure down with this drug as its action is so evanescent. 18. That the action of erythrol tetra-nitrate it more prolonged and reliable and is more powerful in lowering the blood-pressure in melancholia than is nitro-glycerine. 19. That the prolonged bath raises the blood-pressure and hence is of more value in the treatment of excited patients.

Bethlem Hospital, S.E.

NOTE ON LUMBAR COLOTOMY.

BY LAWSON TAIT, F.R.C.S. ENG.,
CONSULTING SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN, &C.

MY letter on this subject in THE LANCET of May 21st has brought so much correspondence that I think it well to answer inquiries regarding it in a further note.

I have intended for a long time to write fully on this operation because it has been so needlessly complicated that at one time it seemed as if it would fall into disrepute. There came a "boom" on behalf of inguinal colotomy which was useless and has proved disappointing so far as I can learn. Personally I never gave any countenance to inguinal colotomy save in one case, where I had abundant reason to be dissatisfied with it. I have had every reason to be satisfied with the older operation so far as my own results were concerned, and there were arguments in favour of it as against the operation in the groin which seemed to me convincing. Thus there were of necessity many cases where the effects of the disease in the matter of obstruction were not overcome by inguinal colotomy or where the disease advanced into and above the opening which were not so affected in the event of the performance of lumbar colotomy. In fact, I have never seen a case of lumbar colotomy where the beneficial effects were destroyed by the progress of the disease. Again, it has been found, as might have been expected, that uncomfortable eversion of the gut after inguinal colotomy has been far more frequent and extensive than it ever is after the lumbar operation. Other and less important arguments also affect my choice in favour of the higher opening, amongst which is the efficiency in most cases of the imitation sphincter to which I alluded in my letter of May 21st.

I have had a number of cases of the curious non-malignant stricture of the rectum found in women, but never yet described as having been seen in men, where I have relieved the patients by lumbar colotomy, the patients living in fair comfort with the new passage after the gut below has atrophied. One of them has lived now twenty-four years since the operation and I have seen her within the last few days. According to her account she has notice of the need of an evacuation and control over the aperture very much as she had some thirty years ago before the disease attacked her. Such an amount of relief is not of course obtained in the great mass of such operations performed, for the disease is malignant in probably 98 per cent. of the cases.

There is a new group of cases at present in existence where colotomy seems more urgently needed than in any formerly amongst my experience—I mean those in which the uterus has been removed for malignant disease and the patients have recovered from the operation. I have not yet seen a case with a secondary success. It is an operation against which I was prejudiced from the first. I could not believe that any operation would be really successful in cancer of the uterus. My experience is certainly in favour of my prejudice and I can only explain any alleged success by an assertion that the diagnosis of cancer was a mistaken one. All the cases on which I have operated and now sufficiently advanced, some forty in number, have died within twelve months and most of them long before that time. Not only so, but their complications and sufferings have been more severe than in the cases left alone. Amongst these complications is a new one—one I never saw before in cancer of the uterus uninterfered with. I mean obstruction of the rectum. In the return of the disease in the pelvic cicatrix there seems an extraordinary tendency to contraction which soon pulls the bowel out of shape and afterwards completely obstructs it. Two such cases have happened to me this year already and the story of one of them will suffice. The patient was a woman, aged thirty-eight years, married three years and with one child born when I saw her first about fourteen months ago. She never got over her confinement but went on persistently losing, with menstrual exaggeration. For this she was twice treated by curettage, once in Calcutta and once in London. After the second operation she was much better for a few months and she returned to India. But all her former symptoms speedily returned and she was sent back to England and placed under my care. I diagnosed endometric cancer and advised removal of the uterus. This I carried out last November and found a polypoid patch of papilloma at what I presume had been the placental site. The body of the uterus was perfectly free from the disease apparently, the wound healed easily and in March last she was perfectly well and desirous of once more travelling eastwards. But I felt a nodule in the cicatrix and advised delay in the journey. The disease advanced with fearful rapidity and at the beginning of May I had to open the colon on account of symptoms of intestinal obstruction. In the second case I operated upon the patient for obstruction of the rectum ten days later, and she is still in bed recovering from the lumbar operation. Such experiences do not encourage me to advise removal of the uterus for cancer, for these two cases were such as ought to have had satisfactory results if ever they are to be obtained.

Now as to the method for operating on the colon for intestinal relief. I have not troubled to look up the history of the operation beyond consulting Portal and Neale and that assures me that Amussat was the inventor alike of the idea and the proceeding. According to a wit of the early part of this century the ancients have stolen most of our good ideas, but here they seem to have left us a good thing. The idea was good, and Amussat's method of carrying it out was good though complicated, but the professional anatomists have made it worse. It is very funny to hear a professional anatomist describe the structures to be seen and those to be avoided in the performance of a surgical operation. The worst operators I have ever seen have been those same people. They begin with their knives as if they meant to dissect and they proceed as if they were engaged in a demonstration. They want to see all the structures which are described in the books and to display them to the onlookers. The only thing they do not do is to recognise the fact that in the human body there are almost as many variations as there are subjects, and this is particularly true in myology. A man who attends to dissecting-room manuals in such operations as those involving incisions through the abdominal wall will come to woeful grief and may end, as I have seen happen more than once, in stripping the transversalis fascia off the peritoneum in the belief that he was undoing old adhesions. A good training in anatomical detail is all very well, but with ninety-nine out of every hundred of us it is a mere waste of time, and even with the hundredth of us the great bulk of it may be forgotten, and what is worth remembering for surgical purposes can be learnt best from frozen sections. A week with Cunningham of Dublin and his frozen sections undid all the mental mischief done to me by the careful scholastic training of Goodsir and Turner. For the first time I grasped the idea that structures were not separated, that there were no foramina, and that the abdominal organs in particular lay closely packed together in very varying relations.

So the muscles of the abdominal wall vary and so the operation of lumbar colotomy as performed in my presence by a professor was one of the most gruesome sights I ever saw in my life. He divided a lumbar artery with its accompanying nerve—he carefully identified them but could not tie the artery, for he lost it in the wealth of muscular tissue which he unravelled, and after her death his patient was found to have her peritoneal cavity full of blood. I do not recollect ever having a fatal colotomy—I am certain no case of mine ever died from hæmorrhage, for I disregard all anatomical curiosity during the operation. I put the patient on her right side with her knees bent up to steady her and I place a pillow under her right loin so as to put on the stretch that which is the guide to the whole thing—a strip of tendon which marks the union of the fascias encasing the external oblique muscle, the internal oblique, the transversalis on the one side and the latissimus dorsi (or its tendon) and the quadratus lumborum on the other. The real difficulty is that the relations of the edges of these muscles do not follow the directions of the text-books as of course they ought to do. Let the operator disregard the text-books and bear in mind that after he has divided the skin to a necessary extent over the tight band and absolutely in its direction he has only to open the glistening fascia in the same position and carefully look at the direction of the muscular fibres with which he meets. He must in his proceedings inwards bear only one route in mind and that is as nearly as possible to the umbilicus. Only one direction further is necessary so far as muscular fibres are concerned, that the surgeon must put his knife down and use only his blunt forefingers to separate the fibres. At first this would be in a direction parallel to the axis of the patient's trunk and afterwards at right angles to that axis—he need not trouble to identify even the muscles. When he has got through the two layers he will come on a layer of fascia of the greatest importance, concerning which he ought to be "well up"—the transversalis fascia. This he must slightly notch and after getting his forefingers through it he must search backward towards the body of the vertebra till he finds the base of the kidney. Having found this and remembering two arid facts of anatomy—that the descending colon is generally immediately in front of the kidney if placed on its usual side, in front of his fingers, is attached to the moveable peritoneum and separated from his finger by some loose fat, he will take two or three pairs of catch forceps and pull layer after layer of fat boldly and freely up into the wound, leaving the forceps on each layer as he lands it outside, and proceed in this way till he sees the unmistakeable gut. If he keeps the points of his forceps well downwards and pointing well forwards towards the umbilicus he cannot miss the gut. When the gut is missed it is always by dissecting-room people who go over it instead of at it. Having found the gut, haul it freely and fearlessly up out of the wound, cut it nearly through and stitch with an all-round suture into the *lower* angle of the wound, carefully replacing all fringes of fat as you proceed, or removing them if much injured by the forceps, but remove them with your fingers and not with cutting instruments. You then close the rest of the wound, the upper part. The wound need never be more than three inches long and generally need not be so much, but it may look like five inches deep. A wound so made heals immediately, and as there is nothing but a temporary separation of muscular fibres they fall back at once into position and at once resume their function. The *whole* gut has been pulled through the crosswise-made opening in the undamaged muscle, so that the almost constant tension involved in all active positions of the body secures the closure of the aperture in the gut. In a badly done colotomy only a bit of the circumference of the gut is pulled up to or out of the muscular aperture, the bulk of it being as before left inside and the gut is emptied through the relief passage only by regurgitation from below and generally when the whole of it is distended by hardened fæces. This does not give full or indeed much relief, the retained fæces having from time to time to be dug out. After colotomy is done as I recommend it should be done *all* the motion comes through the wound at once and after some practice there comes marvellous control over the passage.

If anyone compares the proceedings described above with those of Amussat as described by himself and as copied or altered in text-book after text-book after him, it will be seen that there is very little in common between the two. The operation as I give it I got from the lips of Alexander McKenzie Edwards, lecturer on surgery in the Extra-Mural School of Edinburgh, to whom I was apprentice, pupil, and assistant for about six years. I have no recollection of hearing from him that he got it from anybody else and I certainly have neither read nor heard of it elsewhere. He was a surgical genius of the highest order, as many can testify who are still alive who knew him, so that I have no doubt it was a conception of his own, and if any name is to be attached to it his name alone ought to be.

When the time came in the "seventies" that I ventured to operate upon and to remove kidneys I adopted the same incision save in such cases as those where I followed another rule as simple and imperative. Attack your tumour on its most prominent aspect and certainly avoid all dissecting-room rules about finding "oblique lines" or other untrustworthy directions.

Birmingham.

A NOTE ON THE ETIOLOGY OF BERI-BERI.

BY WALTER K. HUNTER, M.D., B.SC. GLASG.,
ASSISTANT PHYSICIAN TO THE ROYAL INFIRMARY AND TO THE ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.

IN THE LANCET of July 31st, 1897, I reported the results of a bacteriological examination of the blood in two cases of beri-beri. Since then I have had the opportunity of carrying out in two other cases a similar investigation, and this I now put on record in further support of the opinion already expressed—namely, that the white staphylococcus of Pekelharing and Winkler is in truth the specific micro-organism of beri-beri. The two patients, both seamen from the s.s. *City of London*, were admitted into Dr. Middleton's wards of the Glasgow Royal Infirmary on Oct. 29th, 1897. Neither of them spoke English with any degree of fluency and so the account of their illnesses is necessarily very brief.

CASE 1.—The patient was a native of Bombay and as far as could be made out his illness began fourteen days previously to admission with swelling and pain in the feet and legs. There was considerable difficulty in walking and the patient was sick and very drowsy. On admission to the wards the œdema of the feet and legs was well marked. The sensation to touch and pain seemed to be blunted over a considerable extent of the body, but examination on this point was not very satisfactory. The superficial reflexes were quite active. The left knee reflex was absent and the right was diminished. The patient walked fairly well except when he was told to go along a straight line and then he had a tendency to stagger. He could not stand with the feet close together and the eyes shut. No reaction of degeneration was found in any of the muscles. The right ventricle of the heart seemed to be somewhat dilated, but no murmur was to be heard over any part of the cardiac area. There was evidence of some fluid effusion into both pleural cavities. The urine was quite normal. Examination of the blood gave the following results: hæmoglobin, 70 per cent.; red corpuscles, 71·5 per cent.; and white corpuscles, 1 in 450. The patient remained in hospital for five weeks and during that time the only change noted was a return to activity of both knee reflexes. At no time was albumin to be found in the urine.

CASE 2.—The patient was a native of Zanzibar and the history of his illness was very similar to that in Case 1. He had swelling and pain in the feet and legs, but there was no sickness or difficulty in walking. He could stand with the eyes shut and the feet close together without any difficulty. The superficial reflexes were present, but both knee reflexes were abolished. The sensation to pain seemed to be practically absent all over the body and the sensation to touch was much impaired. There was no reaction of degeneration in any of the muscles. The lungs were quite healthy, but there was a suspicion of some mitral incompetence. The urine was perfectly normal. Examination of the blood gave the following results: hæmoglobin, 90 per cent.; red corpuscles, 85 per cent.; no increase of white corpuscles. The patient was dismissed from the hospital after a month's residence in much the same condition as on admission, the knee reflexes being still absent and sensation in no way improved.

In both these cases specimens of freshly-drawn blood were examined at various times and on each occasion micro-organisms were to be seen in rapid motion in the spaces

between the groups of corpuscles. Culture media were inoculated with the blood as follows: on Oct. 31st 4 agar-agar and 1 bouillon tubes from each case; on Nov. 10th 3 agar-agar and 3 bouillon tubes from each case; and on Nov. 23rd 4 bouillon tubes from each case. Of the 30 tubes thus inoculated growth was obtained in only 4, 3 of these having been inoculated from Case 1 and the fourth from Case 2. Of these 4 growths, 3 of them (2 from Case 1 and 1 from Case 2) were pure, and they presented all the characters of the staphylococcus beri-beri as already described in my former paper. They liquefied gelatin in three weeks. The fourth growth (from Case 1) was impure, consisting chiefly of streptococci, but from it no staphylococcus could be isolated.

The pathogenic properties of these staphylococcus growths were investigated by injecting the organisms grown in bouillon broth into rabbits.

Rabbit 1 was injected with staphylococcus grown from Case 1. In this rabbit 8 injections (each injection consisting of 10 c.mm.[1] of a forty-eight hours' bouillon growth), extending over 18 days—i.e., an injection every second day—were given before signs of paralysis showed themselves. The post-mortem examination of the rabbit was quite negative as regards naked-eye appearances, there being no signs whatever of peritonitis and no abscesses in the liver. The nerves, however, showed unmistakeable evidence of parenchymatous degeneration. The experiment, then, serves to establish the relationship of this staphylococcus with the staphylococcus beri-beri of Pekelharing and Winkler and at the same time it demonstrates that it is not staphylococcus pyogenes albus—not at least as one usually meets with that micro-organism.

The next two rabbits were injected with growths of the staphylococcus which had been subjected for twenty-four hours to a temperature of 41° C.

Rabbit 2 (injected with growth from Case 1) and *Rabbit 3* (injected with growth from Case 2) each received twelve injections which extended over four weeks, each injection containing 10 c.mm. of a bouillon broth culture. That the virulence of these growths had been lessened by the temperature they had been submitted to seems to be undoubted, for at the end of the experiment the animals looked as healthy as at the commencement. After an interval of ten days the same rabbits were injected with non-attenuated growths—i.e., with the same growths as those which killed Rabbit 1. Each rabbit received nine injections, each of 12 c.mm., extending over twenty-one days. At the end of this time the rabbits still showed no signs of paralysis. They were then killed, but the post-mortem appearances in both were again negative. The white staphylococcus was cultivated from the heart and spleen in both. Careful microscopic examination of the nerves showed undoubtedly that fibres here and there were undergoing parenchymatous degeneration, but the degeneration was not nearly so marked as in Rabbit 1. Thus it is seen that in rabbits of the same size the two previously injected with an attenuated micro-organism seemed less easily affected by the unattenuated organism than those which were not so injected. I scarcely wish to suggest that an immunity had been produced, for a conclusion cannot be drawn from solitary observations. But the experiments at least make one think of the possibility of producing an immunity or of lessening the susceptibility to the poison of beri-beri.

As regards the source of infection of the two patients I was supplied through the kindness of Dr. George Marshall with samples of their food. These samples consisted of rice, split peas, and two kinds of dried fish. Several cultures were taken from each, with the result that from the rice there was readily cultivated a white staphylococcus with similar morphological characters to the staphylococcus beri-beri which was grown from the blood of the two patients. This staphylococcus which was grown from rice liquefied gelatin in 19 days. Its pathogenic properties were tested by injecting a fourth rabbit.

Rabbit 4 was injected with bouillon culture which was grown from rice; 12 injections, each consisting of 10 c.mm. of a forty-eight hours' bouillon growth were given, extending over four weeks. At the end of that time no signs of paralysis had presented themselves, so the animal was killed. The result of the post-mortem examination as regards naked-eye appearances was quite negative. The nerves, however, on microscopic examination showed unmistakeable signs in many places of a parenchymatous degeneration. Cultures of the white staphylococcus were readily grown from the blood of this rabbit.

I conclude, then, from the above that this white staphylococcus which was grown from rice is the same micro-organism as that which was found in the blood of the two patients and therefore I consider rice taken as food may be a source of infection. Possibly, however, it may be that rice only makes a suitable medium for the growth of the staphylococcus and that the entrance of the infection is entirely through the air passages. If one may draw any conclusion from comparing the experiment of Rabbit 1 with that of Rabbit 4 it would be that the staphylococcus grown on rice is less virulent than when grown from the human blood. This, however, is not warranted, for the data are too uncertain. The white staphylococcus grown from rice was not found in any of the growths from the other specimens of food.

I again have to express my great indebtedness to Dr. G. S. Middleton, who so kindly placed at my disposal these two cases of beri-beri. I have also to thank Dr. Lindsay Steven and Dr. J. Barlow for the use of their laboratories and apparatus.

Glasgow.

[1] An error occurs throughout my former paper, where it is stated that cubic centimetres (c.c.) of the bouillon broth were injected into the rabbits. It was, of course, cubic millimetres (c.mm.) which were injected.

A CASE OF FRACTURED SPINE WITH SOME UNUSUAL COMPLICATIONS; RECOVERY.

BY A. W. LYONS, M.B. LOND., M.R.C.S. ENG.,
HONORARY MEDICAL OFFICER TO THE THAMES DITTON COTTAGE HOSPITAL.

ON Dec. 24th, 1897, a carter, aged twenty-eight years, was leading his horse, which was attached to an empty brickcart, under a railway-bridge when the horse took fright at a passing train, bolted, and knocked him down, causing the cart-wheel to pass over his back. I found the patient lying by the side of the road, whither he had been carried. He complained of great pain in his back, and he was bathed in a profuse perspiration. His pulse was feeble; 65 per minute. He was conveyed to the Thames Ditton Cottage Hospital on an ambulance. On admission no bruises or other external marks of injury were discovered, but there was a puffy swelling over the situation of the ninth and tenth dorsal vertebræ. On palpating this the finger appeared to sink into the swelling; but it was difficult to make out the vertebral spines though the one next above the seat of injury appeared to be a little prominent. No crepitus was made out, neither was there any distinct dislocation of the spine. A careful search was made for a fracture of the ribs but none was discovered. At this time there was no marked paralysis, though the movements of both legs were feeble, especially of the right. The patellar reflexes were both absent. The patient was laid flat on his back and was kept in position by means of a folded towel placed across his chest and secured at the ends by a sandbag on either side. The urine was drawn off and was found to be normal. By the evening of the same day the right leg was paralysed, the patient being quite unable to draw it up in bed though he could still move the foot a little. The movements of the left leg were impaired considerably more than they had been in the morning. The patellar reflexes were both absent. He had been coughing a little and bringing up some blood-stained mucus. On auscultation a few râles were heard over the right lung but none over the left lung. Resonance was equal on both sides. The temperature of the patient on admission was 98·2 F. In the evening of the same day it was 99°. On Dec. 25th the temperature was 99·4°. The patient had passed a fairly good night, but the cough had been a little troublesome. Blood-stained mucus was still being brought up. The cough caused him acute pain over the seat of injury to his back. The movements of the right side of the chest were much diminished and there was dulness over the whole of that side. The apex beat was not displaced. Vocal fremitus was absent and no tubular breathing could be heard, but the breath sounds were very faint and vocal resonance was much diminished. The patient complained of shooting pains in the right leg. The paralysis remained stationary and there was still retention of urine. There had been no action of

the bowels since the accident. Six grains of subchloride of mercury were given. The temperature in the evening was 100·4°. The temperature on the morning of the 26th was 99·2°. The patient had had a very bad night. His breathing was very rapid and shallow. Resonance was re-established over the front of the right lung, with very large râles and profuse muco-purulent expectoration tinged with blood. It was not deemed wise to move the patient to get at the back of his chest. He was able to draw up both his legs, the left more freely than the right; there was no loss of tactile sensibility, and he was able to localise tactile sensations. He complained of shooting pains in the legs, especially in the right, and he perspired profusely. There was no action of the bowels until after an enema. In the evening the temperature was 102·2°, the pulse was 136, and the respirations were 38 per minute. The morning temperature on the 27th was 101·2°, the pulse was 114, and the respirations were 31. The patient had had a bad night. The cough was troublesome and the expectoration was profuse. The nurse reported that the breathing had been very rapid and shallow during the night. The right lung continued in the same condition as on the previous day. The left lung was quite normal. The right leg was completely paralysed, and the reflexes were still absent on both sides. He was able to move the left leg a little but not so much as on the previous day. He still complained of shooting pains in both legs. The catheter was used night and morning; he passed a little urine towards the evening, but it appeared to be overflow. A small superficial sore of about the size of a sixpenny-piece had made its appearance on quite the lower and internal part of the left gluteal fold out of the way of any pressure. The evening temperature was 102·2°, the pulse was 108, and the respirations were 40. On the 28th the temperature in the morning was 100·2°, the pulse was 112, and the respirations were 36. There was no change in the general condition of the patient. The urine drawn off by catheter was offensive, though the greatest care had been taken to render the instrument aseptic on each occasion of its use. The bladder was now washed out with warm boric acid lotion morning and evening. The temperature in the evening was 100°, the pulse was 112, and the respirations were 36. On the 29th the morning temperature was 100·2°, the pulse was 112, and the respirations were 36. The patient still expectorated large quantities of muco-purulent sputum but no blood. The urine drawn off in the morning had lost all the offensive odour. He passed a motion unconsciously; hitherto he had only had an action of the bowels after an enema. The evening temperature was 100·2°, the pulse was 100, and the respirations were 24. On the morning of the 30th the temperature was 101°, the pulse was 119, and the respirations were 28. The patient had had rather a better night. There was no increase in the weakness of the left leg. He took nourishment well—indeed, he had done so all along. There was no return of the reflexes. The evening temperature was 101°, the pulse was 112, and the respirations were 32. On Jan. 3rd, 1898, the temperature, pulse, and respirations were normal. During the last two days the patient had been making steady progress. He was reported to have had a much better night. There had been less coughing; the expectoration, however, was still muco-purulent but diminished in quantity. The râles to be heard over the right lung were smaller. There was some increase in movement in the left leg; the right leg was still absolutely paralysed. The urine had to be drawn off and the bladder to be washed out as before. There was no overflow—in fact, the urine only flowed through the catheter on pressure being made with the hand above the pubes. The patient had had an action of the bowels without an enema. The bedsore was beginning to heal. The perspiration was much less. The temperature through the day had been normal; at midnight it fell to 97°. On the 6th the temperature, &c., were normal. The patient had slept very well but he coughed a little. A few râles were to be heard over the right lung. He was able to draw up the right leg. He had no pain except on coughing violently, when he felt it in his back. The urine flowed through the catheter without any external pressure. On the 7th the temperature, &c., were normal. The patient felt "very well"; the cough had nearly gone and the expectoration had correspondingly diminished. He was able to draw up the right leg quite freely. The patellar reflexes had not returned. There was distinct lessening of painful sensibility over the right leg and thigh; he said he felt a "little prick" when a pin was pushed well into the subcutaneous tissue. He was well able to localise tactile as well as painful stimuli. The swelling over the seat of the injury had completely disappeared, but there was a hollow in the situation of the spine of the tenth dorsal vertebra and a prominence a little to the right which appeared to be the displaced spine, and there was tenderness on pressure over this prominence. The cremasteric and abdominal reflexes were absent, as they have been ever since the accident. On the morning of the 8th the patient had decidedly more power to expel the urine through the catheter. He had hardly coughed at all during the night. The patellar reflexes were absent. He passed 16 oz. of urine naturally during the evening. On the 9th the patient said that when he brought his head forward his back felt "as if it were in two pieces." He was able to draw up both legs in bed, the left more strongly than before. He could not dorsally flex either foot and was unable to abduct his thighs. There was dulness on the right side of the chest behind from the level of the inferior angle of the scapula downwards. The breath sounds over this area were very faint and vocal fremitus and resonance were both absent. The breath sounds in front of the right lung were somewhat harsh; there were no moist sounds. An exploring needle plunged into the dull area behind failed to draw off any fluid. On the 10th the general condition of the patient was unchanged. It was noticed that the abdominal reflexes were present on both sides. He passed urine freely and naturally. On the 11th the cremasteric reflex had not returned. The patient had had a very good night. In the evening he passed 10 cz. of nearly pure blood per urethram. He complained of no pain and otherwise his condition appeared unaltered. The temperature was normal. On the 12th the patient had no pain or tenderness over the bladder, but on being pressed he admitted feeling a little pain at the end of the act of micturition. The urine passed during the night contained less and less blood on each successive occasion. A specimen of urine passed in the early morning had a specific gravity of 1018; it was alkaline with a trace of albumin and under the microscope amorphous phosphates and a very few isolated pus cells were found. On the 15th the urine was slightly offensive. The patient was ordered 10 gr. of boric acid three times a day. On the 18th the urine was quite normal, being clear with no trace of albumin and no pus cells. After this date he made a perfectly uneventful progress, gradually regaining power in his legs, and was discharged at the end of April when he was able to get about on crutches. The only movement he was unable to perform was dorsal flexion of his feet. There was some slight return of patellar reflex on both sides.

The initial paralysis was probably due to hæmorrhage; had it been due to shock it would have occurred immediately after the accident and have progressively diminished, but it did not attain its maximum until the evening of the day on which the accident happened—i.e., some ten or twelve hours afterwards. There were no girdle pains complained of. The blood-stained sputum would seem to indicate some injury to the lung, and cases have been recorded in which this occurred from a violent crush to the thorax without any fracture of the ribs (Erichsen). The physical signs which developed in the right chest during the night of Christmas Eve may have been due to hæmothorax or pneumothorax or a combination of the two. One can hardly imagine a hæmorrhage so extensive as to render one side of the chest absolutely dull without some definite symptoms of loss of blood, but these were entirely absent. Pneumothorax may be accompanied by dulness (Osler). The sudden re-establishment of resonance and breath sounds over the front of the chest is difficult to explain. There were at no time symptoms of pneumonia. The sputum was never pneumonic but always copious and thin; the blood gradually diminished in quantity and finally disappeared five days after the accident. The reappearance of paralysis must have been due to a secondary myelitis, and to this probably the temperature was partly due. With regard to the bladder, the cystitis was probably due to the inability of the bladder to completely empty itself when the catheter was passed owing to paralysis of its walls. There never was over-distension, for the abdomen was percussed at least twice daily and no dulness was found. When natural micturition was re-established the washing out of the bladder was discontinued. Probably there was some trophic ulceration of its mucous membrane which was the source of the hæmorrhage. At this time he was given 10 gr. doses of boric acid, which speedily and finally put a stop to the decomposition of the urine and so aided the healing of the ulcer. The

bedsore was obviously a trophic lesion, being in a situation in which pressure was impossible. It developed on the third day after the accident and healed in about a fortnight. It seems improbable that the body of the vertebra was fractured, for if it had been union could hardly have taken place sufficiently for an examination of his back to be made by Jan. 9th, sixteen days after the accident. At all events there was no solution of continuity in the spinal column. The lumbar enlargement of the cord begins at the tenth dorsal vertebra, hence the absence of the patellar reflex. The cremasteric reflex depends upon the first and second lumbar nerves, and the abdominal reflex upon the eighth and twelfth dorsal nerves (Suckling).

Thames Ditton.

THREE CASES OF PROLONGED LABOUR.

BY JOHN MABERLY, M.R.C.S. ENG., L.R.C.P. LOND.

IT rarely happens that one is called in close succession to cases which illustrate the causes, difficulties, and dangers of prolonged labour in such a typical manner as the following which have lately come under my observation, and I have on this account been tempted to record them in the hope that they will be of interest to my fellow practitioners.

CASE 1.—The patient was a primipara, aged twenty-three years. She had been in charge of a so-called midwife who allowed labour to proceed for something over forty-eight hours, until at last becoming alarmed at the condition of the patient a medical man (Dr. J. Petersen) was sent for. When he arrived he found the patient in a terribly exhausted condition, with the vagina, vulvæ and neighbouring parts greatly inflamed and swollen. On examination the head was found low down in the pelvis and it had probably been lying there for some hours. Forceps were applied and the child, which had been dead for some time, was extracted without difficulty. The tissues were, however, in such a condition owing to the prolonged pressure that the perineum ruptured as far back as the anus in spite of the greatest care being used. Owing to the œdematous condition of the parts any attempt at immediate suture was out of the question and a douche of 1 in 2000 perchloride of mercury was ordered. This was on Jan. 14th, 1898. The patient was in a collapsed condition and it seemed doubtful whether she would survive many hours. She, however, rallied to some extent and the parts were dressed two or three times a day with the lotion and dusted with iodoform. Extensive sloughing occurred, portions being removed each day. The temperature varied from 101·5° to 105° F. and the pulse from 120 to 130 beats a minute. A liberal supply of nourishment in the form of milk, eggs, meat, broths, &c., with a good allowance of brandy and a mixture of quinine with diffusible stimulants were administered. The urine had to be drawn off with a catheter regularly. The fæces were passed involuntarily. The bladder becoming infected powders containing 10 gr. of boric acid were given three times a day if the urine was turbid and ammoniacal. On the morning of the 21st the swelling and the sloughs in the vagina had to some extent disappeared and it was possible for the first time to get a view of the cervix. It was then seen that sloughs were projecting from the cervix and extending into the uterus. As much was removed as possible and the uterus was syringed out with disinfectant lotion. At night the uterus appeared to be more enlarged than usual and a hypodermic injection of $\frac{1}{75}$ gr. of ergotin with $\frac{1}{4}$ gr. of morphia was given. On the next morning (Jan. 22nd) a large amount of clot and sloughs came away by natural efforts, and a further quantity was removed with the fingers and forceps. It was found impossible to remove all the sloughs an account of the imminent danger there appeared to be of going through the uterine walls if too much force were used in attempting to detach portions which were not easily separable from the living tissue, besides the risk of hæmorrhage, which, in the low condition of the patient, would have been fatal to her. During the day the patient appeared to rally somewhat, but on the morning of the 23rd she sank, worn out by the exhausting illness. There can be no doubt that besides the mere surgical injury inflicted by neglecting to deliver the child earlier there was superadded the septic infection caused by the dirty hands of the midwife. It is a deplorable fact that owing to laxity of the Medical Acts in South Africa a number of women who put themselves up as midwives are absolutely ignorant of the use of antiseptics or even of the necessity for ordinary cleanliness in their work, consequently one is constantly seeing cases of severe fever following confinements which have been attended to by such persons—in fact, so common is it among them that they consider it a matter of course, deluding themselves and their patients that it is what they call "milk fever," whereas the correct term would be "puerperal fever."

CASE 2.—The patient, a healthy, young, coloured woman, had previously given birth to a healthy child without any abnormal difficulty. I was called in early on the morning of Feb. 22nd, 1898. She had then been in labour about thirty-six hours. The membranes had ruptured about twelve hours previously, the pains, according to the patient, had been strong and fairly frequent from the commencement. On examination the os was found to be dilated to about the size of a two-shilling-piece and the head was felt above the pelvic brim. The frontal bone was made out to be the presenting part—the brow could be felt high up and to the front. The back of the child appeared to be turned towards that of the mother. The uterus was strongly contracted and the patient was in excellent condition in spite of the long continuance of the labour. An attempt was made bimanually to push the brow up and to promote flexion of the head, apparently with some success. 45 gr. of choral in 15 gr. doses given at intervals of twenty-minutes were administered with the object of giving the patient some rest and assisting the dilation of the os. I again saw the patient about 10 A.M. in company with Dr. Engelbach, and although the position of the head appeared to be to some extent rectified and the os well dilatable no real progress had been made, the head still being above the pelvic brim in spite of the strong uterine contraction. It was evident that, probably owing to the abnormal size of the head, a natural termination of the labour could not be expected. Chloroform was administered and after a good deal of difficulty the forceps were applied, but no amount of reasonable force appeared to have the slightest effect in persuading the head to enter the brim. Turning was next tried but was found impracticable on account of the strongly contracted state of the uterus and the fact that the waters had drained away some hours previously. The only resource left was either to do a Cæsarean section or to perforate and crush. The former was out of the question on account of the septic surroundings of the patient and it was therefore decided to perforate. After some difficulty the perforator was inserted into the posterior fontanelle and the hole having been enlarged the cephalotribe was applied and the head was crushed sufficiently to be able to make it enter the pelvic brim. The condition of the patient still being excellent it was decided to leave the case to nature to complete delivery. In this way there would be less risk of injury to the maternal soft parts, especially the perineum, which was still very resistant, and no harm could be done to the patient by the delay of two or three hours. The result was as anticipated and at about the end of three hours the child was born without further difficulty. The patient made an uninterrupted recovery. Syringing out twice a day with perchloride of mercury solution was practised for the next four days and a powder composed of 4 gr. of sulphate of quinine, 2 gr. of phenacetin, and $\frac{1}{2}$ gr. of calomel was given night and morning for the first two days, the bowels being kept open once or twice a day with the assistance of a little castor-oil. The temperature never rose above 100° and on the fourth day it was normal.

CASE 3.—The patient in this case was a woman, twenty-eight years of age, who had two years previously given birth to a healthy child, the labour then only lasting about three hours. A month previously to the present confinement I had been called in to see the patient for what she had been told was quinsy, but on examination it was seen to be an extensively ulcerated throat with a dirty sloughing ulcer perforating the soft palate, evidently specific in origin. She was given inunctions of mercury ointment and a mixture of Donovan's solution with iodide of potassium. At the date of the confinement the throat was perfectly sound except for a small perforation in the centre of the soft palate. The first signs of labour occurred on Feb. 26th, 1898, at about 1 A.M., when after a few slight pains the membranes broke, a large quantity of water coming away. The pains then almost entirely disappeared and when the patient was seen for the first time at about 7 A.M. the os was found high up and dilatable, with the head presenting at the brim

in the first occipito-anterior position; the pelvis was roomy and the parts concerned in the passage of the child were soft and dilatable. There was evidently no obstacle to rapid delivery provided the uterine contractions were normal. The pains, however, continued to be very weak and irregular and had not the slightest effect in propelling the head into the pelvis. At night 30 gr. of chloral were given with the object of giving the patient some rest, there being no reason to hurry the labour either in the condition of the mother or that of the child, judging by the fœtal heart sounds. The patient had four or five hours' sleep, and at 3 A.M. on the 27th she was awakened by the pains recommencing. They continued up to noon, but although accompanied by a fair amount of pain they appeared to be quite useless owing to the irregular contraction of the uterus. As there was no obstacle except the character of the pains to rapid delivery 2 dr. of the liquid extract of ergot were administered. About half an hour afterwards the pains became much stronger and more effectual, the head gradually progressing into the pelvis until at the level of the perineum, but it then seemed to have little inclination to come any further. The forceps were therefore applied and the child, alive and healthy, was removed, so little resistance being offered that the child appeared rather to slip out than to be pulled out. The uterus after the birth of the child again dilated and could be felt through the abdominal wall in an elongated flabby condition; the hand was therefore introduced into the uterus and the placenta was removed without difficulty. The uterine cavity was syringed out with hot solution of 1 in 2000 perchloride of mercury and a hypodermic injection of ergotine was given. This caused the sluggish member to contract fairly firmly, very little blood being lost. The pulse, which at the time of delivery was 90, quickly dropped to 75 and the patient had no further trouble, convalescing in the usual way.

When we come to examine these cases we find that they agree only in one point—viz., the abnormally prolonged time of labour. They differ materially in the causes producing this result and in the effects on the patients. They illustrate very clearly the different effects on the mother of labour prolonged during the first stage, when the head is still above the pelvic brim, contrasted with that in which it is prolonged in the second stage, with the head tightly wedged in the pelvis and causing pressure on the maternal soft parts. In Cases 2 and 3 no ill effects were noticeable, although the membranes had broken twenty-four hours or more previously to delivery, but in Case 1 the result was fatal to both mother and child although, according to the midwife's statement, the head had not been lying in the pelvis for more than eight or ten hours. As regards the causes of the prolonged labours the three cases differed essentially from one another. In Case 1 matters probably went on fairly normally until the head reached the perineum, and then the patient becoming exhausted the propulsive force of the uterine contractions became proportionately weakened, with the result that no further progress was made. If at this time proper assistance had been given in the way of forceps there can be little doubt that the fatal result would have been avoided. Case 2 was clearly one in which no natural efforts would have brought about delivery owing to the abnormal size of the head, and the result obtained justified the extreme measure of destroying the child in order to save the mother. In Case 3 it is questionable how long labour would have been prolonged if it had been left to nature, owing to the want of proper uterine contractions, and it was, I think, one of those exceptional cases in which the administration of ergot during the first stage of labour was not only justifiable but very beneficial in rousing the sluggish uterus when after careful examination it was found that there was no obstruction to rapid delivery. In this important point this case differs fundamentally from Case 2, in which the administration of ergot would possibly have led to rupture of the uterus, or at any rate would have been a most dangerous and unscientific proceeding.

Capetown.

SWANSEA WATERWORKS.—At the meeting of the Swansea Town Council held on June 16th it was stated that with regard to the reservoir and tunnel the seal had been affixed to a contract for £255,247, so that the Cray Waterworks would now be shortly commenced.

A PRELIMINARY NOTE ON THE ACTION OF ROENTGEN RAYS UPON THE GROWTH AND ACTIVITY OF BACTERIA AND MICRO-ORGANISMS.[1]

BY R. NORRIS WOLFENDEN, M.D. CANTAB.,
AND
F. W. FORBES-ROSS, M.D. EDIN.

SOME work has been done upon this subject, but as it has not led to any definite conclusions and in view of the somewhat conflicting statements published we have thought that further investigations would be desirable. With this end in view we have selected the bacillus prodigiosus as the first subject for experiment. Six culture tubes of the normal growth on potato were obtained from University College laboratory and on May 25th these were set to incubate in a Hearson incubator at a temperature of 35° C. in the dark. After five days' growth a tube was taken and from it two fresh cultures were made; one was a simple control culture and the other was rayed along with the mother culture for an hour. After twenty-four hours' growth that in the tubes which had been rayed (i.e., the mother and one of the daughter cultures) had increased markedly in comparison with the original tubes, which had now been growing for six days. The control culture appeared to be only just showing a margin of increase. The difference in growth between the two tubes which had been rayed and the non-rayed control tube was very great, showing that undoubtedly the action of the x ray tube had been exceedingly stimulative.

In order to determine whether the exposure of the potato to prolonged x ray action would produce such changes in the medium of growth as to account for any marked increase of bacillary growth, two sterile tubes were rayed for one hour, a culture was then made on one of them from one of the previous tubes which had been rayed and which showed active growth, and another culture was made in the second tube from a culture which had never been rayed at all. These were incubated under precisely the same conditions as the previous tubes. When examined two days afterwards the growth in the rayed potato culture from rayed bacilli had entirely outgrown the culture on rayed potato from non-rayed bacilli, therefore the only cause of this exceptional growth must have been a property of the bacilli themselves and not of the medium of growth.

Cultures up to the fifth generation were made and the following facts were arrived at:—A single exposure to the x rays increased growth markedly and along with it there was an increase of chromogenetic property, even though grown in the warmth. As is well known the bacillus prodigiosus does not form pigment when grown in a warm atmosphere. Further exposure to the rays so stimulates the growth as to again deprive the bacilli of power to form this peculiar pigment in the warmth, though on return to cold this property is afterwards recovered to such an extent that the amount of pigmentation, though slightly different in colour, is in excess of the original culture. Up to the fifth generation the result of exposure for an hour to x rays of the culture is to produce an exuberant growth—apparently the pigment power is somewhat altered.

The method of application of the x rays was as follows:—With a large 18 in. spark coil of Newton's make a power was used of 16 volts, and from 8 to 10 ampères. The focus-tube was placed about 6 in. above the test-tube containing the potato growth. In every instance the exposure was of from fifty to sixty minutes' duration, with occasional resting of the tubes, which were run with the anodes as nearly red-hot as practicable.

We do not here attempt to enter into the explanation of these phenomena of growth. We are content to record the facts that exposure of the bacillus prodigiosus to the radiations of a focus tube induces very marked increase of growth and peculiar changes in the pigment-forming powers of this particular micro-organism. We will merely add that in some of the lower forms of vegetable life the same changes are observed, notably in the protococcus. An exposure of this organism to x rays for from five to ten minutes appears to

[1] A paper read at the meeting of the Roentgen Society on June 7th, 1898.

much stimulate its activity, and if the exposure is a little prolonged the cells become much paler, the chlorophyll disappears, and the protoplasmic contents are more granular. The cells recover their green colour when exposed to sunlight, but on renewed exposure to x rays the chlorophyll seems to disappear more or less completely.

The following microscopic changes are to be noticed as the result of exposure of these bacilli prodigiosi to x radiations. There is apparently little to call for notice as regards the relative size of the rayed and non-rayed bacilli. As regards groupirg, an unusual property of the bacillus prodigiosus was apparent—that is, growth in chains or strepto-bacteria; and further, what is at present giving rise to controversy, spore formation, which seems to be clearly established by the presence of a chain preparation. For the rest, the bacilli appear in both cases equally granular and stain equally at the ends and as irregularly.

We are continuing these experiments, especially upon the pathogenic bacilli, among which it is possible that changes in growth may be accompanied with some alterations in the character of the bacilli.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF PUERPERAL ECLAMPSIA OCCURRING IN THE SIXTH MONTH OF PREGNANCY; DEATH.

BY H. HOWARD MURPHY, M.D. CANTAB,
HONORARY MEDICAL OFFICER TO ST. JOHN'S HOSPITAL, TWICKENHAM.

THE following notes on the case of a patient who was seized with puerperal eclampsia in the sixth month may be of interest to readers of THE LANCET in general as well as to "R. C.," who recently asked for references to cases.[1]

On Oct. 21st, 1897, I was asked in the morning to call on a patient, about thirty years of age, who had vomiting and cramps in the stomach. She had one child, an easy confinement, four years ago, and was now some five months pregnant. She had not felt very well for some days, her stomach seeming to be out of order. There was no history of colic or jaundice previously or of any serious illness, the patient being generally healthy. The attack commenced after breakfast by some colicky pains across the upper abdomen and pains across the loins. She had rolled on the floor with pain, felt faint, and vomited once. The bowels were last opened on the 19th, when they acted well twice. I ordered an enema, a mixture with tincture of chloroform and morphia, fomentations, appropriate diet, &c. In the afternoon there was another attack of the colicky pain and the patient vomited twice. The tongue was clean; the liver dulness was not increased; there was tenderness in the region of the epigastrium, but not over the gall-bladder, which could not be felt. The pulse was 75 and good and the temperature was normal. During the evening a second enema had caused a free evacuation; but the colic had been very severe and she had vomited frequently and all she took. There were no uterine symptoms at all. Morphia (¼ gr.) was injected hypodermically. She slept for four hours quietly; then she awoke and had severe colic and frequent vomiting and about 3 A.M. there occurred severe convulsions which lasted for an hour. Her pulse was 80 and good. Another hypodermic injection of morphia quieted her. At 10 A.M. she had two convulsions; she kept fairly conscious between the attacks; she complained much of epigastric pain and threw herself about and vomited frequently. She had passed very little urine, which contained a cloud of albumin. At noon she was distinctly jaundiced and was becoming less conscious. The temperature had risen to 100° F. and the pulse was 80 and of fair strength. Dr. Amand Routh kindly saw the patient on the afternoon of the 22nd in consultation. He considered that the eclamptic state demanded the induction of labour and finding that the os was patulous he was soon able to pass in a finger, to rupture the membranes, and to bring down a leg. There were no uterine contractions. He advised the continuance of the morphia and the administration of nutrient enemata with some bromide and chloral. In three hours the uterus was emptied and washed out. There were no more convulsions; the patient was quieter, but she also gradually became less capable of being roused to answer questions or to take food. On the 23rd she had a quiet night, without convulsion, vomiting, or complaints of pain. She had not required any morphia. She recognised and spoke to me, answering questions. She passed no urine and no action of the bowels took place. The pulse was 100 and weaker. She took food well. All day she lay very quietly and in much the same condition. As no urine was passed by the evening the catheter was used and yielded 16 oz. of urine which was very dark coloured with bile and contained much albumin. The liver was tender and the area of dulness was diminished. The tongue was coated. The pulse went up to 120 and got weaker. She was very jaundiced. On the 24th the patient had passed a very quiet night. She took liquid nourishment well. No urine was passed. The bowels were frequently opened with small liquid motions. She had no convulsions and did not vomit. There was loss of vision and she said she could not see me but she recognised my voice; she was rambling and semi-conscious. The pulse was 120 and very weak and the temperature was 100°. In the afternoon the catheter drew off 1½ oz. of urine which was very dark with bile and contained some blood. About 4 P.M. she became quite unconscious and very weak and died quietly in half an hour. No post-mortem examination was held.

Dr. Routh agreed with me that there was acute atrophy of the liver in this case as well as the eclampsia. The latter ceased as soon as the uterus was emptied, as did the epigastric pain and vomiting. The urine contained albumin, was scanty, and almost suppressed at last.

Twickenham.

[1] THE LANCET, May 21st, 1898.

A CASE OF CONCEALMENT OF BIRTH.

BY SANDERSON MELLOR, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

THE following is a curious and interesting case as showing what can be done by one who has just given birth to a child.

A single woman, aged twenty-three years, lived with her father (who is a widower) and a sister, aged fifteen years. The mother died some years ago and the home surroundings and comforts of these two daughters had not been of the happiest. The elder sister, whose extraordinary conduct I am referring to, gave birth to a child about two years ago and I understand she was on that occasion attended by a midwife. She expected her second confinement last February. For some reason—most probably shame—she never mentioned her condition to anyone and for a month or six weeks before the event she kept to the house and was never seen outside, not even by the next door neighbours. At 12.30 P.M. on the day on which she was confined she told her sister that she was in pain and asked her to fetch her married sister who lived two and a half miles away. This sister was, however, unable to go as her children were all ill and she could not leave them. The young girl then ran nearly two miles for another sister, with the result that the second sister went at once. She arrived at her father's cottage at 3.30 P.M. and finding the back door locked she ran round to the front and there met the girl who had just been confined. She then told her sister that she had had a "loss" and that she had put it in the water-closet. The girl was immediately put to bed and a neighbour was called and a close inspection of the water-closet revealed nothing which threw any light on this mysterious affair. The floor near the bed, the bedclothes, and the girl's linen were all soaked in blood. In the centre of another room and on the floor was a dirty old bag which had been used for stopping up the chimney, and in this bag, in which there was a large quantity of horsehair, a fully developed after-birth was found. Up the chimney in the same room another dirty bag was discovered which contained the body of a full-time child. The matter was placed in the hands of the police and I made a post-mortem examination. The umbilical cord was one yard long and was coiled round the child's neck, and the cord

was torn about 6 in. from the placental end. The child had breathed.

This case is interesting inasmuch as barely three hours had elapsed from the time labour had commenced to the time the concealment of the birth was brought to light. Although the mother must have lost an enormous amount of blood, as evidenced by the state of the room and her linen, and notwithstanding the fact that she was removed to the union the next morning, a distance of two miles, she is now quite well.

West Malling, Kent.

A CASE OF GUMMA INSIDE THE STERNUM.

BY THOMAS COLE, M.D., F.R.C.P. LOND.,
LATE SENIOR PHYSICIAN TO THE ROYAL UNITED HOSPITAL, BATH.

I WAS a few years ago asked by his two medical attendants to see a man, aged about forty-eight years. He had been indefinitely ill for some time, suffering from dyspnœa, slight cough, and some blueness. The most minute examination of every organ revealed nothing, but I found on the front of the sternum a small boss or elevation which was a third of an inch wide and about the same in elevation. The mass was slightly tender. I was the first to discover it. I also thought the substernal respiration was somewhat more tracheal than usual. Taking the few facts into consideration I suggested that there might be some gummatous mischief and advised the administration of 20 gr. of iodide of potassium every four hours. But I could make no impression on my friends, who would express no opinion, and only (when I was gone) put eight leeches over the little swelling. In two or three days we met again. The mass was rather larger, there was a little more dyspnœa, the respiration was noisy, and there was a slight laryngeal cough I still urged my plan; it could do no harm and might confer immense benefit on the patient, whose case I began to think of with great distrust. But I could not move these practitioners by any argument whatever. Still they believed in me and on many occasions had called me in. They wished me to meet them again in a week, which of course I did. The poor fellow was evidently gradually slipping through their fingers; every symptom was worse, intra-sternal pressure was more marked, and venous stasis above the clavicles was developing. I asked, "Are you prepared to go on treating this case as you are—doing nothing?" One of them said, "Are you prepared to give us a good reason for such heroic treatment as the administration of 20 gr. of iodide of potassium every two or three hours" (which I then proposed)? A merciful providence intervened on the patient's behalf as well as on my own. Strange, indeed, was it that the left sleeve of his night-dress being unbuttoned and drawn up towards the elbow I saw a large node on the ulna at least 2½ in. by 1½ in. I pointed it out to my sceptical friends and turning to the patient said: "How long have you found this?" "It was not there, Dr. Cole, when you last came, but the day after it began to come and it is getting very painful. I intended to call your attention to it this morning as I knew you were all coming and you had asked about swellings before." Persuasion leaped into the minds of my friends after so unmistakeable a proof of the nature of the malady and the treatment was at once begun. In a very short time all the evidence vanished and the patient resumed his usual health. Of course, he was most carefully watched and when I heard of his state a year afterwards he was well and free from disease. Does not such a case prove to every practitioner the absolute necessity of an accurate diagnosis in every case which comes under his notice? How many lives would be saved were common care taken in such important and critical matters?

Bath.

NOTES ON TWO CASES OF CONGENITAL ABSENCE OF THE RIGHT EYE (ANOPHTHALMOS).

BY JOHN R. ROLSTON, L.R.C.P. EDIN., M.R.C.S. ENG.,
SURGEON TO THE ROYAL EYE INFIRMARY, PLYMOUTH, AND OPHTHALMIC SURGEON TO THE ROYAL ALBERT HOSPITAL, DEVONPORT.

IN THE LANCET of Jan. 1st, 1898, Mr. W. G. Nash of Bedford records a case of Congenital Absence of the Right Eye, with an illustration. As I have seen two cases of the same deformity—one of which very closely resembles the case related by Mr. Nash—I thought an account of them would interest the readers of THE LANCET. The accompanying illustration is reproduced from a photograph of the one which is so similar to that described by Mr. Nash.



Portrait of the patient (aged six years) in Case 1.

CASE 1.—A girl, aged six years, was brought to me in December, 1896. There was—as is depicted in the illustration—congenital absence of the right globe with a small rudimentary palpebral aperture 12 mm. long with eyelashes; a small caruncle was seen inside. No evidence of a rudimentary globe was observed. There was much flattening of the bridge of the nose and the right ala of the nose was imperfectly developed. The left eye had horizontal nystagmus. The mother has had 5 children, all of whom are healthy. She has had no miscarriage. She says that she had a fall several months before the child was born.

CASE 2.—A girl, aged six years, was brought to me in December, 1896. There was congenital absence of the right eye with a small but otherwise natural palpebral aperture 19 mm. long. The cavity seemed to be natural. There was no sign of a rudimentary globe. No defect of the face was present. In this case the mother was not seen by me and no family history could be obtained. Photography was not allowed. The left eye was normal.

I am of opinion that these two cases may be correctly classified as true anophthalmos, as in each case I failed to find any rudimentary globe (although I did not use dissection), and this class is much more rare than that to which I should imagine Mr. Nash's belongs—viz., that of microphthalmos, as he states that "a small pigmented body about the size of a pea occupied the centre of the cavity" of the orbit. The point in common is that in all three cases the right side is affected.

Plymouth.

NOTE ON A CASE OF FATAL HEART AFFECTION IN SCARLATINAL RHEUMATISM.

BY FRANK ROBINSON, M.D. VICT.,
RESIDENT MEDICAL OFFICER, CITY HOSPITAL NORTH, LIVERPOOL.

I BELIEVE that the following case of acute pericarditis (largely obliterative) will be of interest in connexion with the annotation on obliterative pericarditis in THE LANCET of June 18th, 1898.

A girl, aged ten years, suffered from an attack of scarlet fever of average severity in the City Hospital North, Liverpool, and made a satisfactory recovery from the acute stage. On the twenty-first day a mild attack of articular rheumatism commenced. There was no local swelling and but little pyrexia occurred, but the wandering pains persisted and on the fiftieth day severe pain drew special attention to the heart. An extensive area of pericardial

friction was found and by the sixty-second day the area of dulness extended beyond the sternum to the right and beyond the nipple to the left. On this day there was severe cardiac dyspnœa, which was relieved as the area of dulness diminished during the next few days. Murmurs were audible on the sixty-seventh day over the mitral and aortic areas and death resulted suddenly next morning.

Post mortem the posterior layers of the pericardium were found to be totally adherent, as was also the area where at one time paracentesis had been contemplated. The remaining portion of the pericardial sac still contained some excess of fluid (though the dulness had greatly lessened), and the free surface was coated with shaggy fibrinous deposit which was blood-stained in parts. The heart was much dilated and the edge of every valvular cusp on the left side was lined continuously with recent vegetations.

The extent to which the heart was involved in this case appears to be remarkable considering that it is comparatively seldom affected in scarlatinal rheumatism and that the joint symptoms were so trivial. Had the patient recovered the sequelæ would doubtless have been similar to those recorded by Dr. Cabot. I am enabled to report this case by the courtesy of Dr. Robertson, the visiting physician.

Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

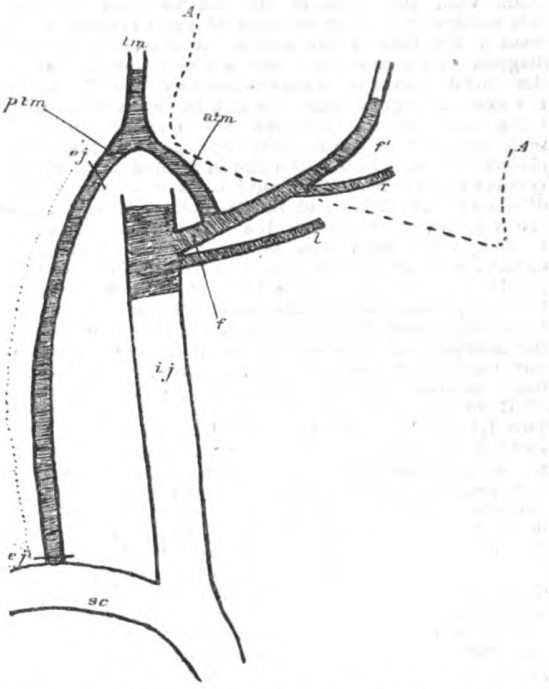
EVELINA HOSPITAL FOR SICK CHILDREN.

A CASE OF ALVEOLAR ABSCESS; DEATH FROM PYÆMIA IN EIGHT DAYS; NECROPSY.

(Under the care of Dr. F. WILLCOCKS.)

PYÆMIA arising from suppuration in connexion with a tooth is probably less rare than is usually thought, as there is great chance that the alveolar suppuration may be overlooked in many cases. When a septic clotting has been started in the veins of the part it may spread in several directions. The case below and the one quoted by Dr. Bolton in his remarks illustrate what is perhaps the most usual direction for it to take, but it is by no means rare for the septic phlebitis to extend from the facial vein into the buccal vein and so into the pterygoid plexus of veins, whence it passes into the cranium through the foramen ovale, and so affects the cavernous sinus. In this way are to be explained the cases in which severe cerebral symptoms arise early. For the notes of the case we are indebted to Dr. Charles Bolton, senior resident medical officer.

The patient was a boy, aged four years, who was taken to the Evelina Hospital for Sick Children at 8 P.M. on April 25th, 1898, on account of "pain in the sides." The mother stated that with the exception of an attack of measles from which he suffered in last December the child had had no previous illness, that for many weeks she had noticed that his teeth were "going very bad," but she took no notice of it as "bad teeth were so common," and that he had made no complaint and had been perfectly well until the evening of April 20th, when he complained of "toothache." His face was a little swollen on the right side on the next day and a medical man who was sent for said that the patient had a gumboil and ordered poultices. On the 22nd his mother took him to a hospital as he seemed to be getting stupid, and here she was told that he had a gumboil and was given some medicine. The child was much worse on the following day and complained of pain in the sides, and another medical man who was called in said that he had pleurisy and ordered poultices to be applied to the chest. He remained in the same condition until he was taken to the Evelina Hospital on the above-mentioned date. When the child was admitted he was drowsy and fretful; the skin was hot and dry and the temperature was 104·6° F. There was a hard, tender, non-fluctuating swelling with an indefinite outline fixed to the right side of the lower jaw in the molar region; the skin over it was hotter than the skin on the other side was, but it was not red, and several distended veins were seen over the surface. There were a few enlarged glands at the angle of the jaw, but nothing else abnormal could be felt in the neck. The breath was extremely offensive and the tongue was coated with a greyish-brown fur. The crowns of several teeth were completely decayed and the second lower right temporary molar was carious and loose, a brownish purulent discharge oozing from its socket and the surrounding gum and adjacent part of the floor of the mouth being ulcerated. The teeth and gums were partly covered with a dark-coloured, cheesy material, which had a foul odour. The throat was a little congested and was covered with tenacious mucus. With the exception of a few rhonchi on both sides there were no physical signs in the chest. The spleen was easily felt about two fingers' breadth below the left costal margin and the urine contained a trace of albumin. The loose molar was extracted and a quantity of thick brown pus escaped. The teeth and gums were thoroughly cleansed and the mouth and abscess cavity were irrigated every four hours with sanitas lotion. On the 27th the right eyelids were œdematous and the superficial veins were much more distinct than they had been before. The right external jugular vein could be distinctly



Diagrammatic representation of the veins on the right side of the neck. The shaded portions show the extent of the clotting in the various veins. A A, Outline of jaw. *tm*, Temporo-maxillary vein; *atm*, the anterior branch; and *ptm*, the posterior. *ej*, External jugular; the portion marked off was excised at the operation. *ij*, The internal jugular. *sc*, The subclavian. *j*, The common facial. *f*, The facial. *l*, The lingual. *r*, The ranine.

felt and rolled under the finger; the internal jugular was apparently normal. There was a free discharge of thin offensive fluid from the mouth and creolin lotion (1 in 1000) was substituted for the sanitas on account of the smell. Rhonchi and râles could be heard on both sides of the chest and the skin was a little jaundiced; the liver could not be felt. The general condition was the same as it had been before; the temperature ranged between 104° and 106°, once or twice rising to 107° and falling from 3° to 4° after each tepid sponging; there were no rigors. Mr. Makins was asked to see the case. He exposed the external jugular vein and found it to be yellow in colour and full of pus. He ligatured it below at its junction with the subclavian and above almost as high up as the angle of the jaw and cut out the intervening portion. The internal jugular was next examined and the blood in it was found to be fluid. The wound was then

closed as the child's condition was very bad. The patient died on the following day (the 28th) at 3 P.M.

Necropsy.—At the post-mortem examination the external swelling was found to be chiefly composed of glands matted together. A part of the inner surface of the lower jaw was lying bare in the abscess cavity and the adjacent portion of the floor of the mouth was infiltrated with pus and was in a sloughing condition. The veins on the right side of the neck were dissected out and are represented in the accompanying diagram. The lingual, the ranine, and the lower part of the facial vein, together with the common facial and the anterior and posterior divisions of the temporo-maxillary vein, were full of pus, the external jugular having been removed at the operation. The clotting extended for some distance up the temporo-maxillary and facial veins and also along the branches, some branches of the facial being full of pus. The clot in the internal jugular was beginning to break down and extended for about a quarter of an inch above and below the entrance of the common facial. There were several pyæmic abscesses in both lungs and the spleen was enlarged and soft. There were no abscesses in the other organs.

Remarks by Dr. BOLTON.—There are several points worthy of note in the above case. 1. The first point I will consider is the course taken by the blood-clot. This depends upon the fact that in an alveolar abscess in this situation the probable source of infection is through branches of the facial vein, the veins of the tongue being infected in this particular case on account of the extensive involvement of the floor of the mouth. A glance at the above diagram shows that there was a direct line of pus from the facial into the temporo-maxillary and thence into the external jugular vein, the clot in the internal jugular being more recent, although the common facial vein runs directly into the internal jugular. The probable explanation of this is that the clot in passing down the facial vein towards the internal jugular blocked up the lower end of the anterior division of the temporo-maxillary vein, and the volume of blood in the latter vein, being small in comparison with that in the internal jugular, easily clotted, and so the infection was carried to the external jugular, whereas the large volume of blood flowing in the internal jugular would at first sweep off any clots projecting from the common facial into its lumen and thus clotting in the internal jugular would be delayed. Pyæmia is a very rare result of alveolar abscess; however, many cases have been recorded and Mr. Pedley in his book on Diseases of Children's Teeth quotes one which was published in THE LANCET[1] by Mr. Arbuthnot Lane and which bears a striking resemblance to this case. Mr. Lane's patient was a boy, aged four years, whose illness began with toothache and swelling in connexion with the second left lower temporary molar about a week before admission into hospital. He had jaundice, rigors, and an enlarged liver. The most interesting point is that in Mr. Lane's case the course of the clotting has apparently been exactly the same as described above, the external jugular vein being thrombosed to within half an inch of its lower end and the internal jugular only for a very slight distance. Mr. Lane cut out the external jugular and facial veins and tied the internal jugular above and below the entrance of the common facial with the result that the jaundice and rigors disappeared; however, the child died and at the necropsy abscesses were found in the lungs and liver which had been formed before the operation probably by clots projecting from the common facial into the internal jugular and washed off by the blood-stream. In these cases the clotting must reach the internal jugular very soon after it reaches the temporo-maxillary, hence the earlier the internal jugular is ligatured the greater is the chance of success, and when the external jugular is found to be thrombosed it is probably too late to save the patient by operative interference. The proper treatment in such cases obviously is to examine the facial vein as early as possible and not to wait until there are signs of thrombosis of the external or internal jugular veins. 2. The next point to which I wish to refer is the inattention which is paid to children's teeth not only by the parents but even by members of the medical profession. Of this there are numerous examples daily in the Evelina Hospital: it is an extremely common thing to see children with the majority of their teeth carious, with pus oozing alongside the crowns of two or three, or several minute abscesses pointing through the gum, or probably three or four fangs of temporary teeth protruding through the gum and causing ulceration of the cheek owing to their non-absorption as a result of caries of the crown. This condition of things is totally disregarded and the teeth are never examined because the children do not complain of pain. This brings me to the third point which this case illustrates. 3. Namely, that it is quite the rule for these children never to have any pain at all. This point is not paid much attention to, but everyone can verify it for himself and he will then be surprised at the amount of destruction which can take place in children's teeth without the occurrence of any pain whatever. 4. In reference to the treatment of alveolar abscess in connexion with temporary teeth there is no doubt that in all cases the proper thing is to extract the tooth at once and not either to apply poultices or to give medicine. The abscess then drains through the socket, the cause of the abscess is removed, and the permanent tooth which lies under the temporary one will probably be saved, which it cannot be if the abscess is allowed to run its course unopened. 5. Another point illustrated here is the fact that there may be most extensive suppuration within the veins and secondary abscesses without any rigors or large variations of temperature. 6. Lastly, the value of creolin in this case as a deodoriser may perhaps deserve mention. At the necropsy, which took place twenty-four hours after death, the mouth smelt very strongly of that drug.

[1] THE LANCET, Nov. 5th, 1892.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Retinitis Proliferans.—Œdema of the Conjunctiva due to Obstruction of the Lymph Stream.—The Pathogenesis of Anterior Polar Cataract.—Splinters of Steel removed from the Eye with the Electro Magnet.—Value of X Ray Examination in Old Injury to the Eye.—Large Fibroma of the Upper Eyelid.—Toxic Amblyopia.—Exhibition of Cases and Specimens.

AN ordinary meeting of this society was held on June 9th, Mr. H. R. SWANZY, the President, being in the chair.

Mr. PERCY FLEMMING described a case of Retinitis Proliferans. The specimen was obtained from a man, aged twenty-two years, who died from chronic renal disease. The following appearances were seen on section: the posterior part of the retina was much thickened, folded and detached; a thin membrane stretched across the vitreous cavity from the ora serrata to the posterior part of the retina; another membrane had a similar origin in part, but ended freely about the middle of the vitreous cavity; the space between these membranes and the retina was occupied by blood-clot; there were signs of cyclitis. The chief microscopic appearances were a thickening of the retina and disorganisation of its inner layer, a definite transformation of the clot (as seen in successive sections) into connective tissue membrane with lacunar spaces, and a pulled-out condition of the retina near the ora serrata, resulting in elongation and rupture of Müller's fibres. It was possible to trace a direct continuity between the membranes and the retinal tissue. A review of previously recorded cases was given and the suggestion made that the essential factors of the disease were: (1) hæmorrhage, and (2) an inflammation of the sustentacular tissue of the retina allied to sclerosis of the central nervous system.—Mr. C. WRAY referred to two cases, one of a man, aged sixty-eight years, with glycosuria, who exhibited detachment of retina and retinitis proliferans in the right eye and vitreous hæmorrhage and a vascular formation from the optic disc resembling the skeleton of a leaf in the left. There was no necropsy. The other, also a man, aged thirty-five years, with a similar condition of the vitreous, detachment of the retina, whose vision had improved under continued large doses of potassium iodide from the capacity to count fingers at 3 metres to $\frac{6}{9}$ths, and who had been able to work during the last five years.

Mr. HOLMES SPICER described a case of Œdema of the Conjunctiva due to Obstruction of the Lymph Stream. He said these cases presented themselves in two groups, the acute and chronic. In the acute cases, owing to a poison received into the conjunctival sac supposed in one case to have come from wood pavement, the pre-auricular and cervica

lymphatic glands became inflamed, although the local signs of conjunctival irritation were not marked. The flow of lymph was hindered and a condition of extreme œdema of the conjunctiva was produced in which the conjunctiva hung out from between the closed lid as a flaccid gelatinous bag. Two cases were narrated in which the glandular enlargement was increased by the simultaneous occurrence of follicular tonsillitis. In the second chronic group, owing to a post-suppurative inflammation of the lymphatic glands of one side of the face and neck, great cicatrisation had been produced, the lymph stream was hindered, the subconjunctival tissue spaces became filled with the solid constituents of the lymph, and a condition of solid œdema resembling elephantiasis in other parts remained, which was persistent in spite of treatment.—Dr. RAYNER BATTEN cited two cases in females, aged respectively twelve and thirty years, in whom œdema affected the conjunctiva and lids, causing limitation of movement of the globe. Incision into the orbit elicited nothing, though there was proptosis. No rheumatic history existed, but the condition subsided rapidly under salicylates. —Mr. BASS laid much stress on the coexistence of follicular tonsillitis in the cases reported, suggesting that the conjunctival sac was probably infected from the saliva in moistening the lids, which often adhered.

Mr. TREACHER COLLINS read a paper on the Pathogenesis of Anterior Polar Cataract. He first described a case in which a melanotic sarcoma of the anterior part of the ciliary body, coming in contact with the antero-lateral part of the lens, had produced an opacity of the lens in that position, which presented precisely similar microscopical appearances to those seen in anterior polar cataracts. This, he thought, strongly supported the view that these latter resulted from contact of lens and cornea arresting the osmosis of nutritional fluids in the lens. He next demonstrated the microscopical characters of a congenital cataract where there was a large anterior polar opacity, beneath which the lens fibres had undergone such extensive degeneration that the whole lens was much flattened from before backwards. He thought the changes could be accounted for by prolonged contact of the lens and cornea in fœtal life, after the anterior fibro-vascular sheath of the lens had disappeared. He then quoted several cases in which, besides an anterior polar opacity, there was a second opacity situated beneath it a little deeper in the lens. In all these the cataract had been formed in early life and several years had elapsed before the patient came under observation. He showed a drawing of the microscopical appearances of a lens presenting two such opacities. There was the usual laminated mass at the anterior pole, then some normal lens fibres, and then an area where the lens fibres had broken up into irregular amorphous granules and detritus. This area corresponded fairly accurately in shape to that of the mass at the anterior pole and he thought there could be no doubt that they were at one time in contact, having become separated by the gradual growth of new lens fibres inwards between them.

Mr. SIMEON SNELL related two cases in which Splinters of Steel were removed from the Eye with the Electro-magnet. 1. From the retina with preservation of excellent sight. The piece was observed with the ophthalmoscope as fixed in the retina in the outer and lower quadrant; the fragment had passed through the cornea close to the sclero-corneal junction, and when the patient was first seen four days after the accident the glistening of the steel was distinct, but the foreign body was partially covered with exudation. The patient could count fingers. The electro-magnet was inserted eight days after the accident between the inferior and internal recti and the fragment was removed. Later the vision equalled $\frac{6}{24}$. 2. From the vitreous, the foreign body being localised by the x rays. The patient was not seen for several weeks after the accident. The foreign body was diagnosed as having entered the upper part of the cornea, passing through the lens into the vitreous. Dr. McKenzie Davidson used the x rays and localised the splinter in the upper part of the vitreous. A skiagram showed it to be needle-shaped, measuring 8 mm. in length, and placed obliquely. The electro-magnet (fifteen weeks after the accident) was introduced through a scleral incision between the inferior and internal recti and the splinter was at once removed. The patient could afterwards count fingers.—Dr. TATHAM THOMPSON spoke of the difficulty sometimes experienced in withdrawing the foreign body through a small wound which he had overcome by approaching the body from another direction so as to get it end on. He thought one of the chief advantages in using the x rays was the power of excluding foreign bodies in doubtful cases.

Mr. W. LANG described two cases illustrating the Value of the X Ray Examination in instances of Old Injury to the Eye with Defect of Vision. The first patient consulted him for failure of vision going on to total amblyopia in whom there was a small corneal scar with corresponding openings in the iris and lens. Though there was no history of injury a foreign body was suspected and a skiagram by Dr. McKenzie Davidson revealed one in the lowest part of the vitreous covered up by opaque tissue. The second had a recent wound of the cornea, iris, and vitreous, but no foreign body could be seen. This was subsequently located in the sclerotic at the fundus. There was a small hole in the choroid. No operation was attempted in either as the eyes were quiet.

Mr. SIMEON SNELL related a case of Large Fibroma of the Upper Eyelid. The patient, a man aged forty-three years, never remembered being without the tumour and it had only increased in size very slowly. At the time of his being first seen it was pedunculated, of the size of a filbert, and by its weight and situation interfered with the movements of the eyelid and with vision. It was attached to the left upper eyelid just external to the punctum. It was dissected off. The tumour was white and glistening in section and under the microscope it was found to consist of fibrous tissue.

Mr. ANDERSON CRITCHETT showed a case of Toxic Amblyopia which was attributed to poisoning by iodoform. An elderly woman suffering from an extensive cancerous ulceration of her breast had been in the habit of applying iodoform to the ulcer over a period of three years. She developed somewhat suddenly extreme amblyopia, lost the recognition of all colours except blue, for which she had a large central scotoma, and was found to have slight pallor of the outer half of each optic disc and a small granular change to the inner side of each macula lutea. Since the iodoform had been stopped (ten weeks) the return of her colour vision had been very decided, she could recognise any colour by indirect vision, but still had a large central scotoma. Her visual acuity was still very bad, though it had shown some improvement.

The following cases and card specimens were shown:—

Mr. HARTRIDGE: Phagedæna of the Eyelids.

Mr. CHARLES WRAY: (1) Pemphigus of the Conjunctiva; and (2) Skiagram of a Foreign Body in an Eye.

Dr. TATHAM THOMPSON: Intraocular Granuloma.

Reviews and Notices of Books.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D. St. And., F.R.C.P. Lond., Professor of Forensic Medicine and Toxicology in Owens College, Manchester, &c. Second edition. London: Charles Griffin and Co. 1898. Pp. 683.

THE merits of the first edition of this work at once classed it as among the best text-books and works of reference on the subjects of which it treats. The present edition has been entirely revised and brought fully up to date, some of the sections have been re-written, and others have been added—for example, on the Obligation of Professional Secrecy, on Sudden Death from Natural Causes, on Blood Poisons, and on the Post-mortem Imbibition of Poisons.

Great interest will naturally be taken in Dr. Mann's words on the position which medical men occupy as depositories of secrets acquired in their professional capacity concerning the physical or mental condition and the doings or misdoings of their patients. The advice given is sound; if carefully followed the medical man is not likely to involve himself in a lawsuit. The author naturally considers the duties of a medical man when brought into contact with a case in which abortion has been illegally produced. He says: "The law relating to the subject is very unsatisfactory, but a medical man placed in such a difficulty would not be far wrong were he to determine his course of action by carefully considering whether the knowledge acquired whilst acting in a professional capacity

was or was not of such a character as to override the obligation to secrecy. The rule is never to violate professional secrecy, but, like other rules, it may have its exceptions." The chief point that attracts attention in reading Dr. Mann's book is the thorough manner in which the whole of the strictly scientific portions are considered; a great deal of investigation and study must have been required. A notable instance will be found in Chapter XXII.—"Death caused by Burns and Scalds"; the various theories advanced to account for death from burning are carefully analysed and summarised. The opinion arrived at is that early death from burns and scalds is a primary blood disorder, which chiefly results from injuries received by the red corpuscles when subjected to intense heat.

The subject of wounds and injuries from a medico-legal point of view is always a large and difficult one, but the classification here found will materially help the student to understand the complicated points which may arise. Dealing first with the nature of contusions and wounds, injuries of the various parts of the body are considered, then wounds produced by firearms. Next follows an excellent disquisition of wounds in their causal relation, and these sections a medical man would do well to consult before giving evidence in cases in which wounds have been inflicted.

In the present edition some of the more abstruse theoretical considerations are printed in smaller type, and this we think is an improvement, especially to aid reference. A student will necessarily have to read such paragraphs, but the busy practitioner who may suddenly be called upon to express an opinion in a medico-legal case would be glad to be able to find at once practical hints as to the matters involved and consequently by the change of type would save time by not having to read theoretical matters. The chapters devoted to Insanity in its medico-legal relationships are also very good.

The section on Toxicology is most complete and forms about the best work of reference on that science with which we have met. In this edition several additional poisons are described, some of which for the first time now find a place in a textbook of this kind. Amongst these we notice (at least, as not appearing in the first edition of the book) acetylene, bromoform, trional, creolin, cicuta virosa, &c.

In these chapters, again, the plan has been adopted of printing the less important poisons in smaller type. The symptoms, fatal doses, and methods of treatment are fully given, and to those students who wish for an advanced textbook on forensic medicine and toxicology we can strongly recommend this volume which will moreover form a most valuable book for all medical practitioners. A medical man may at any time be called upon to help the law in cases of suspected murder and unless the minutest precautions are taken to conduct the medical examination properly the medical witness may find himself in a very unpleasant position under the fire of cross-examination, but if he has carefully considered Dr. Mann's observations on similar cases he may enter the witness-box with every confidence.

L'Allaitement Mixte et l'Allaitement Artificiel. By HENRI DE ROTHSCHILD. Paris: Masson et Cie. 1898. Pp. 659.

THIS book deals with an important subject at considerable length, but the length is scarcely to be gauged by the number of pages, since only 242 are devoted to the text while about 110 are occupied with clinical observations, charts, tables, and diagrams, and the concluding 300 pages are occupied by a bibliography from the year 1519 to 1897. The author commences with a consideration of the nursing of infants at the breast and speedily passes on to deal with the causes which may necessitate artificial feeding, and in turn he reviews the conditions which affect the mother and the child. The chemical composition of milk is then considered in some detail and the author deals separately with the numerous micro-organisms which may be found in milk. The conditions suitable for a model dairy are then detailed and this includes a description of pasteurisation by means of which the various preservatives, such as borax, boric acid or salicylic acid, may be dispensed with. Great stress is laid upon the nature and cleanliness of the feeding bottle, but the most important chapter in the book is that on Sterilisation. This contains full descriptions of the various modes which have been recently recommended. Short sections are devoted to a consideration of forms of fermented milk, koumiss, and kephir, while more space is given to a consideration of condensed milk. The bibliography appears to be very complete and contains references to no less than 2877 signed and unsigned papers connected with this subject.

The Water-supply of London; or, Suggestions for an Illimitable Supply of Water to London at a Comparatively Small Cost. By C. H. F. ROUTH, M.D., M.R.C.P. Lond., Fellow of University College, London. London: Baillière, Tindall and Cox.

THE importance of the water-supply of London is so great that any honest attempt to throw light on the matter should not be passed by. Dr. Routh's pamphlet gives nternal evidence that the subject has engaged his attention, that he has spent a good deal of time and trouble in making abstracts of various reports on the London water-supply, and that as a result he has come to certain conclusions with regard to what it would be best to do.

The pamphlet contains an abstract of the Report of the Royal Commission upon the Water-supply of the Metropolis which was issued in the year 1892 and is commonly called the Balfour Report. This is followed by an abstract of the Report on the London Water-supply which was given by Mr. (now Sir) A. Binnie, engineer to the London County Council. The third abstract is from a paper by Mr. Thomas Hennel which was published in the year 1879 and which treats of the supply of sea-water to London. An abstract of a paper by Mr. Paterson on "The Hermite System of Sanitation of Towns by Electricity" follows.

With regard to the abstracts of these various papers and reports it may be said that they are carefully made and appear to give a fairly accurate summary of the reports with which they deal. Those who are not acquainted with the Balfour Report may, for example, get a very good general idea of its recommendations by reading the abstract. However, anyone who wishes to make a serious study of the question would do better to refer to the original report.

While giving every credit to Dr. Routh for the care which he has devoted to the work he has undertaken, we cannot think that the pamphlet will do anything to help anyone to solve the question as to what it is best to do with regard to the future water-supply of London, nor can we agree with all the conclusions to which the writer comes. The pamphlet shows that the author has bestowed a good deal of thought on the matters with which he attempts to deal; but it does not suggest that he possesses a sufficient grasp of the technical points of the subject to make his views, taken as a whole, of any weight.

The first conclusion to which the writer comes is that "the sea being illimitable, even during droughts, would always enable us to condense it for fresh water." No one has ever denied that there is plenty of water in the sea, and, therefore, with regard to quantity no one would be likely to take very serious exception to the statement which Dr. Routh apparently wishes to express. A captious critic might suggest that the sea is not "illimitable" either during droughts or at other times and, further, that the laws of condensation do not, as he suggests, depend on the quantity

of water in the sea. The second conclusion is that the plan of using sea-water would not affect any of the existing water companies, but that it would relieve them of the necessity of supplying so great a quantity of water for baths, for watering the streets, and for extinguishing fires. The third conclusion is that if sea-water were brought to London its electrolysation would be the cheapest and most effective antiseptic and would greatly improve the sanitary condition of London. The fourth conclusion is that the London water companies might graft this plan on to theirs as a useful adjunct and, finally, it is suggested that the "Government" or the London County Council might undertake the work of bringing the water "to the profitable advantage both of themselves and the public." There is no doubt that a plentiful supply of sea-water would be a great boon to London, but the notion that the sea would be a good source of supply for drinking purposes is open to serious question from more than one point of view.

The History and Technique of the Vaginal Radical Operation. By Professor Dr. LEOPOLD LANDAU and Dr. THEODOR LANDAU of Berlin. English Translation by B. L. EASTMAN, M.D., Assistant in the Landau Frauen-Klinik, Berlin, &c., and ARTHUR E. GILES, M.D. Lond., Assistant Surgeon, Chelsea Hospital for Women, London. London: Baillière, Tindall, and Cox. 1897. Price 7*s.* 6*d.*

BY the expression "vaginal radical operation" the authors mean removal of the uterus and the uterine appendages by the vaginal route. It is the operation they make use of "in the treatment of double inflammatory or suppurative diseases of the tubes and ovaries"—a class of cases which, according to the authors, resists every other method of treatment. They regard the removal of suppurating appendages by abdominal section as unsatisfactory and maintain that, though the immediate results may be good, permanent cure does not follow; in fact, they regard such operations as incomplete in that the diseased uterus, the real source and origin of the affection, is left behind. Certain it is that there are such cases which have been treated by abdominal section and have recovered from the operation but have not been permanently cured, and it may well be that these failures are to be attributed to the fact that the uterine ends of the Fallopian tubes, necessarily left in the pedicles when the uterine appendages are removed in the ordinary way by laparotomy, remain as sources of irritation and future trouble. We should be inclined to regard the failures rather as due to the portions of the tubes left than to the fact that the uterus remains. It is of course impossible to remove the tubes in their entire extent without removing the uterus. The book deserves the thoughtful attention of those engaged in dealing with the class of cases under consideration. So far the "vaginal radical operation" has not become, so to speak, acclimatised here, but perhaps it may become so in the future. Those who wish to try the operation will find ample directions for the purpose in the work before us. There are some ingenious diagrams at the end of the book, in which the parts removed are spread over wire frames and seem to make up, when put together, the uterus and its appendages.

LIBRARY TABLE.

Transactions of the Iowa State Medical Society. Vol. XIV. Forty-fifth Annual Session, 1896. Desmoines, Iowa: The Kenyon Printing and Manufacturing Company. 8vo, pp. 351. —The papers read at this annual meeting of the Iowa State Medical Society were numerous and many of them were of great interest. We may especially mention a paper on Transitory Albuminuria, its Significance in relation to Life Insurance, by Dr. Jenkins of Keokuk, and a paper on the Pathology of Empyema and Hydrothorax. A very important appendix contains a report of the chairman on the Section of State Medicine, in which particulars are given of all the Bills connected with medical subjects which were passed during the preceding year by the State Legislature; the most interesting of these is one which is directed against the neglect of parents in cases of ophthalmia neonatorum. We must add a word in praise of the excellent manner in which the volume has been printed.

Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1896. By the Medical Registrars: JAMES CALVERT, M.D., F.R.C.P. Lond., and ARCHIBALD E. GARROD, M.D. Oxon., F.R.C.P. Lond.; and the Surgical Registrar, JAMES BERRY, B.S. Lond., F.R.C.S. Eng. London. 1897. Pp. 230.—The large amount of useful work which is done by medical and surgical registrars is often hardly appreciated at its full value and this more especially applies to the reports which are issued annually by many of the hospitals. Only those who have themselves prepared such statistical reports know how much time and trouble their preparation requires. The reports of St. Bartholomew's Hospital have usually been some of the most elaborate in London and the volume before us seems to be even more detailed than before. The medical report consists chiefly of a series of tables in which the diseases are classified according to the "nomenclature of diseases" drawn up by the Royal College of Physicians of London. In each disease, in addition to the total number of cases male and female with the results "discharged" or "died," we find the cases divided into nine classes according to age. The numbers which represent the fatal cases are in a very heavy-faced type; this is a great help in reading the tables. Following these tables is an index of the diseases and chief symptoms, with references to the volume in which the notes of each case can be found, and a similar index of the post-mortem examinations on medical cases. The Surgical Report by Mr. James Berry is even more elaborate. In addition to the tables of surgical diseases, arranged like the corresponding one in the medical section, there is a similar table of operations and each of these has an appendix in which all the important cases in each section are given in fairly full detail—for instance, the notes of a case of anthrax occupy thirteen lines of small type. Very many cases of interest are recorded, and we should have liked, had space permitted, to quote some of them, but we have said sufficient to show the very large amount of labour which the abstracting of so many cases must have entailed. The value of such tables and notes as these to anyone who is investigating the statistics and results of any disease can hardly be over-estimated.

La Cura Razionale dei Tisici e i Sanatorii. (*The Rational Treatment of Phthisis especially as conducted in Sanatoria.*) By Dr. AUSONIO ZUBIANI. Pp. xvi. and 239. Price 2 lire (1*s.* 8*d.*).—*Raggi di Röntgen e loro Pratiche Applicazioni.* (*The Roentgen Rays and their Practical Applications*) By ITALO TONTA. Pp. 160. Price 2½ lire (2*s.*). Milan: Ulrico Hoepli. 1898. These two volumes belong to the series of "manuali Hoepli" and are uniform with Dr. Rebuschini's work on the Serum Treatment of Disease which was noticed in our columns on April 30th (page 1198). We are glad to see that Dr. Zubiani recommends the treatment of phthisis by strict attention to personal hygiene, by remaining most of the day in the open air, and by plenty of appetising nutritious food. These conditions, however, can seldom be fully realised in the patient's home life. Dr. Zubiani describes the essentials of sanatoria in considerable detail and gives an account of those established in England, Germany, France, and Switzerland. Signor Tonta's treatise on the Roentgen rays is devoted mainly to their medico-chirurgical applications. It is copiously illustrated, chiefly with radiographs of fractures, dislocations, and congenital absence of bones, foreign bodies embedded in the tissues, &c., and presents in

a convenient form many interesting cases collected from the voluminous literature of the subject.

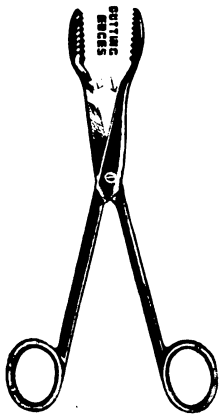
La Protection et la Santé de l'Écolier (The Protection and the Health of School Children). By Dr. C. DELVAILLE. Biarritz: A. Lamaignère. 1897. Pp. 15.—In this pamphlet Dr. Delvaille of Bayonne has printed an address delivered by him at a public meeting in Biarritz last year, an address well adapted to a popular audience and full of sound advice on matters of school hygiene. His principal object was to impress on his hearers the necessity of physical culture for the young. It is not enough that the school forms should have backs and that the class-rooms should be well ventilated and well lighted. There must be playgrounds, games should form part of the day's work, and children's temperance societies should be formed, through the medium of which a beneficial effect may even be produced on self-indulgent parents. For the last ten years Dr. Delvaille and Dr. Breucq have been engaged in the good work of sending delicate children of the poorer class in Bayonne for a month to the seaside at Ciboure-St.-Jean-de-Luz during the school holidays, the effect of which has naturally been very beneficial to their health and growth.

Elementary Physics, Practical and Theoretical (First Year's Course). By JOHN G. KERR, M.A. London: Blackie and Son. 1898. Price 1*s.* 6*d.*—This work is written to meet the requirements of the Education Department and details a series of simple experiments for the beginner; it is a valuable addition to the ordinary theoretical elementary text-book, when practical work is being rightly insisted on, in the conduct of any scientific teaching. We are glad to see the introduction of the "curve" as a convenient means of recording results in a few cases, furnishing a step to its much more extended use in more advanced work.

New Inventions.

COMBINATION SURGICAL SCISSORS AND DRESSING FORCEPS.

THE accompanying illustration shows an instrument which have found most useful and convenient in the routine work of house surgeon and dresser. It combines in one the functions of surgical scissors and dressing forceps and it may also be used as an emergency "clip" and sinus dilator. The blades of a medium-sized pair of dressing forceps (Spencer Wells' pattern) have been made broader and furnished with scissor edges between the terminals and the axis. At the same time a rib has been left on the unsharpened edges which renders the instrument usable as a small sinus dilator. It can be obtained with or without detachable blades, is easily cleaned and sterilised, and is of a convenient size for the pocket. It is exactly 5 in. in length. The fact that the number of instruments on a chatelaine may now be reduced will recommend it to nurses; and house surgeons and dressers will recognise the advantage of using a single instrument which can replace without inconvenience the necessity for carrying two. I believe the cost is little in excess of an ordinary pair of scissors. The "scissor-forceps" are manufactured by, and may be obtained from, Messrs. Reynolds and Branson of Leeds.



H. DE PAIVA B. VEALE, L.S.A. LOND.,
Late House Surgeon, Leeds General Infirmary; Resident Medical Officer, Ida Convalescent Hospital; House Physician, General Infirmary, Leeds.

DEATHS UNDER ANÆSTHETICS.

A DEATH under chloroform occurred recently at Bispham. The patient, a lad, aged sixteen years, had injured his arm at football and the resulting stiffness necessitated forcible movement under an anæsthetic and the removal of a sequestrum. The lad was apparently somewhat delicate and pale. In the evidence given before the coroner's court, according to the report which has reached us, the nurse, who, by the way, appears to have been questioned as if she were a medical man, stated that the patient did not seem to be taking the chloroform as he ought to have done. It was "sprinkled on lint at intervals" and the boy was told to count aloud. At 24 he stopped and although urged to say 25 he made no reply. The medical man drew him to the side of the bed and performed artificial respiration. In spite of this and other restorative measures he died. The chloroformist stated that he gave only 40 minims of the anæsthetic when a convulsive seizure came on. Death, he believed, was due to paralysis of the respiratory centre the result of shock and chloroform. In reply to a question why ether had not been given for the present operation, as it had been on previous occasions he said he had ether with him but decided that chloroform was safer under the circumstances; indeed, he would not have liked to have given ether. "From ether the same form of death occurred—viz., respiratory paralysis." Now unless the report before us is quite unreliable some of these statements are incomprehensible. In the first place the form of death, sudden failure of respiration and circulation, occurring after counting 24 in a patient who has had less than a drachm of chloroform, is not what usually takes place when respiratory paralysis results from a gradual overloading of the circulation with chloroform. Snow pointed out that "when chloroform vapour largely diluted with air is long continued it may cause not real asphyxia but a mode of death resembling it owing to the medulla oblongata and nerves of respiration becoming over-narcotised." One of two causes seem to have been instrumental in this case—fear, or too strong a vapour suddenly taken in and paralysing the heart. The youth had counted to 24 and then expired. Snow recorded at least 4 cases in which death suddenly occurred, although insensibility had not previously shown itself. Reading the evidence it appears that throughout the administration the anæsthetic was badly taken; probably the breath was held; possibly too strong a vapour was presented to the patient. It does not appear what reasons decided the administrator to condemn ether and select chloroform. The report itself seems to show not only no reason to select the less safe narcotic, but rather to contra-indicate its use. It is clearly an error to speak of the mode of death under ether as being on a parity with that under chloroform when referring to a young patient devoid of obstructive lung disease. Even the commonly accepted fallacy that a more profound narcosis and greater muscular relaxation are obtained under chloroform is not alleged as influencing the choice of anæsthetic in this case. We cannot but wish that the real properties and limitations of ether were better understood. In the report of the next case we are informed that ether or the A.C.E. mixture could not have been given for the kind of operation performed. The operation appears to have been one for hæmorrhoids! The fact that the patient was "fat and flabby" possibly made the anæsthetist anxious to avoid venous congestion and struggling such as may occur in such people when the ether is not well taken. The patient was a woman, aged twenty-seven years. Chloroform to the extent of 2 drachms was given (?) by the open method when the woman died. She struggled "very much indeed" when the anæsthetic was being administered. It seems more than probable that an overdose was inhaled during the struggles. Birmingham has to report another fatality under chloroform. The patient, a child aged ten years, was admitted into the General Hospital to undergo an operation for removal of post-nasal adenoid growths. Chloroform was given by an experienced anæsthetist and the operation was rapidly performed. The child was recovering from the anæsthetic at the time of the operation and death was believed to be due to shock reacting upon a nervous system incompletely protected by full anæsthesia. Respiration was noticed for one and a half minutes after the circulation had become imperceptible. The coroner in this case urged the necessity of fully advising parents before giving their children an anæsthetic. We concur with the recommendation.

THE LANCET.

LONDON: SATURDAY, JUNE 25, 1898.

HOWEVER political opinions may differ as to the merits of the Workmen's Compensation Act, 1897, there can be no doubt that it is one of the most interesting experiments in modern legislation. None will quarrel with the great underlying principle of the measure that the workman of our country should be in some way safeguarded against the perils of his employment, even against those which obviously arise from his own fault and carelessness. The Act comes into force before our next issue and it becomes the duty of the Home Office, which is primarily answerable both for the Act and the administration of it, to take all necessary steps to ensure its impartial application in individual cases. Though every endeavour has been made by the authors of the Act to reduce the chances and the cost of litigation to working men and to their employers, it may be pretty confidently predicted that the measure will have the effect of giving much new employment to lawyers, for no perfection of the drafting art has ever yet succeeded in making an Act of Parliament so plain as not to admit of differences of reading and dubieties of application.

It is a feature—and a somewhat novel feature—of this Act that those who administer it will require in many contingencies the assistance of sound medical advice. Without this assistance to their judgment the unfairness and mischief likely to be wrought by the Act would more than justify all that has been said against it by its severest critics. Therefore it is not remarkable that the Home Office has been at considerable pains to explain in its memorandum the duties of the medical referees whom it intends to appoint under the Act, the qualifications which it regards as indispensable, the remuneration which it proposes to give for such services, and the views which it holds in reference to the nature and dignity of them. We have already published the Memorandum of Sir MATTHEW WHITE RIDLEY[1] and in a later issue we have commented on it, but our readers will do well to study it for themselves. The subject is so important that we make no excuse for recurring to it. The medical profession has always maintained that in legal procedures it would be well if medical evidence could be divested of all appearance of partisanship. In the case of the Act now under discussion and of the appointments under it this principle is to prevail. The medical referee is not to be examined as a witness in the first instance. He is to be consulted at their discretion by the judges and the arbitrators. He is to advise them, to make a written report to them of cases which they refer to him, and to answer questions propounded by them. His position will be that of an assessor, an *amicus curiæ*. It will be judicial and within its own range authoritative. We need not point out that the creation of a number of appointments the holders of which will be placed in such a position is a matter of serious consequence to the profession at large. Such a use of medical knowledge has been too long delayed, but everything points to the conclusion that in the future it will be more and more common as the complexity of social and political problems involving medical elements increases. This Act not only creates new appointments, but it involves a new appreciation of medical science, knowledge, and experience, and as such is one of the greatest interest to a profession which has too long been inadequately used in courts of justice. The profession will do well to use its influence in promoting the appointment of suitable men for such functions and in according to them, when appointed, the respect due to their office. The questions in the decision of which the medical referees will have to assist will be by no means easy and novel points of law and legal bearing may be involved. The greatest care will have to be taken at first to avoid, on the one hand, too much dogmatism and on the other too much ambiguity. But with care and the selection of good men these difficulties will be surmounted and the medical profession will assist the legal in making the Act work well, not only for the workmen whose interests are primarily involved, but for the industry which gives them employment and the State prosperity.

The fees seem at first sight reasonable, but they are not too liberal for the services required and may have to be revised. The Memorandum of the Home Secretary evidently contemplates the appointment of men of high standing and with experience of hospital, and especially of surgical, work. There can be but one opinion as to the necessity of appointing men whose authority and judgment will be respected by their neighbours and by the profession. Such are not necessarily or in every case men of consulting or hospital rank. The country abounds in general practitioners of skill and experience and reputation whose judgment would be respected by the profession and the public alike. We therefore hope that no hard-and-fast line will be laid down which will exclude such men from the appointments. But the Home Secretary may be assured of the support of the profession in making only such appointments as will bear criticism. We shall look to the working of this system with much interest. It would be sanguine to expect no errors. To give exact decisions upon the disabling effects in the present and future of all injuries to workmen in the complicated industries of the United Kingdom—for the Act is to apply throughout—will be a task of profound difficulty. But there will be the more credit to the profession in discharging it successfully.

THE inquest recently held at Longton concerning the death of MARY ANNE POOLE has served to accentuate the widespread feeling of suspicion and unrest in connexion with perils known to attend the manufacture of pottery ware. The deceased succumbed to epileptiform convulsions—of that there can be no doubt; but the all-important issue placed before the jury was not the proximate but the primary cause of death. The medical evidence was too equivocal to warrant other than an open verdict. We do

[1] THE LANCET, April 23rd, 1898 p. 1137.

not suggest that it could have been different under the exclusive circumstances in which the practitioner conducted his investigations. The inquiry was adjourned for the purpose of enabling a post-mortem examination to be made in order that the question of "lead poisoning" might be determined—a most desirable procedure. But the only means—a chemical analysis—by which the doubt could with any certainty be dispelled was utterly ignored. The practitioner to whom the coroner issued his order was not in the least to blame for this, since his instructions did not include this particular method of inquiry.

It was alleged that the deceased had suffered from symptoms of plumbism and that her mother had died from epilepsy the result of chronic lead poisoning. In each case it was suggested that the metal had gained access to the system through the respiratory tract. The alternative theories as to the cause of the epileptiform convulsions placed before the jury were (1) lead poisoning; (2) hereditary epilepsy; and (3) exposure to cold. The last although admitted as a possible explanation may for practical purposes be excluded on the ground of its extreme improbability. The question of heredity was based on the assumption that the mother of the deceased was the subject of true epilepsy, whereas, as before mentioned, there appeared to be strong grounds for the popular belief that she also had fallen a victim to the insidious poison. But supposing this belief had no certain foundation in fact it was an additional incentive to exhaustive inquiry. How deeply the public mind has been exercised with regard to the dangers to which pottery workers are exposed is shown by the discussion which took place at the special meeting of the North Staffordshire Chamber of Commerce and by the interpellation in the House of Commons. We regret to find that, instead of a common desire being evinced to arrive at the absolute truth as to the degree—the existence cannot be questioned—of the perils to which the employés in the industry under consideration are exposed, there seems to be a spirit of antagonism which on the one hand leans to unmeasured distrust and condemnation and on the other to a tendency to ignore or minimise what is a source of danger to the public health. It is difficult to repress a feeling that commercial enterprise and profit have been preferred to the well-being of the country. In response to questions put to him Sir MATTHEW WHITE RIDLEY admitted that the report of the certifying surgeon contained matter which he deemed it inexpedient to disclose. It needs no great stretch of the imagination to idealise a state of affairs startlingly disquieting.

To the suggestion that the Home Secretary should order the body of MARY ANNE POOLE to be exhumed in order that the matters in dispute might be cleared up by an exhaustive chemical analysis there comes the reply that such a procedure is without precedent inasmuch as there is no allegation of illegal practices. Such an argument, to our minds, is too much encircled with red-tape. Surely a possible danger to the health of hundreds of operatives and to the lives of many is sufficient reason that no stone should be left unturned which might help to prove the unreasonableness or not of deep and widespread alarm. The conditions under which pottery operatives work and the effects of the operations concerned have already been thoroughly gone into and reported upon by Mr. ASQUITH'S committee, appointed in 1893, and it is the duty of the Government to take measures for the protection of the workers in this industry. It will be a lasting reproach to our independence if juries are compelled for want of available assistance to return open verdicts when a definite presentment is within reasonable reach, as we affirm it was in the case of the deceased woman POOLE.

THE recent case of death from phosphorus poisoning of a girl employed in a match factory has again drawn medical attention to the risks run by persons employed in that occupation. Numerous efforts have been made to minimise such dangers and considerable success has been obtained. The manufacturers assert that they do all that science suggests to render the work as little dangerous as possible, but as long as the present processes are continued certain risk must be encountered. There is a large demand for matches which may be struck upon any roughened surface and such matches cannot be made without the poisonous yellow phosphorus. Many of the foremost chemists in Europe have tried for years to make a match which shall answer the demand without yellow phosphorus, but they have failed, and so far as is at present known yellow phosphorus is absolutely necessary in the manufacture of "strike anywhere" matches. These statements made in the press by the managing director of Messrs. BRYANT and MAY emanate from an interested source, but they are none the less true. The substitution of the amorphous for the yellow phosphorus in the manufacture of matches by machinery in strictly confined spaces whence little or no fumes could escape would go far to avert the evil. In our Paris Letter in THE LANCET of March 13th, 1897, attention was drawn to the discussion which had taken place in the Academy of Medicine of Paris and to the hygienic conditions which it is desirable to impose upon the manufacture of matches. Among the conclusions arrived at were the following: "The suppression of the use of white phosphorus is the only certain way of insuring health to the workers in this manufacture. ..... The present unhealthiness can be diminished by thorough ventilation, short shifts for those men working in the dangerous shops, careful selection of healthy hands, and periodical medical inspection, with power to prohibit the labour, either for a time or altogether, of anyone with lesions of the mouth or whose general health is impaired." These latter points are usually lost sight of and in justice to the employers it must be pointed out that the employed can greatly lessen the dangers to which they are liable by attention to their own health.

It is not yet possible to say definitely how phosphorus fumes act upon the bones in this deadly manner, but WEGNER[1] demonstrated that necrosis of bone could be produced by the action of the fumes of phosphorus, consisting chiefly of the tetroxide, we believe, in those portions from which the periosteum had been removed. Hence, it is suggested that this explains the peculiar liability of the

[1] Virchow's Archiv, 1872.

jaw to become affected in those persons working with phosphorus. The fumes may enter a carious cavity in a tooth and so reach the periosteal membrane. It is by reason of such knowledge that regulations are formed for the dismissal from match factories of operatives suffering from bad teeth. But care of the denture of the operatives is not the only or a sufficient precaution to be taken. Strict attention, too, should be directed to the general health and none but persons who are to all intents and purposes physically sound should be employed. Personal cleanliness is of the first importance. The hands of the employés should be carefully washed before meals which should be taken outside the factory. The recent special rules issued by Dr. WHITELEGGE, the Chief Inspector of Factories, for the regulation of pottery works, lay great stress upon this point.

"The occupier" (of the factory), runs one rule, "shall provide and maintain sufficient and suitable washing conveniences for all persons employed in the places and processes named in Rule I., as near as is practicable to the places in which such persons are employed. The washing conveniences shall comprise soap, nail-brushes, and towels, and at least one lavatory basin for every five persons employed as above, and each such basin shall be fitted with wastepipe and have a constant supply of water laid on by tap."

Such regulations as these should be the rule of every factory where the fumes or dust produced in the course of trade are deleterious to human life.

The foregoing remarks will convey to our readers little or nothing that is not known to them, but we make no excuse on this score, for when the public are greatly excited it is necessary that the medical profession should have the simple facts ready to hand in case they should be called on to bear part in a controversy. There is at the present time no known method of making "strike anywhere" matches without danger to the operatives, *yet the public will have these matches.* The Belgian Government have offered a premium of 50,000 francs to the inventor of a paste for matches which will be free from poisonous phosphorus and which will ignite on cloth or any other surface, but no one has come forward to claim the prize. Until such a discovery is forthcoming the employers, supported by the workers, must take every precaution to employ only healthy hands and the hands must coöperate with their masters. It is only by mutual efforts that harm can be warded off. A last word. In spite of recent events we cannot believe that we need warn certifying surgeons as a body against connivance in the suppression of notification to the Home Office. Such suppression cannot be common, nor is it credible that any class of medical men will be found lightly to bear false witness at inquests or to tell lies upon death certificates.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—It is proposed by the subscribers of the South Devon and East Cornwall Hospital, Plymouth, to have the portrait of their chairman, Sir Massey Lopes, Bart., who is now approaching his eightieth birthday, painted and placed in the board-room of this institution. Sir Massey Lopes has been a most munificent supporter of this charity, having given about £16,000 to the funds, and having only recently erected and partially endowed a beautiful chapel for the hospital.

Annotations.

"Ne quid nimis."

HOSPITALS AND HOMES FOR SICK AND DISABLED SOLDIERS.

THE question of making some provision for soldiers disabled by sickness and wounds by the establishment of convalescent homes to which men discharged from military hospitals might proceed, instead of being dependent upon the rates and relegated to workhouse infirmaries, has of late not only been a good deal written about, but it has been made a subject of discussion in the House of Commons. Notice has already been given by Captain Norton that he will again raise the question when the debate on the Army Estimates takes place. The matter is a really important one, and the *Morning Post* deserves credit for having called attention to it. It is a subject which has hitherto been neglected, but it nevertheless cannot be denied that it falls to the duty of the State to look after its discharged soldiers and sailors, and it would certainly be very politic in its own interest that it should do so, considering that the British Army is not raised by conscription but is a voluntary service army. In order to give a practical aim to our remarks we may indicate the directions in which something more is required than is done at present and the way in which it might be set about. As everybody knows who has had any personal experience of sickness a sick man does not regain his health and strength all at once nor does he easily do so—if the illness has been at all a severe one—in the wards or grounds of a hospital. He is not, moreover, immediately fit to return to his ordinary work on recovery or during convalescence. In the case of a soldier he remains in hospital until he is supposed to be cured and he is usually put upon some light and easy duty or is granted sick furlough at the recommendation of the medical officer when he goes out. In many cases this practically works very well, but in some it does not or does not go far enough. Much, of course, depends upon the nature and duration of the illness. What is wanted is that sick and convalescent soldiers should, in suitable cases, have an opportunity of enjoying a change of air and scene either in the immediate vicinity or at a neighbouring seaport or country garrison in connexion with some local military hospital, convalescent establishment, or barracks, and there should also be more facilities than exist at present for sending suitable cases of sickness from one locality to another. Provision might be made for accommodating sufferers or convalescents from pulmonary diseases, for example, on the South Coast, the Isle of Wight, or at Shorncliffe or Aldershot camp, and a separate block of buildings in connexion with existing hospitals or barracks at those stations might, we think, be erected for the purpose. There is no reason why the additional sick accommodation provided in this way should not lead to a reduction of the established rate of hospital accommodation by being included in, and reckoned as part of it. As regards soldiers invalided from the army on account of serious, incurable, or chronic diseases or the effects of injuries the matter is one of larger dimensions and presents more difficulties; but we think that a plan might be devised by the coöperation of the civil population with the Government. If the localisation or territorial scheme were really and properly carried out there should be no difficulty, for it would surely be a matter of pride and patriotism for one county or district to vie with another in taking care of the sick and wounded soldiers who belonged to regiments and corps with the military deeds and traditions of which the local population were so closely interested

and associated. The Government should in any case furnish a given amount of the accommodation, and this could be supplemented to the necessary extent by institutions and refuges provided from private funds subscribed by the civil population. A practicable scheme could, we think, be initiated and worked out, and it seems clear to us that something of the kind will have to be done.

THE NEW MEDICAL SCHOOLS AT CAMBRIDGE.

THE Regius Professor of Medicine has issued a further appeal for subscriptions or donations towards the building fund for providing new medical schools. It is only too well known that owing to agricultural depression the funds of the University have of late years fallen very low. The medical school of Cambridge is one of the best in the world, but, to quote the Vice-Chancellor, is "the worst housed medical school in England." To assist it is not a matter merely of local importance but may almost be described as national, for the more that is known about pathology, therapeutics, and, above all, hygiene, the better for the nation at large and the greater the saving by means of the greater health of the people. The Senate has granted a site and there only remains to find money for the building. A sum of £20,000 is required, not surely a very large one for the wealthy of this country to provide. It is, of course, for Cambridge men to bestir themselves in the first instance and already a fair amount has been subscribed. Sir Reginald Hanson has given £100 on condition that nine other non-medical graduates do the like and the Mercers' Company has given £1050. Subscriptions or donations may be paid by instalments during 1898–1901 inclusive to the University treasurer, Mr. F. Whitting, King's College, Cambridge.

RECTAL ASPIRATION.

IN the *Gazette Médicale de Paris*, May 28th, 1898, Dr. Marcel Baudouin has published an extraordinary case—the second on record—of rectal aspiration, or, as he terms it, *pétomanie*. He published the first case in the *Semaine Médicale*, April 20th, 1892. The subject was a man who could first aspirate by the anus and then expel air or liquid in large quantities. He was in the habit of giving public exhibitions of his powers. The second case was that of a married woman, aged about thirty years, the mother of five children. For a long time she had noticed the facility with which she expelled gas from the large intestine and, thinking that she was affected with some malady, she confided her troubles to a friend who had attended some of the exhibitions just mentioned. The latter assured her that instead of disease she had a fortune—in her abdomen! Accordingly she attended the exhibitions and soon learned enough to embark on this strange profession. Having aspirated a large quantity of air into the intestine she expelled it, producing characteristic sounds of various tones and intensities in imitation of laughing, whistling, the quacking of a duck, &c. These sounds were no doubt due to a power acquired over the anal muscles similar to that over the laryngeal. She introduced into the anus a cannula connected with a tube having a receptacle at the other end into which was placed a lighted cigarette. The cigarette burnt brightly when she aspirated; the smoke was driven out in a cloud when she expelled the air. But her powers appear to have been inferior to those of her model, to which even the *Temps* devoted an article. He could imitate the sound of cannon, musketry, thunder, the violin, the trombone, and the human voice; and he could even sing in this extraordinary way! However, there is nothing new under the sun, for in the writings of St. Augustine there is a description of these very powers. How is the aspiration of the air performed? Dr. Baudouin observed that with closed glottis the man made a strong inspiratory effort, attended by great depression of the abdominal wall and of the supra-clavicular regions. Negative pressure would be thus produced in the abdomen, which would be enlarged by the elevation of the lower ribs and by the upward movement of the diaphragm towards the thorax. Dr. Baudouin describes the auxiliary muscles of inspiration and probably the diaphragm as assisting in the action. The latter supposition cannot be correct. Contraction of the diaphragm would prevent, not assist, the action. With the inspiratory effort there must be, we should think, relaxation of the sphincter ani. M. Baudouin compares this abnormal power to that possessed by certain individuals over the muscles of the external ear. But a much closer parallel is furnished by cases described by Dr. John Wyllie in the Edinburgh Hospital Reports, 1895, of neurotic individuals who acquired the power of creating by muscular action negative pressure in the œsophagus, and thus sucked air into the stomach. In THE LANCET, of Aug. 1st, 1896, Dr. G. A. Sutherland published a remarkable case of this kind. The power of swallowing air possessed by one of Barnum's "freaks," who could rapidly pass from the appearance of emaciation to corpulency, to which we referred in THE LANCET of Feb. 12th, 1898, may also be mentioned. But if the air was really swallowed and not aspirated the action is of a different kind and is distinguished by Dr. Wyllie from air sucking.

THE BRADFIELD PLAY.

AT Bradfield College on June 21st occurred the first performance of the Greek play, now become quite an institution there owing to the energies of the Warden, Dr. Gray. It is difficult to know whether we should praise more the artistic merits of the production or the qualities of organisation by which an intellectual entertainment is provided both for the school and the public without in any way interrupting the drier and more necessary educational curriculum. Parents, and there are such, who are apt to look askance at dramatic entertainments of all kinds, suspecting interference with lawful studies, should know that all rehearsals are conducted on half-holidays and no extras are permitted. The spectacle of the *Antigone*, performed in the beautiful open-air theatre with such archæological exactness as modern scholarship and the conditions of modern art allow, cannot fail to rouse interest even in the dull, and to the public so hospitably admitted it has given as much pleasure as to the clever youths and masters at Bradfield. The boys will look back in after life with something like gratitude to Dr. Gray for giving them an impetus to the study of Greek literature which no imposition or parsing can ever succeed in doing. It would be ungracious to cavil at a performance so generally excellent in intention and achievement. There was, however, a certain lack of unity in the rendering. Greek tragedy should be regarded more as the stately liturgy of a dead religion than the primitive beginning of what passes for modern drama. The curious convention of the chorus constantly reminds us how impossible it is to effect any reconciliation with the classical and modern stage, and those who appreciated the scrupulous care with which the other conventions were adhered to regretted that no boys could be found to take the parts of Antigone and Ismene. The introduction of talented ladies into the cast deprives these productions of their essential characteristics, though we believe Cambridge is responsible for the unclassical precedent. Mr. J. H. Vince gave a really striking interpretation of the part of King Creon and Mr. T. B. Layton as second messenger both in gesture and voice showed an archaic restraint which was beyond all praise. Mr. S. T. Sheppard, the Tiresias, marred the dignity of his part and his excellent elocution by keeping his body bent to give the

illusion of old age—a trifling with realism which was quite out of place. Mr. H. H. Pigott as the Coryphæus led his chorus with enormous skill and wisely abstained from all facial expression which in the absence of masks is both satisfactory and convincing.

ARMY MEDICAL APPOINTMENTS IN THE WEST AFRICAN SERVICE.

IN connexion with the examination of candidates for thirty-nine commissions in the Army Medical Staff, which it is announced in our advertisement columns will be held at the Examination Hall, Victoria Embankment, W.C., on Aug. 5th next and following days, we are asked to point out that appointments in the West African Service are again open. Applications for admission to the competition should be made in writing to the Director-General of the Army Medical Department, 18, Victoria-street, London, S.W. The list will be closed on July 27th.

STREET NOISES.

THE Local Government and Taxation Committee of the London County Council has drawn up a series of by-laws under the Local Government Act, 1888, and the Municipal Corporations Act, 1892, one of which is as follows: "No person shall in any street or public place, for the purpose of hawking, selling, or distributing any article, shout or make other loud noise in such a manner as to cause nuisance or annoyance to residents or passengers, or to persons occupying shops, warehouses, or offices. Provided that this by-law shall not apply to costermongers if and so long as by virtue of the Metropolitan Streets Act (Amendment Act, 1897) they are exempted from the operation of Section 6 of the Metropolitan Streets Act, 1867." The by-laws in question were to be submitted to the council at its meeting on June 21st, but their consideration was deferred until the next meeting of the Council.

THE PROSECUTION OF JOHN HAMILTON, M.D. NEW YORK.

JOHN HAMILTON of Bedford-avenue, Tottenham-court-road, appeared on June 17th before Mr. Lushington in answer to two summonses charging him with falsely pretending to and using the title of Doctor of Medicine, he being an unregistered practitioner. Mr. Muir Mackenzie prosecuted on behalf of the General Medical Council. Mr. Morton Smith defended. A medical student gave evidence that he visited the defendant at the above address and paid him two guineas for medicine. There was a brass plate on the door with the words, "John Hamilton, M.D. New York." Mr. Mackenzie argued on decided cases that the fact that the defendant held a diploma granted in another country did not entitle him to practise as an M.D. in England, but Mr. Smith said the defendant had never described himself as other than he was and pointed out that two previous prosecutions against him had failed. Mr. Lushington dismissed the summons, saying that there was no evidence to show that the defendant had used this title with intent to deceive and allowing the defence £3 3*s.* costs. We have quoted the *Times* report of the case almost verbally, which doubtless represents accurately its essential points. The General Medical Council will not be encouraged by such a result to continue the prosecution of such gentlemen as "John Hamilton, M.D. New York." It does not follow, however, that the Council is not right in having instituted such a prosecution. For one thing, it will satisfy those members of the Council who are anxious that the Council should wage war against all questionable uses of medical titles which are not registrable. Then, it is further very important that the present meaning of the law should be ascertained by actual prosecutions even if they are occasionally unsuccessful. How else is the Council to found a claim which must some day be made to have the law amended and fortified for the protection of the public? Certainly it does not seem to have been proved in this case that the title M.D. was ever used without the source of it being indicated. This is a weak spot in the prosecution and one which differentiates it from other cases in which the prosecution succeeded.

THE DENTAL HOSPITAL OF LONDON.

THE annual report of this hospital which has been recently issued shows that the work connected with the building of the new hospital is progressing surely if slowly. The delay has been due to two causes—namely, the complicated arrangements necessary in the interior of the hospital itself and the difficulties encountered in complying with the demands of the various authorities. The estimates for the new building have, we understand, been received from the builders and are now under the consideration of the trustees and the committee, so that in the near future we may hear that the actual work of building has commenced. The demand on all dental hospitals is bound to increase by rapid strides through the increased importance rightly placed by the public on the value of teeth; in the case of the Dental Hospital of London the building at present in existence is quite unfitted to meet all the calls made upon it and the new building is an absolute necessity. It is satisfactory to find from the report that the expenses of the management are more than met by donations and annual subscriptions. Funds are, however, urgently needed for the building fund. A perusal of the list of subscribers shows strikingly the somewhat scanty support which the institution receives from the public and the liberal aid which it receives from the dental profession.

MEDICAL JOURNALISM AND MEDICAL LIBRARIES.

IN a paper read before the American Medical Editors' Association at the meeting held in Denver on June 6th Dr. G. M. Gould outlined a plan which will commend itself to most of us—in fact, to all who feel an interest in the diffusion of medical knowledge. It is practically impossible for any individual to possess more than a mere fraction of what is continually being published and the difficulty of the case is increased by the circumstance that communications of permanent value are unavoidably associated with much that is of merely passing interest. In this field of action, however, as in many others, a combination of workers can accomplish what it would be hopeless for an individual to attempt. Dr. Gould's proposal is that public medical libraries shall be founded in every large community, so that the local practitioners may have easy access to the best reference books and to current periodicals. Such libraries would have a most beneficial influence on the intellectual life of the profession, enabling practitioners who have rare or difficult cases to compare their observations with those published by their colleagues elsewhere and encouraging them in their turn to give their results to the world for the information of others. Of course, libraries, like most human institutions, vary both in degree and in kind, but surely Dr. Gould fixes his standard of excellence very much too high when he asserts that there are not half-a-dozen good medical libraries in the United States, a country with 100,000 medical graduates and a population of 70,000,000. It is generally understood that there are in the States more than half-a-dozen centres of medical education possessing good libraries, whilst the vast collection in the Surgeon-General's library at Washington is a theme of admiration for book-lovers everywhere. The first step in the realisation

of Dr. Gould's idea will be the formation of an exchange to receive medical books and periodicals from all sources by gift or purchase and to distribute them to the members of the Association of Medical Librarians. Dr. Gould has such confidence in the ultimate success of his project that he has offered in the meantime to superintend the work for the executive committee of the association.

THE UNITED HOSPITALS ATHLETIC SPORTS.

THE annual meeting of the United Hospitals Athletic Sports will be held at Stamford Bridge on the afternoon of Saturday, July 9th, Mr. Edmund Owen being president for the year. It is hoped that there will be a good attendance, as it seems quite an open question as to which hospital will have the good fortune to secure the shield. At present this shield is at St. Mary's Hospital. A team is coming to visit London this year from Dublin University to compete with the United Hospitals team on Wednesday, July 13th. Mr. J. G. Turner, dental surgeon to St. Thomas's Hospital and treasurer of the United Hospitals Athletic Club, is working hard to render these meetings a success, and both he and the honorary secretary, Mr. C. I. Graham, of St. Mary's Hospital, will be glad to furnish information to anyone applying.

MIDWIVES AT HUDDERSFIELD.

IN his report just issued the medical officer of health of Huddersfield, Mr. E. G. Annis, refers to five cases of puerperal fever of which he received notification.

"I have investigated each of these cases," he says, "and one generally finds that the patient has been attended by a midwife, who in about a week's time or, when the patient is practically *in extremis*, calls in a medical man who has very little opportunity to do anything save give a certificate of death. In these cases I visit the midwife's home, and generally the conditions there found are absolutely indescribable. Evidences of neglect, dirt, filth, and a general squalid condition abound; in fact, it is to my mind a great wonder, and shows the great power of resistance possessed by the human organism that there are not many more cases of puerperal fever, especially considering the large amount of midwifery practice carried on by these women. I have asked all the medical men in Huddersfield to kindly supply me with the numbers of the confinements attended by them during the last year or two, and I would here tender them my best thanks for the information so obtained, and I find that roughly one-half of the children born in Huddersfield are cases attended by midwives and the other half by medical men. It certainly seems to me absolutely necessary that there should be some sort of supervision over this class of practitioners in order, among other things, to ensure that their own homes are kept in as cleanly a condition as possible."

Few will be disposed to question the conclusion of Mr. Annis that some check should be placed upon the practice of midwifery by women of the type described.

CHRONIC HYDRARTHROSIS OF SMALL JOINTS.

AT a meeting of the Société Médicale des Hôpitaux on May 27th Dr. Galliard and M. Bernard showed a patient, aged thirty-nine years, who seven years ago had suffered from generalised subacute rheumatism which soon gave place to a condition of tenderness and pain in the joints. For three years she had noticed that certain joints were swollen. The wrists and the metacarpo-phalangeal and proximal phalangeal joints were swollen and fluctuating but without redness of the skin. There was no appreciable change in the bones or cartilages or any deformity. Movements were limited and sometimes painful. Aspiration of the joints gave exit to a yellowish viscid fluid. The other joints appeared normal except that there were some swelling at the left external malleolus and crackling of the knee-joints. Dr. Galliard and M. Bernard claimed this as a form of chronic rheumatism not previously recognised. But they did not refer to what appears to have been a factor in the disease—the occupation of the patient. She worked as a steam embroiderer and had constantly to make traction with her hands flexed. We have seen one case similar to the above in which, however, the disease was more limited, affecting only some of the proximal phalangeal joints, which, however, were the most severely affected in this case. Here the only cause which could be traced was the patient's occupation. She exposed her hands to heat and had to hold her fingers in a cramped position whilst soldering tins. Admitting fully the great importance of constitutional tendencies in these cases, surely occupations which can cause disease in other tissues must at times play some part in the production of joint affections. But such an influence is often overlooked.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS.

AT the annual meeting of the supporters of this hospital held on June 13th a very serious state of matters was disclosed. The lease of the present premises expires early in 1900 and the trustees of the property decline to renew the lease. Canon Duckworth, who was in the chair, mentioned another unfortunate circumstance. There had been every reason to believe that under the will of Mrs. Armitage the hospital would receive a bequest of £4000. But it was with regret that he had to announce that it had recently been found that the amount at the late Mrs. Armitage's disposal was quite insufficient to provide for all the bequests. Hence the nucleus of the new building Trust would be only £2000 instead of £6000 as was hoped for. Sir Owen Tudor Burne pointed out that through no fault of anybody concerned the ground would be literally cut from under the feet of the hospital, which, unless some £15,000 to £20,000 could be raised in less than two years, would be in a position which might be described as "homeless, houseless, and helpless." The committee deserve every sympathy in their need.

THE ABUSE OF MEDICAL CHARITY IN NEW YORK.

AT the National Conference of Charities and Correction, a notice of which by our New York correspondent has already appeared in THE LANCET (June 4th, page 1570), Dr. Frederick Holme Wiggin read an interesting historical sketch of the recent movement to restrict the abuse of medical charity in New York. He said that it had been inaugurated about eighteen months ago by Dr. Stephen Smith, recently president of the Department of Charities, and Dr. Landon Carter Gray, then president of the Medical Society of the County of New York, who showed that the ratio of those applying for medical aid had risen from 16 per cent. in 1860 to about 49 per cent. in 1895. A committee of the County Medical Society, consisting of gentlemen connected not only with the general medical profession, but with the larger teaching faculties in the city, was charged with the duty of investigating the abuse and was soon reinforced by representatives of a similar committee appointed by the New York County Medical Association. Inquiry showed that the managers of all the dispensaries in the city would not voluntarily agree to any general reform, their attitude being clearly presented in the report made to the Legislature last January by the State Board of Charities, which says that they "apparently are not and have never been in a temper to come to some mutual understanding whereby better conditions shall prevail. In a large degree and for various reasons they have become competitors in business to such an extent that it is probable that nearly half of the inhabitants of New York are now receiving practically free medical treatment." Eventually the New

York State Medical Association, the Medical Society of the County of New York, the New York County Medical Association, and seven other medical societies endorsed the plan of appealing to the Legislature to limit the abuse of medical charity and in the legislative session of 1898 a Bill was introduced which among other provisions constituted it a misdemeanour to obtain relief from dispensaries by false representations and gave the State Board of Charities control over dispensaries by empowering it to grant licences to such as in its judgment would be for the public benefit. At first the Bill met with scarcely any opposition, but when it was favourably reported by the Committee on Public Health of the Senate, to which it had been referred, such vigorous protests were made that both the friends and the opponents of the measure were heard before the Senate and Assembly Committee on Public Health. After full arguments on both sides the Senate Committee reported the Bill favourably to the Senate, which passed it with only two negative votes, but the Public Health Committee of the Assembly failed to report the measure to the Assembly, although energetic efforts were made by its friends to secure a favourable report. The measure was therefore smothered in committee and failed to become law.

THE REPORT OF THE PETROLEUM COMMITTEE.

IT is premature yet to say what decision will be precisely arrived at by this committee, two draft reports having, according to the *Times*, been submitted — one by the chairman (Mr. Jesse Collings) and the other by Mr. Ure. The impression is, however, that Mr. Collings's report will with slight amendment be accepted. The recommendations in this report are almost exactly in a line with those drawn up by THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps, the report of which was published in THE LANCET of Jan 4th, 1896. It is stated that Mr. Collings proposes to deal exclusively with the structure of lamps, but that Mr. Ure insists upon the flash-point being raised. We hope to deal at length in an early issue with the final conclusions of the committee. In the meantime we may express our satisfaction that the views which we published on this important question over two years ago are in practical agreement with the findings of a Select Committee of the House of Commons which has been sitting for several years.

"ONLY A PAUPER."

THE question of the nursing arrangements at the workhouse infirmaries has frequently been brought before the public by means of inquests held upon the bodies of inmates, the evidence often showing the utterly inadequate character of the attendance. In many instances the patients have to wait upon one another or an infirm pauper alone is told to look after the ward. On June 10th Dr. Danford Thomas held an inquest concerning the death of a man, aged seventy-seven years, whose death took place at the Marylebone Infirmary Workhouse, Gray's Inn-road, on June 5th. The evidence showed that the deceased had been an inmate of the workhouse for some years. Owing to the reconstruction of the Marylebone Workhouse the guardians some three years ago rented the old Holborn Workhouse, Gray's-inn-road, as a temporary resort to which they sent some of their inmates, including the deceased. On June 4th the porter noticed that the deceased appeared to be weak and feeble and told him to go to the sick ward. He did so and died there the next morning. Another of the inmates, aged sixty-three years, stated that he was an inmate of the workhouse and was in charge of the sick ward night and day and slept there, and there was no nurse over him. He further stated that the medicine was given to the patients by the porter, who also attended to the door and to the inmates having their meals. The jury returned a verdict of "Death from natural causes" and added a "strong recommendation that a proper trained nurse should be appointed to attend to the sick." Similar cases are constantly occurring and the verdict is generally the same. We are of opinion that it is expressed in terms far too mild. The guardians are responsible for the lives of the paupers so far as suitable medical attendance and nursing can cure or relieve disease, but to leave a whole ward of patients in sole charge of a man, aged sixty-three years, who was, so far as the evidence showed, without any training, is a matter for the gravest censure. Guardians are oftentimes remiss in their care of sick paupers. Had such neglect been discovered in an ordinary hospital the authorities would rightly have been deemed to be incapable of managing an asylum for the sick, yet such gross negligence on the part of the guardians is simply met with "a strong recommendation for a trained nurse," rather than with a formal and severe censure. In some infirmaries, no doubt, the nursing is everything that can be desired, but in others it is the reverse.

LARGE NUMBER OF FOREIGN BODIES IN THE STOMACH: GASTROTOMY.

IN the *Journal of the American Medical Association*, March 5th, 1898, Dr. A. H. Meisenbach has published the case of a man, aged twenty-two years, terming himself "the human ostrich," who had for nine years followed the "profession" of swallowing glass, metal, &c. He suffered no discomfort until the end of that period when he complained of pain in the stomach. Whilst standing a mass of about the size of the hand could be felt in the umbilical and hypogastric regions which could be raised and which descended with an impulse. When recumbent as he turned from his back on either side the mass moved towards that side. A skiagram showed a shadow in the umbilical region. Gastrotomy was performed and 118 articles, besides about an ounce of broken glass, weighing in all 1 lb., were removed. The articles were: 27 staples, 15 screws (1 in. and 1½ in.), 52 nails (2 in. and 1½ in.), 21 cartridges, 2 pocket-knife blades, and 2 inches of brass chain. The patient recovered but an attack of pneumonia of the right base followed the operation. Dr. Meisenbach attributes this to the x rays, to which the patient had been exposed on several occasions for long periods. X rays dermatitis is now well known and deep-seated injury has also been claimed as an effect. Dr. Sorel, a French surgeon, has already asserted that pneumonia can be produced by the rays; other writers mention periostitis. The retention for such a long period of this extraordinary collection of foreign bodies in the stomach without injury and even without symptoms is remarkable.

DEATHS IN CHILD-BIRTH.

AT a meeting of the Royal Statistical Society held on June 21st at the Royal United Service Institution, Mr. T. A. Coghlan, the Government Statistician of New South Wales, read a paper on "Deaths in Child-birth" which was of considerable interest to the medical profession. He drew the data for his paper mainly from an analysis of the deaths and births registered in New South Wales during a period of four years (1893–96 inclusive), though some of his deductions were taken from only the last three years. During these three years there were 115,669 confinements in the colony and the births caused the deaths of the mothers in 813 instances. As difficulty is always experienced in obtaining full and accurate particulars in regard to the confinements of unmarried women the statistics furnished in the paper generally excluded the 9920 confinements of the

unmarried and noticed only the 105,749 confinements of married women. In his first table Mr. Coghlan dealt with the mortality in consecutive confinements up to the twenty-third confinement, of which there were two in the colony during the period under review, though the figures beyond the twelfth or thirteenth confinement were so attenuated as to be practically valueless. From the data thus collected a corrected statement of the probability of death during each confinement was reached. It was shown that the risk attending the first birth is greater than that at any subsequent confinement up to the ninth and that the increase in risk in subsequent confinements may be due to the increased age of the mother and not to a loss of vitality arising from the number of previous confinements. The statistics of first confinements at various ages were examined with the aid of a diagram and from them it appeared that the risk attendant upon a first birth is at a minimum at the ages of twenty-two and twenty-three years. After five years more this risk increases rather rapidly with age.

THE SMOKE NUISANCE.

THE London County Council has authorised its General Purposes Committee to prosecute through the police in cases of smoke nuisance in the County of London with regard to which the local authorities have failed to take action. This is as it should be, but the first case which has been heard since the decision has not given a result calculated to reassure those who are anxious for the purity of the London atmosphere. On June 22nd the Metropolitan Electric Supply Company was summoned at Bow-street for not complying with a magisterial order calling upon them to abate a nuisance caused by black smoke. The counsel for the defence argued that the company could not get smokeless coal and that to prevent smoke with the coal which they were obliged to use they would have to reconstruct their furnaces. Sir James Vaughan said that he was satisfied that the company had done all in their power to mitigate the nuisance and he marked the summons "No conviction." We cannot agree with this judgment. The Public Health Act says nothing about smokeless coal, but it does say that a court may dismiss a summons if it is satisfied that the fireplace or furnace is constructed in such a manner as to consume as far as practicable all smoke arising therefrom. The defendant company admitted that in this case they would have to reconstruct their furnaces, so apparently the furnaces were originally built on the supposition that smokeless coal could always be got—an utopian idea. It is no defence that because only smoky coal can be got a company may foul the atmosphere and bring about a nuisance, albeit a legal one.

THE "REPRESSION" OF TUBERCULOSIS.

A WELL attended meeting of prominent members of the profession took place by invitation at the house of Sir William Broadbent on Wednesday last. The meeting had been called to consider the advisability of inaugurating a movement to disseminate knowledge concerning tuberculosis and its prevention and also the provision of sanatoria for the open-air treatment of tuberculous lung disease. Sir William Broadbent was in the chair and he briefly stated the objects in view. He read a letter from the President of the Royal College of Physicians of London expressing approval of the project and suggesting lines of work. Dr. Corfield, Mr. Malcolm Morris, Mr. Shirley Murphy, Dr. Isambard Owen, Dr. J. Pollock, Dr. Ransome, Dr. H. Weber, and others spoke; and resolutions were passed (1) expressing the desirability of forming a public association for the purpose stated and (2) appointing a provisional committee to take the necessary steps to start such an association. We heartily sympathise with any action which may be taken to diminish the amount of tuberculous disease, and consider that if, as no doubt will be the case, the methods of effecting this are pursued with wisdom and discretion much good will be done. The facts, as stated by Dr. Ransome, that under existing sanitary legislation the death-rate from such disease has been reduced by two-thirds and, as Mr. Shirley Murphy pointed out, that vast improvements have taken place in London habitations during the past twenty years, go far to encourage the hope that yet greater benefits will accrue when the community realise fully the preventable nature of tuberculosis and the value of pure air and food.

COTTAGE BATHS.

THE Corporation of Manchester seem still unable to see the advantage, or it might be said the necessity, of providing facilities for cleanliness for the youngest, the most helpless, the poorest, and perhaps the dirtiest section of their fellow citizens, and still hold out against the oft-renewed appeal for cottage baths. On May 17th a joint deputation from the Manchester and Salford Sanitary Association and the Ladies' Health Society waited by appointment on the Baths Committee of the corporation. It was introduced by Professor Leech, chairman of the Sanitary Association, who said they wished to renew the appeal made a year ago to the committee that they should try the experiment of establishing cottage baths in districts where the influence of the Ladies' Health Society could be brought to bear in making them popular. Miss Beard, of the Ladies' Health Society, stated that in the district which she superintended there were 3000 houses, representing a population of 15,000, and in the whole of that area there was not a single bath. Mr. T. C. Horsfall earnestly appealed to the committee to help the deputation in the matter and spoke of the unclean condition of many of the children who visited the Art Museum. Dr. Sawers Scott also addressed the committee, but in vain. The chairman, in reply, said the experiment would mean the purchase of cottages which might be thrown on the committee's hands if it should prove a failure. But with a charming *naïveté* he assured the deputation that "if the matter were undertaken by private enterprise *and proved successful* the corporation would not be slow to take over the property and establish other cottage baths in the city." Municipal poverty of idea as to fulfilling the duty of promoting the welfare of those whose suffrages have placed the members of the Baths Committee where they are could not be more clearly exhibited. It is not creditable to the corporation that this crying want should be left so long unsupplied and not even one cottage bath be available for the poor woman who finds it almost impossible in her single room to keep her infant sweet and clean, and all because "the experiment might prove a failure."

WE understand that it is arranged that the committee appointed by the General Medical Council to confer with the delegates from the Midwives Bill Committee will do so to-day (Saturday, June 25th). The delegates include Mr. J. B. Balfour, M.P., three medical members of the Midwives Bill Committee, and three members of the Association for Promoting Compulsory Registration of Midwives. The committee appointed by the General Medical Council consists of the following members: Sir Richard Thorne, Dr. Glover, Dr. MacAlister, and Sir Christopher Nixon. The conference will take place at the premises of the General Medical Council.

THE next meeting of the Neurological Society of London will be held at the rooms of the Medical Society, 11,

Chandos-street, W., on Thursday, June 30th, at 8.30 P.M., when Dr. C. E. Beevor will open a discussion on "The Accurate Localisation of Intracranial Tumours." Dr. Byrom Bramwell, Dr. Michell Clarke, Dr. Ormerod, Dr. Newton Pitt, Dr. Sharkey, and Mr. Marcus Gunn will take part in the discussion.

THE annual meeting of the Brussels Medical Graduates' Association will take place at the Café Royal, Regent-street, W., on Tuesday, July 12th, at 6.30 P.M., and will be followed by the annual dinner at 7.30 P.M. Any Brussels medical graduate desiring to be present should communicate with the honorary secretary, Dr. Major Greenwood, 243, Hackney-road, London, N.E.

THE complimentary dinner to Dr. Playfair (postponed from June 8th) will be held at the Grand Hotel on Monday, July 4th, at 7.15 P.M. Lord Lister will preside. Applications for tickets should be made not later than Thursday, June 30th, to Dr. John Phillips, 68, Brook-street, W.

DR. BEATTIE CROZIER has received information that his pension from the Civil List has been increased from £50 per annum to £100 per annum, to assist him in completing the remaining volumes of the "History of Intellectual Development."

THE foundation-stone of the Nurses' Home of Queen Charlotte's Lying-In Hospital in the Marylebone-road will be laid by Viscountess Portman on the afternoon of Wednesday, July 6th.

THE Lord Mayor visited Stone, near Dartford, Kent, on Saturday last and laid a foundation-stone for a new church to be erected in connexion with the City of London Asylum.

DR. G. E. SHUTTLEWORTH has been elected a Foreign Member of the Moscow Society of Neurology and Mental Sciences.

THE MEDICAL SERVICE OF OUR ARMY.

IN the account of the annual dinner of the Indian Medical Service which we published last week, we intimated that we intended to refer again to the speech made by Surgeon-Major-General Jameson, C.B., Director-General of the Army Medical Department, when responding to the toast of "The Sister Services." The speech, interesting in itself, is particularly interesting regarded as an expression of opinion of the value of the service and of the professional skill and bravery of the medical officers. We are therefore glad to be able to publish it at length, especially as by so doing we may make better known facts which in the opinion of the Director-General have not received adequate notice in the medical press, but which, slightly to transpose Surgeon-Major-General Jameson's words, show, "by the results of military expeditions in tropical and unhealthy climates, that the medical service of our army, including, of course, the Indian Army, is the best in the world." The following is the text of the speech:—

Sir JOSEPH FAYRER and GENTLEMEN,—"A prophet is not without honour save in his own country" is an expression which may well be applied to the department which I represent. At home the Army Medical Service is looked upon as a very ordinary affair, often subjected to adverse criticism regardless of a cause; but what do they say of us abroad, in France and Germany, for example? They say that the medical service of our army, including, of course, the Indian Army, is the best in the world, as proved by the results of military expeditions in tropical and unhealthy climates. This is a subject not much alluded to in the general press or, indeed, in the medical press, probably in ignorance of the facts. What are the facts?

Since the year 1860 we have had eighteen military expeditions the medical statistics of which have been separately recorded, and by a strange coincidence the French have had exactly the same number under circumstances somewhat similar—that is to say, in tropical or semi-tropical climates. Comparing the mortality of these eighteen French and eighteen English expeditions it will be found that the French loss from disease alone in relation to strength has been a little more than four times greater than the English. That does not represent all the difference, for we have nothing to compare with the appalling disaster of Madagascar, where the loss from disease was 30 per cent. of the entire strength. Compare that with our last expedition in Ashanti (a climate just as deadly as Madagascar), where the mortality was only 4 per cent. And yet it is reported that the sanitary and medical equipments in Madagascar were exceedingly good. What, then, was the cause of the disaster? Just this. The general officer commanding saw only one enemy—*man*—and he took no account of a far greater enemy—*disease*—and accordingly the medical and sanitary equipments, in spite of medical protest, were left at the base. The result of that was that 7 men were killed in action and 4189 men died from disease.

I shall make another contrast which at the present time may possess a particular interest. It is between the Spanish war in Cuba and our late war on the north-western frontier of India. From the end of 1895 until March, 1897 (a period of 15 months), Spain had an army in Cuba numbering 200,000 men. During that short time there died from yellow fever alone 13,322, and from other diseases, irrespective of killed and wounded, 40,125, while 20,000, or 10 per cent. of the force, were invalided to Spain. It is calculated that at the present moment only 70,000 out of the 200,000 men are now alive. In the frontier war in India the whole loss from battle and disease was only between 4 and 5 per cent. and the greatest number in hospital at the front, on the line of communications, and at the base in any one day was 11½ per cent.

When the medical history of the last war in India is written it will prove interesting reading. There were many difficulties overcome and hardships endured with the usual element of danger. A good instance of this was when General Woodhouse was wounded early in the war. A bullet struck him in the thigh, passed down below the knee, broke into pieces, and lodged. The Roentgen ray apparatus revealed the exact conditions and it was determined to extract the pieces. In the middle of the operation artificial light being used the Afridis crawled up and suddenly blazed into the tent, sending 13 shots through the canvas. Now that might have been a very disturbing circumstance and apt to interfere with the perfect application of the aseptic form of surgery. And what happened? Nothing. The operation went on and was successfully completed as if there was no Afridi within 100 miles. As usual we had many examples of great personal bravery and devotion to duty in the midst of danger. Surgeon-Captain Beyts of my service is an example. He arrested hæmorrhage under a hot fire, and Sir Wm. Lockhart speaking of the incident said that no one ever better merited the reward of the Victoria Cross than he. He got nothing; but that is another story. Another medical officer greatly distinguished himself, Surgeon-Captain Hugo of your service. The incident is so graphically described by Mr. Churchill in his book on the Malakand Field Force that I shall ask this sympathetic audience for permission to read an extract.

"Lieutenant Ford was dangerously wounded in the shoulder. The bullet cut the artery and he was bleeding to death when Surgeon-Lieutenant V. Hugo came to his aid. The fire was too hot to permit of lights being used. There was no cover of any sort. It was at the bottom of the cup. Nevertheless the surgeon struck a match at the peril of his life and examined the wound. The match went out amid a splutter of bullets which kicked up the dust all around, but by its uncertain light he saw the nature of the injury. The officer had already fainted from loss of blood. The doctor seized the artery and as no other ligature was forthcoming he remained under fire for three hours holding a man's life between his finger and thumb. When at length it seemed that the enemy had broken into the camp he picked up the still unconscious officer in his arms and without relaxing his hold bore him to a place of safety. His arm was for many hours paralysed from cramp with the effects of the exertion.

of compressing the artery. I think there are few, whatever may be their views or interests, who will not applaud this splendid act of devotion. The profession of medicine and surgery must always rank as the most noble that men can adopt. The spectacle of a doctor in action among soldiers in equal danger and with equal courage saving life where all others are taking it, allaying pain where all others are causing it, is one which must always seem glorious, whether to God or man. It is impossible to imagine any situation from which a human being might better leave this world and embark on the hazards of the unknown."

The retirement down the Bara Valley was full of dangerous incidents. It was the rear of the column that was always the part the most fiercely attacked. It was there that the wounded and the medical officers were placed, and in repelling the numerous rushes made by a fierce enemy every one had to fight for his own hand. Under such circumstances it would perhaps be difficult to differentiate between the combatants and the so-called non-combatants. If medical officers are non-combatants one might well exclaim with the Frenchman: "Que diable allait-il faire dans cette galère." The great importance of an efficient army medical service is well shown in a report lately received from an American surgeon who, writing of the War of Secession in 1862–66, said that the mortality from disease alone had been 250,000, and he expressed the opinion that had their medical service been as complete in the first three years of the war as it was in the last at least one-third of these lives would have been saved.

Gentlemen, these are facts which tend to show that even in war, paradoxical as it may appear, the preservation of life may be as important as its destruction.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

ON Thursday, July 7th, the election of members of Council will take place. Every year at least three vacancies occur, as three members retire by rotation, and it not unfrequently happens that by death more vacancies arise, but this year there are only the three regular vacancies.

The following list of the 24 members of Council gives the date at which each member retires:—

Retire in 1905: Mr. H. G. Howse, Guy's Hospital (first elected 1889), Junior Vice-President; Mr. Edmund Owen, St. Mary's Hospital; and Mr. Rickman J. Godlee, University College Hospital.

Retire in 1904: Mr. Bryant, Guy's Hospital (first elected 1880); Mr. Pickering Pick, St. George's Hospital (first elected 1888); and Mr. Davies-Colley, Guy's Hospital.

Retire in 1903: Mr. Willett, St. Bartholomew's Hospital (first elected 1887), Senior Vice-President; Mr. Butlin, St. Bartholomew's Hospital; and Mr. Treves, London Hospital.

Retire in 1902: Mr. Reginald Harrison (first elected 1886); Mr. Howard Marsh, St. Bartholomew's Hospital (first elected 1892); and Mr. J. Hardie, Royal Infirmary, Manchester.

Retire in 1901: Mr. Macnamara, Westminster Hospital; Mr. Mayo Robson, Leeds General Infirmary; and Mr. Watson Cheyne, King's College Hospital.

Retire in 1900: Sir Thomas Smith, Bart., St. Bartholomew's Hospital; Mr. J. Tweedy, University College Hospital; and Mr. Alfred Cooper.

Retire in 1899: Sir William MacCormac, Bart., St. Thomas's Hospital (first elected 1883), President; Mr. T. R. Jessop, Leeds General Infirmary; and Dr. Ward Cousins, Royal Portsmouth Hospital.

Retire in 1898: Mr. J. Langton, St. Bartholomew's Hospital; Mr. Mitchell Banks, Liverpool Royal Infirmary; and Mr. Henry Morris, Middlesex Hospital.

An analysis of these names shows that at present St. Bartholomew's Hospital has 5 representatives, Guy's Hospital has 3 representatives, University College Hospital has 2 representatives, London Hospital has 1 representative, St. Mary's Hospital has 1 representative, St. George's Hospital has 1 representative, Westminster Hospital has 1 representative, King's College Hospital has 1 representative, Middlesex Hospital has 1 representative, and St. Thomas's Hospital has 1 representative; making a total of 17. Attached to the London medical schools are 17 representatives, to the special London hospitals 2, and to the provincial hospitals 5, of which number Leeds furnishes 2, Manchester 1, Liverpool 1, and Portsmouth 1.

The approaching election will be perhaps less exciting than have been many of the recent elections. As we have pointed out above, no vacancies on the Council having occurred through death there are only 3 places to be filled at the coming election. One of the retiring members of Council, Mr. Mitchell Banks, does not intend to offer himself for re-election, but the 2 others, Mr. Langton and Mr. Henry Morris, are candidates. 3 other Fellows have come forward, Mr. Clement Lucas, of Guy's Hospital, Mr. Bennett May of Birmingham, and Mr. Richardson Cross of Clifton. We think there can be no reasonable doubt that Mr. Langton and Mr. Morris will be re-elected. They are two very distinguished surgeons, each attached to an important London medical school, and it would be a distinct loss to the Council should either not be reappointed. Thus it happens that there is practically only 1 vacancy on the Council and for this there are 3 candidates. In the present Council there are 5 provincial Fellows and 19 London Fellows, and as Mr. Mitchell Banks does not seek re-election it follows that unless a provincial Fellow is appointed there will be only 4 representatives from the provinces. It is difficult to decide exactly how many provincial representatives there should be, but it may fairly be said that 6 and 4 represent a reasonable maximum and minimum. Of the 3 candidates for this single post Mr. Clement Lucas is the only London Fellow and should the voters think that 4 provincial representatives are sufficient they could not do wrong by voting for Mr. Lucas. He has already been a candidate for a seat on the Council and at the last election he received only 34 fewer votes than the lowest successful candidate. He is connected with a large medical school, is well in touch with current medical education, and would supply to the Council a further instalment of the reforming element which is so much wanted on that body. If, on the other hand, it is felt that a provincial Fellow should replace the provincial representative who has retired, then a choice will have to be made between Mr. Bennett May and Mr. Richardson Cross. Mr. May is a well-known surgeon at Birmingham and the fact that he is unanimously supported by all the Fellows of the College in Birmingham tells greatly in his favour. He was a candidate at the last election and was only 23 votes behind the last successful candidate. Mr. Richardson Cross is a distinguished ophthalmologist and is connected with the Bristol Royal Infirmary. He would prove a decided acquisition to the Council.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS, PARIS.

AUG. 2ND TO AUG. 9TH, 1900.

THE next meeting of the International Medical Congress will take place in Paris during the year of the great exhibition in 1900—from Aug. 2nd to 9th. Professor Lannelongue, the well-known surgeon and a member of the Senate, has been chosen President and Dr. Chauffard (21, Rue St. Guillaume) has been appointed secretary-general. The committee of organisation has already been at work for some months and considerable progress in the arrangements, which will be on a large scale, has been made. The President of the Republic has consented to open the Congress in person, and foreign countries are being invited to join in the work.

Sir William Mac Cormac has received an official letter from the President and Secretary-General asking him to organise an English national committee if possible before Aug. 1st. They hope that England will take a large interest in the Congress which promises to be a great success. No effort will be spared by our French *confrères* to make it one and they are all the more stimulated by the great *éclat* which attended the last meeting of the Congress in Moscow. It is interesting to recall that the first International Medical Congress took place in Paris under the Presidency of Professor Bouillaud in 1867.

A meeting of those interested in the matter will, we understand, be held at some convenient time and place, to be announced shortly, in order to carry out the wishes of our French colleagues.

THE BRITISH PHARMACOPŒIA.

VI.[1]

THE ADDITIONS—(*continued*).

THESE new tinctures only are added to the British Pharmacopœia. These are the *Tinctura Ergotæ Ammoniata*, *Tinctura Quillaiæ*, and the *Tinctura Pruni Virginianæ*. To the last two we have already referred. The tincture of ergot of the old British Pharmacopœia is now omitted; it was of the same strength as the new preparation (1 in 4) which now contains 2 oz. solution of ammonia in each pint and which has a dose of from ½ to 1 drachm—i.e., double the dose given in the old Pharmacopœia for a tincture of the same strength. The addition of ammonia to the menstruum used in exhausting ergot has been found to give a much more stable and uniform result; whether this is caused by its power of dissolving out all the active principles of the drug or by its influence in precipitating some of the antagonistic complex alkaloidal bodies always present, we know not. The admission of the new tincture is a decided advantage.

Trochiscus Acidi Carbolici.—Simple as it may seem we believe that this is one of the most important and valuable additions to the list of new Galenical preparations in the British Pharmacopœia, 1898. Carbolic acid has a specific action upon the throat and palate muscles which can be obtained by no other drug; it paralyses them slightly, destroying the sensibility of the nerves in inflamed conditions and it is, moreover, a powerful antiseptic. These properties rendered a lozenge of it most desirable and it was always remarked as "surpassing strange" that the British Pharmacopœia did not contain one whilst lozenges of benzoic acid, bismuth, opium, iron, soda, &c., retained a place in the national pharmacopœia. The new trochiscus contains 1 gr. of phenol in each lozenge and it will prove of great value in the treatment of various forms of sore-throat and in suppurative and painful conditions of the gums and tongue. It has not been our desire to criticise the work of the revisers in any fault-finding spirit, upon the contrary we have rejoiced in their success at the very great improvement which they have effected in this, the first really praiseworthy attempt at reform, but we cannot congratulate them upon their action in introducing the following list of lozenges—i.e., *Trochiscus Eucalypti Gummi*, *Trochiscus Guaiaci Resinæ*, *Trochiscus Krameriæ*, and *Trochiscus Krameriæ et Cocainæ*. There are now no less than seventeen of these antiquated specimens of confectionery in the new volume. Fortunately the revisers have simplified the direction for their *manufacture*—we use the word advisedly, as they will never be prepared by the ordinary pharmaceutical chemist.

To *Unguentum Aquæ Rosæ* we have already referred. It is a substitute for the popular "cold cream" and is an elegant emollient if it be found to keep without resolving itself into its component parts, as it sometimes does.

Unguentum Capsici will be welcomed especially by all who have a leaning towards hydropathy, as this is now the official representative of the popular "chili paste" so much used at most of the hydropathic establishments. The original formula we believe recommended the use of the oleo-resin of capsicum (United States Pharmacopœia), but the new ointment seems to meet all requirements; it is of the strength of about 1 in 5 and will prove a valuable rubefacient.

Unguentum Cocainæ is a 5 per cent. ointment of the alkaloid dissolved in oleic acid and lard. It was required, and is a valuable addition to high-class pharmacy as well as an agent certain to be prized by the physician or surgeon who is called upon to treat painful affections especially in the neighbourhood of the junction of skin and mucous membranes as about the anus and vulva. Its anæsthetic action will be much more uniform and prolonged than that of a watery solution of the drug.

Unguentum Hydrargyri Oleatis has already been referred to under Hydrargyri Oleas. *Unguentum Hydrargyri Oxidi Flavi* is introduced as a substitute or representative of the celebrated Pagenstecher's ointment. The revisers have shown their sound judgment in making the new ointment of the strength of about only 10 gr. to 1 oz., though the original ointment was made by rubbing up 30 gr. with 1 oz. vaseline. This preparation may be substituted for the popular "Golden" ointment made with the red precipitate of mercury. It is very efficacious in most chronic inflammatory conditions of the eyelids and may be used with great advantage in many forms of conjunctivitis. We would, however, recommend the practitioner when prescribing this or any other similar eye ointment to slightly vary the official strength so that the dispensing chemist will feel himself compelled to make up the preparation afresh and not fill it out of a pot which contains the ointment made up in bulk. We give this advice because the preparation of eye ointments especially requires laborious trituration and can only (when not made by complicated machinery) be well made in small quantities at a time. It is a good practice for the prescriber to add the words (underlined) *tere bene* in the subscription of his recipe. If the trituration be not most carefully performed the particles of the yellow oxide will act like an irritant when applied to the conjunctiva. The British Pharmacopœia directions for making this ointment, which is seldom used except for ophthalmic purposes, are summed up in the word "mix."

Unguentum Paraffini is simply a mixture of three parts of hard paraffin with seven parts of vaseline and is introduced as a basis for other ointments. The British Pharmacopœia directs that when paraffin ointment is used as a basis of white ointments it should be prepared with the white variety of soft paraffin or vaseline and when used in coloured ointments it should be prepared with the yellow variety. It also makes a noteworthy departure in the directions following the process by stating that "the proportions of hard and soft paraffins in paraffin ointment may be modified to meet the exigencies of climate and prevailing temperature." This is very nice, but we expect that no two chemists will agree about these exigencies and that patients will be furnished with a little variety when travelling about or when compelled to get their recipes filled up by a new chemist, but no harm can otherwise come of the little latitude given to the dispenser.

It remains for us to notice some of the new Galenical preparations of the British Pharmacopœia belonging to drugs which were already official.

Extractum Belladonnæ Liquidum.—Though this preparation is chiefly of pharmaceutical interest it cannot fail to be of importance to the practitioner of medicine, since its introduction marks the first step in what must prove to be a sweeping change in the vegetable materia medica. This change was first suggested by Barclay a few years ago and there can be no doubt about the wisdom of the revisers in acting upon it. The old green extract of belladonna was, and, we regret to say, still is, an official preparation of very variable composition and strength owing to the insuperable difficulties in effecting its standardisation. There are now in addition to the folia, radix, and succus eight preparations of belladonna in the new British Pharmacopœia. All these with the single exception of this variable old green extract are now standardised preparations made to contain definite and unvarying percentages of the alkaloids of belladonna root. This uniformity and accuracy is obtained by the introduction of the preparation now under notice; from it all the other preparations of belladonna are made. It is standardised to contain 0·75 per cent. alkaloids and is prepared by percolating belladonna root with alcohol and finally finishing the process when the liquid is made to contain ½ gr. of alkaloids in every 110 minims. From it the following Galenical preparations are made—i.e., extractum belladonnæ alcoholicum (1 per cent. alkaloids); emplastrum belladonnæ (0·5 per cent. alkaloids); linimentum belladonnæ (0·38 per cent. alkaloids); suppositoria belladonnæ (⅕ gr. alkaloids in each); tinctura belladonnæ (from 0·048 to 0·052 per cent. alkaloids); and unguentum belladonnæ (0·6 per cent. alkaloids). It will thus be seen that this new liquid extract is one of the most important preparations in the Pharmacopœia and should receive the attention of every practitioner prescribing belladonna. We would, however, caution about one fallacy in prescribing belladonna which is likely to arise from an arithmetical study of these preparations. The practitioner must not compute the therapeutic action of these Galenicals

[1] Articles I., II., III., IV., and V. were published in THE LANCET of April 16th and 23rd, May 7th and 28th, and June 18th, 1898, respectively.

in units of atropine. It is essential to have preparations of definite alkaloidal strengths, but it must be remembered that their doses must not be calculated upon the basis of the atropine dosage. Binz states that recent investigation shows that good belladonna root does not contain any atropine but merely *hyoscyamine*, which by the action of alkalies or prolonged heating is converted into atropine. It is thus of vital importance that all the preparations of the root of belladonna be prepared from this liquid extract. It remains for the practical therapeutist at the bedside to determine the exact dosage and action of the belladonna Galenicals by patient and numerous observations, commencing with the doses of the Pharmacopœia.

Extractum Ipecacuanhæ Liquidum.—This, like the previous liquid, is a valuable addition, and though it is chiefly of pharmaceutical interest it should receive the attention of the prescriber because of its influence upon the dosage. The old vinum ipecacuanhæ was made by first preparing a *dry* extract of the root and then macerating it in sherry; the result was not satisfactory. The prolonged heating necessitated by the evaporation to complete dryness spoiled to a certain extent the alkaloidal richness of the wine, and we believe that the new wine will be more active and more uniform though the doses remain nearly as before. It is made by mixing 1 oz. of liquid extract of ipecacuanha with 19 oz. of sherry. The liquid extract is standardised to contain from 2 gr. to 2¼ gr. *alkaloid* in 110 minims. Cephaeline is also contained in ipecacuanha and it is a stronger alkaloid than emetine. Probably we may have these alkaloids separated, as suggested by Wilde, and the emetine alone retained for Galenical preparations of ipecacuanha in some future edition of the British Pharmacopœia.

Extractum Jaborandi Liquidum.—This preparation does not appear to be of any interest to the practitioner and there does not seem to be any reason for its introduction since we have a powerful tincture 1 in 5. Its presence in almost identical form in the American Pharmacopœia probably suggested to the revisers that it should be included in the British Pharmacopœia.

Extractum Nucis Vomicæ Liquidum.—This liquid extract is introduced for the same reasons as have caused the introduction of the liquid extract of ipecacuanha. Formerly, in making the tincture of nux vomica the semi-solid extract after being standardised was dissolved in alcohol and water, but now the introduction of this liquid does away to a certain extent with the danger of deteriorating its virtues by prolonged evaporation as the standardised liquid extract is simply dissolved in alcohol and water. An important change is thus introduced into the tincture—i.e., from being standardised to contain 1 gr. *total alkaloids* in 1 oz. it is now made to represent ¼ gr. *strychnine* in 110 minims, and the dose is slightly reduced—i.e., from 5 to 15 minims. This tincture must be altered in the next revision. It gives a precipitate with water which is most undesirable in a liquid containing strychnine when dispensed in prescriptions; moreover, there is no necessity for such precipitation. We sincerely hope that few of the new Galenical preparations will be found open to objections like this. Every new compound should be made and experimented with for long periods before becoming officially honoured.

Extractum Strophanthi.—As already stated in a former article this is a valuable addition. Its composition is, however, a debatable one. The extract is made in the ordinary way and then milk sugar is added so that every ounce of the strophanthus seeds is to make 2 oz. of the extract. This makes the new extract a dry powder or *abstract*. These abstracts were numerous in a comparatively recent edition of the Pharmacopœia of the United States, but they have since been rejected, as altogether unsatisfactory, from the American Pharmacopœia, a fact no doubt well known to the British Pharmacopœia revisers, who have, it is to be hoped, tested the keeping qualities of this extract and those of physostigma.

NEWPORT (MON.).—It is stated that the total expenditure up to the present on the Wentwood Waterworks undertaking for the Newport Corporation amounts to £118,740. The works are yet very far from completion.—The Parliamentary Committee of Newport Borough Council recommend the purchase for £5350 of a site near Caerleon which consists of 53 acres, for the new Borough Lunatic Asylum.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twenty-sixth sitting of the Royal Commissioners was held on June 20th at the Guildhall, Westminster. The Commissioners present were the Chairman (Lord Llandaff), the Right Hon. J. W. Mellor, Mr. De Bock Porter, and Major-General Scott.

The first part of the sitting was occupied in hearing the evidence of Mr. William Chambers Leete, Vestry clerk to the parish of Kensington, and of Mr. John Collins, a member of the Whitechapel District Board of Works. The examination of these witnesses was concluded. After the adjournment for luncheon Mr. Littler, Q.C., Chairman of the Middlesex County Council, whose evidence was taken at a previous sitting, was cross-examined by Mr. Balfour Browne on behalf of the London County Council.

Mr. LEETE, in answer to the Chairman, said that the parish of St. Mary Abbotts, Kensington, comprises an area of 2245 acres, contains 22,000 inhabited houses, a population of 170,000, and has a rateable value of £2,107,894. The Kensington vestry had during recent years considered the question of the water-supply of the metropolis in connexion with the various Bills which had been promoted by the London County Council and had on more than one occasion expressed their disapproval of the purchase of the water companies' undertakings by the London County Council. The vestry favoured an alternative policy—namely, the promotion of legislation for the creation of a central body representing the ratepayers of the whole of "Water London," and that this body should be vested on behalf of the water consumers with powers of control and of supervision over the undertakings of the water companies. On Jan. 16th, 1895, the vestry passed the following resolution:—

That it is inexpedient, in the opinion of this vestry, that any further steps should be taken for promoting the passage of the Bills through Parliament having for their object the purchase of the water companies' properties by the Council and thus incurring expenditure which may ultimately prove useless in addition to that already incurred, but the vestry fully recognises the absolute necessity of there being some form of control and supervision by a representative body over the sources of supply from which London water is now and may in future have to be derived, and is prepared to give its support to any well-considered public measure having that object in view.

On May 8th, 1895, the following resolution was passed:—

That in the opinion of the vestry it is desirable that legislation should be promoted which shall have the effect of bringing the undertakings of the water companies which now supply the metropolis under the supervision and inspection, with powers of regulation, of a central body representing the ratepayers, by which in return for the rights conferred on the companies and without hampering their operations within the area of supply of each, the systems of distribution may be rendered thoroughly efficient in all weathers and universally intercommunicating.

The witness pointed out that the object of the resolutions was to obtain for representatives of the ratepayers such control and supervision for the whole of the water-supply of the metropolis as would without the necessity of purchasing the undertakings give to the consumers large statutory powers and a directing influence in regard to all schemes for the extension of the supply in future as well as for the due regulation of the system and manner of distribution, such as Parliament has imposed on similar private undertakings in times more recent than those at which the original Acts were passed in favour of the existing metropolitan water companies. With regard to the powers of levying water rents at present possessed by the companies the witness said that the vestry felt that there were anomalies which should be dealt with by Parliament. The attention of the vestry had been directed to a question which had arisen between the owner of some small stables and one of the water companies. The complaint arose out of the statutory powers possessed by the Grand Junction Waterworks Company. It appeared that the stables and two rooms over them were assessed at £8 a year: the amount paid for water both for stables and domestic use had been 19*s*. a year under an agreement made with the company by the occupant. The company sought to increase the charge to £2 14*s* a year. Objection to this was taken by the owner and the company threatened under their powers to require that the water should be supplied to this particular stable and to two small stables adjoining by meter. The company had statutory power to charge for 100,000 gallons per annum as the minimum quantity at the rate of 9*d*. per 1000

gallons, and at this rate the charge would have been even higher than that which the company had proposed. The points raised were whether it was reasonable that the water company should have power (*a*) to charge for domestic supply in the case of a stable when the water used for the horses and vehicles forms a distinct item in the demand upon the full rateable value of the hereditament, and (*b*) failing agreement as between the company and the ratepayer to require that the supply shall be by meter, looking to the power of the company to charge for 100,000 gallons per annum as the minimum quantity at 9*d*. per 1000 gallons. The vestry considered the statements submitted to them and came to the conclusion that the Metropolis Water Act of 1897 would not enable them to obtain any relief in this case. It was, however, thought that the facts did betray an anomaly as regards the charges which the Grand Junction Company were empowered to levy under their Waterworks Act of 1852 (15 & 16 Vict. c. 157), and they were of opinion that, if exercised to the full, the provisions of this Act would undoubtedly be a serious matter for many of the ratepayers within the area of supply of this company. The vestry had therefore communicated with the Secretary of State for the Home Department calling attention to this anomaly and urging the Government to consider the expediency of further legislation dealing with this and other charges which the water companies had power to levy. A statement of this case was sent to other local authorities in order to obtain their opinion with regard to the matter, and the answers received showed that these authorities agreed with the Kensington vestry in advising legislation on the subject. With regard to the power at present possessed by the water companies to cut off the supply from occupied houses the vestry as the sanitary authority were strongly of opinion that this power should no longer exist. They felt that it was not right that the companies should merely as a coercive measure for securing payment of the water rent be allowed to create what might be a dangerous nuisance. The vestry wished to call the attention of the Commissioners to the fact that the first report of the Royal Commission appointed in 1884 to inquire into the housing of the working classes contained a recommendation to the effect that the water companies should be prevented from cutting off the water supply from an inhabited house.

Mr. PEMBER, on behalf of the water companies, and Mr. CRIPPS, the Parliamentary agent of the London County Council, on behalf of that body, cross-examined the witness. The cross-examination referred chiefly to the question of the equalisation of water-rents, and the witness pointed out that although the amount levied on the rateable value was less in the Kensington district than in some other parts of London yet the amount paid for water per gallon was probably more. The water-rents were levied on the rateable value, and the witness gave a striking example of what had occurred in his own case. When he moved from Highbury to Kensington he took a house of about the same size and used about the same amount of water, but he had to pay about 50 per cent. more for it because the rateable value of the new house at Kensington was higher than that of the one he left at Highbury. The present charges must be admitted to be anomalous, but the anomaly would certainly not be done away with simply by basing the water rents on the rateable value of houses throughout London, and this the witness's own case conclusively proved.

Mr. JOHN COLLINS, in answer to the CHAIRMAN, said that he was a member of the board of works of the Whitechapel district. He was by trade a basket-maker and his wife carried on a laundry business. Towards the end of the year 1895 he suffered from a short supply of water and was subjected to much inconvenience. In the month of July, 1896, the supply of water was again deficient and he and his neighbours were greatly inconvenienced. He first referred to the turncock of the East London Water Company which supplied the district in which he lived. He was told that the water could only be supplied in that neighbourhood for two hours a day. The witness then went to the office of the company and tendered the amount of his water rent up to Christmas, 1896, because the regulations of the company were that the money should be paid in advance. The clerk after some demur accepted the money and gave him a receipt. The witness then asked to see the manager and was taken to an inner office to make his representation. He produced his receipt for water-rate, and said that he required to have a proper supply of water, that he had paid for it, that his business as a laundryman was suffering from his not being able to obtain a supply, and that, as a matter of fact, his business was at a standstill for want of water. The evidence of the witness was taken down at the office, and he was promised that the matter should be attended to. On the following day water was supplied for about two hours only. The witness was inconvenienced in his business, and on the following day therefore he went to the Worship-street police-court and made an application to Mr. Cluer for the purpose of obtaining a summons. The witness's case was that the company, although refusing to supply him as an ordinary customer, yet still supplied other customers who took water by meter. Mr. Cluer advised the witness that his remedy was by a civil action against the company. The witness, however, felt that his means would not allow him to go to the expense of a civil suit. A few days after this event the East London Waterworks Company distributed a notice to say that the water-supply would be continued for six hours during the day. The conditions of that notice were not complied with; a supply of about two hours twice a day was given and that supply was not sufficient for the business purposes of the witness.

In answer to Mr. DE BOCK PORTER the witness said that some people in the district had for a time refused to pay their water rents to the company. The company had made no abatement in their charges in consequence of the inadequacy of the supply which they had given. Water in Whitechapel was so scarce that the witness had known people give ½*d*. or 1*d*. a pail for it. At the same time supplies were given by meter to those customers who took it by measure. On July 30th, 1896, a special meeting of the Whitechapel District Board of Works was held. At that meeting the following resolution was passed:—

> That this board feel strongly the serious crisis through which this district is passing owing to the renewed breakdown of the East London Water Company to fulfil its legal and moral obligations to the inhabitants, that pressing representation be made to the Government and the London County Council forthwith, urging immediate action to secure a competitive supply or to take over the whole supply of London by a body directly representative of the ratepayers.

A deputation was appointed by the board to wait on the East London Water Company and urge on them the necessity of increasing the domestic supply. The deputation was received on Aug. 7th, 1896, and explanations were given by the secretary of the company, who promised that more standpipes should be put up in the district and that the hours of supply should be extended as much as possible. Shortly afterwards a notice was issued by the East London Water Company that storage cisterns must be fixed to all supplies as required by the "company's Acts of Parliament." The witness said that the cisterns which were formerly in use had been removed in consequence of the sanitary requirements of the district and that all the houses were upon the constant service system. The notice issued by the company that cisterns should be supplied throughout the district would have entailed an enormous expense and was, in fact, practically impossible. The witness visited the premises of many people who, like himself, complained of the inadequacy of the water-supply, and he had satisfied himself of the justice of the complaints which had been made both by inspecting the houses and by hearing the evidence of the inhabitants who complained. The scarcity of water continued for some little time during the autumn of 1896 and the supply given came in some instances as early as six o'clock in the morning, and the water thus supplied could not under ordinary circumstances be utilised. The witness had suffered much from the want of water and had at the wish of his constituents taken a prominent part in inquiring about the details of the water famine. The witness, therefore, was well known to the East London Water Company, and they had since shown considerable anxiety that no possible waste could take place on his premises, which they had constantly inspected since the occurrence of the events which he had related.

In answer to the CHAIRMAN the witness said that he did not know whether the Whitechapel District Board of Works had communicated with the London County Council with regard to the water famine, but they had not received any help from that body.

The CHAIRMAN pointed out that as he read the Act of 1871 it was in the power of the Whitechapel District Board of Works to prosecute the company and he could not understand why they had not done so.

In answer to Major-General SCOTT the witness said that

he was not aware of the provisions of the Metropolitan Water Act of 1897 and the witness was glad to have his attention called to it. He said that it had not been brought to the attention of his board.

In answer to Mr. PEMBER the witness stated that the notice with regard to the shortness of the supply was not issued by the company until some days after the supply had failed.

Mr. LITTLER, Q.C., said that since he had given his evidence he had received a letter from the Willesden Urban District Council stating that that body did not agree with the views he had expressed, but that they were in favour of the water companies being vested in one central authority or trust.

Mr. BALFOUR BROWNE, Q.C., on behalf of the London County Council, asked Mr. Littler whether the views he had expressed as chairman of the Middlesex County Council agreed with the views which he intended to lay before the Commissioners on behalf of the Kent Water Company which he represented as counsel.

In reply the witness said that as counsel for the Kent Company he should express the views of his clients, for which they were responsible. In his character as chairman of the Middlesex County Council and as a private individual he was not in favour of a water trust, he was not in favour of purchase, and he did not wish to answer questions about control. He did not agree with the form of control which had been suggested by Sir John Lubbock. He had no method of control to suggest. An honourable and gallant member of the Commission knew much more about the question than he did. He was in favour of using the water of the Thames so long as that could be done without injuring the navigation of the river. He thought that a sufficient supply of water by right belonged to the county of Middlesex, which was, in his opinion, entitled to the "first drink" of the water before it was used for the supply of the counties below. The witness objected to any new wells being sunk in Middlesex for the supply of other districts and contended that the water from such wells should belong to that county. He was in favour of the present statutory control of the dividends of the companies. The witness was of opinion that if purchase did not take place and it ever became necessary for the companies to spend money in obtaining water from a new source they would undoubtedly spend it rather than lose the valuable privileges which they possessed. He did not, however, think it would be necessary to go to a new source.

In answer to Lord ROBERT CECIL, who appeared for the Hertfordshire County Council, the witness said that in his opinion if the outside authorities were supplied with water in bulk by the London County Council the outlying districts would undoubtedly suffer first in the case of scarcity of water.

The next sitting will be held on Monday, June 27th.

THE REBUILDING OF UNIVERSITY COLLEGE HOSPITAL.

IT will be within the recollection of our readers that last year Sir J. Blundell Maple made a noble gift of £100,000 to University College Hospital for the purpose of re-building the hospital. The property at the back of the existing hospital was immediately acquired at a cost of £30,000 and a site being thus provided it has been decided to make a start with the rebuilding.

On Tuesday, June 21st, the foundation-stone was laid in the presence of a large company by H.R.H. the Prince of Wales. Among those present were the following members of the Reception Committee:—The Duke of Bedford (President of the hospital), Lord Reay, G.C.S.I., LL.D. (President of University College), Lord Monkswell (treasurer of the hospital), Mr. Henry Lucas (chairman of the hospital committee), Sir J. Blundell Maple, Bart., M.P., the Bishop of London, Mr. J. F. Rotton, LL.B., Q.C., Mr. A. Prevost, Sir George Young, Bart., Captain H. M. Jessel, M.P., Dr. C. J. Hare, Dr. H. Charlton Bastian, F.R.S., Sir John Williams, Bart., M.D., Sir Henry Thompson, F.R.C.S., Mr. S. J. Hutchinson, Mr. Rickman J. Godlee (dean of the medical faculty of University College), Dr. Sydney Ringer, F.R.S. (senior physician to the hospital), Mr. Christopher Heath (senior surgeon to the hospital), Dr. G. Vivian Poore, and Mr. Newton H. Nixon (secretary to the hospital).

Among the general public might have been seen the Duchess of Bedford, Lady Reay, Lady Maple, Mrs. Henry Lucas, Sir G. and Lady Faudel-Phillips, Sir Douglas and Lady Galton, Sir Samuel Montagu, Bart., M.P., and Lady Montagu, Sir Savile and Lady Crossley, Lady Jessel, Lady Russell Reynolds, Sir James Peile, K.C.S.I., and Lady Peile, Lord Lister, P.R.S., Sir Wm. Mac Cormac, P.R.C.S., Sir Henry Burdett, K.C.B., Professor W. Corfield, M.D., Dr. W. J. Collins, L.C.C., Mr. Victor Horsley, F.R.S., Professor Wm. Ramsay, F.R.S., Sir Wm. Roberts, the Chief Rabbi (Dr. Hermann Adler), Dr. J. Rose Bradford, F.R.S., Dr. Thomas Barlow, and Professor A. Kennedy, F.R.S.

A temporary auditorium had been erected, where the invited guests assembled at 3.15 P.M. Fine weather happily prevailed and an unusually brilliant amount of colour was provided, not only by the dresses of the ladies present, but also by the gowns and hoods of a large number of Doctors, Masters, and Bachelors of various Universities who were present in academical dress, conspicuous among them being Dr. Fleming in the brilliant scarlet and gold-coloured gown and hood of a D.Sc. of the University of London. The ceremony was timed to commence at 3.45 P.M., and during the half-hour of waiting the visitors were entertained by a selection of music by the band of the Scots Guards.

Their Royal Highnesses the Prince and Princess of Wales arrived with their accustomed punctuality, and being ushered on to the platform the Duke of Bedford thanked the Prince on behalf of the governors of the hospital for his presence, and called upon Mr. Henry Lucas to make a short statement in reference to the rebuilding of the hospital.

Mr. HENRY LUCAS, after giving a short history of the progress of the hospital since 1833 and stating the need for rebuilding, said that three or four years ago the rebuilding fund had reached a sufficient amount to justify the committee in making a beginning and they requested Mr. Waterhouse to prepare a design for a new hospital. After much consideration and consultation between Mr. Waterhouse and the hospital and medical committees the design which is now to be carried out was adopted, which provides for a hospital to contain about 290 beds, with ample accommodation for out-patients and nurses and for the means of clinical instruction. Complete isolation of every ward from every other part of the hospital will also be secured in the new hospital—an idea emanating from Dr. Poore, "who has," said Mr. Lucas, "for many years given much attention to the subject and to whom the committee are much indebted for his many valuable suggestions in reference to the new hospital." The amount of the rebuilding fund was, however, not large enough to allow of more than a small portion of the new hospital being built at first, and the committee had no hope of its completion until after the lapse of an indefinitely long period. They were then agreeably startled by the splendidly generous proposal of Sir J. Blundell Maple to build the new hospital entirely at his own expense. It was trusted that the whole of the new building would now be completed within three or four years, and be an institution of lasting benefit to the poor and the means of development of the great school of medicine associated with University College.

The PRINCE OF WALES, in reply, said:—"The needy of this locality should indeed be thankful that Sir J. Blundell Maple, who has shown himself so anxious to promote their welfare, is living in their midst. No such magnificent gift for the sick poor of London has, I believe, been made since Thomas Guy established the hospital which bears his name. The prosperous will, I trust, practically mark their appreciation of his generosity by their liberal support of the hospital he is building, and contribute to allay the sufferings of the sick and indigent. I beg subscribers to consider that all general collections for hospitals ought to be regarded as supplements to, and not substitutes for, local subscriptions. Of the utility and the important requirements which the University College meets there can be no doubt. In its immediate vicinity there exists a large population of the labouring classes, many of whom have difficulty, even when they are in full work, in maintaining themselves and their families. When incapacitated by illness or accident it is impossible for them to provide themselves with the means of medical relief. I would point out how valuable are the resources of the hospital when grave accidents occur

in connexion with the three large railway companies—the North-Western, the Great Northern, and the Midland—which all have their London stations within a short distance of a place where the sufferers can obtain immediate relief. Let me say a few words on the incalculable value of the hospital as a school of medicine. Several thousands of its graduates are putting in practice in various parts of the world the lessons they learned at this institution. Many students have risen to great distinction in their profession and foremost among these I am proud to reckon my old friend Sir William Jenner, who is universally recognised as one of the most eminent men of the nineteenth century. I am sure you will unreservedly agree with me that the new building will increase in an immense degree the benefits derived from this hospital. The additional accommodation for the patients and the material improvements in the medical, surgical, and nursing arrangements, as well as in various details of administration, commend themselves to the approval of all who have studied the question. In all the advantages which I have enumerated the medical school will fully participate. When the new building is completed the training of the pupils will be carried on under far more favourable circumstances than hitherto, and by continuing to study the treatment of patients according to the newest improvements, regulated by the most modern science, the students cannot fail to acquire a practical knowledge advantageous to themselves and ultimately to the higher benefit of the general public."

Sir J. BLUNDELL MAPLE then requested His Royal Highness to lay the stone, which was duly done "In the name of the Father, the Son, and the Holy Ghost."

The stone bore the following inscription:—

THIS STONE WAS LAID BY
HIS ROYAL HIGHNESS
ALBERT EDWARD PRINCE OF WALES, K.G.,
Vice-Patron of the University College Hospital,
On TUESDAY, JUNE 21st, 1898,
AS A MEMORIAL OF THE REBUILDING OF THIS HOSPITAL THROUGH THE GENEROSITY OF SIR J. BLUNDELL MAPLE, BART., M.P.

Under the stone was a jar containing a copy of the current *Times*, the annual report of the hospital for 1897, and a programme of the proceedings.

The choir of St. Pancras Church having sung a hymn, the Lord Bishop of London recited the Lord's Prayer and an appropriate collect, after which he gave the Benediction. The proceedings terminated with the singing of the National Anthem.

QUEEN'S BIRTHDAY CELEBRATIONS AT TAMPA BAY, FLORIDA.

WE have received the following letter from a correspondent dated May 29th, 1898:—

"One of the most pleasing functions took place on the 24th inst., one familiar to most Britishers in their own country, but coming as a most agreeable surprise to those of the English-speaking race who are staying at the headquarters of the army here in Florida. The Tampa Bay Hotel was quite *en fête* to celebrate the seventy-ninth birthday of our beloved Queen. The upper end of the palatial dining-room was draped with the two stirring emblems of the Anglo-Saxon race, the British Union Jack being folded cross-wise and leaning towards the American Stars and Stripes. Beneath the folds of the two flags sat the distinguished President, Colonel A. A. Wiley of Montgomery, the Governor of the State of Alabama. On his left was the Commander-in-Chief of the Military Staff here, Major-General Shafter. At the entrance of the hall was placed an immense framework in the form of a crown tastefully decorated with red, white, and blue flowers, which was universally admired. On one side of the President's table was placed the large body of war correspondents, and on the right the military officers serving under the popular general and the naval officers of the gunboats in the port. The body of the immense hall was filled with the visitors and civilians of the town. Before each guest was placed a ménu card, on the top of which was printed in colours the crossed flags with the motto below, "Blood is Thicker than Water."

The band struck up "God Save the Queen," which is identical with the American air, "My Country, 'tis of thee," followed by the "Star-Spangled Banner." The banquet, at which an address was delivered on the Unification of the English-speaking People, will be long remembered by those who were privileged to take part in it. Surgeon A. E. Wynter, M.R.C.S. Eng., L.R.C.P. Lond., 2nd Division U.S. Army Corps, responded to the toast of "Her Britannic Majesty, Victoria, Queen of England and Empress of India, the greatest ruler of the greatest government in the most marvellous century of the world's history."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6752 births and 3167 deaths were registered during the week ending June 18th. The annual rate of mortality in these towns, which had increased in the four preceding weeks from 16·4 to 16·9 per 1000, declined again last week to 14·7. In London the rate was 13·8 per 1000, while it averaged 15·3 in the thirty-two provincial towns. The lowest rates in these towns were 8·5 in Cardiff, 9·2 in Leicester, 9·5 in Burnley, and 9·6 in West Ham and in Croydon; the highest rates were 19·3 in Manchester and in Salford, 19·7 in Preston, 20·6 in Gateshead, and 22·2 in Newcastle-upon-Tyne. The 3167 deaths included 340 which were referred to the principal zymotic diseases, against 389 and 380 in the two preceding weeks; of these, 105 resulted from measles, 93 from whooping-cough, 49 from diarrhœa, 45 from diphtheria, 26 from scarlet fever, 22 from "fever" (principally enteric), and not one from small-pox. No death from any of these diseases was recorded last week in Norwich or in Bolton; in the other towns they caused the lowest death-rates in Brighton, Cardiff, and Huddersfield, and the highest rates in Wolverhampton, Salford, Halifax, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Plymouth, Halifax, Bradford, and Newcastle-upon-Tyne; from whooping-cough in Swansea, and Gateshead; and from "fever" in Portsmouth and Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 45 deaths from diphtheria included 26 in London, 6 in Leeds, 3 in West Ham, 2 in Salford, 2 in Liverpool, and 2 in Burnley. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and only one case of small-pox was under treatment in the Metropolitan Asylums Board Hospitals on Saturday last, the 18th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on the same date was 2194, against 2195, 2207, and 2169 on the three preceding Saturdays; 230 new cases were admitted during the week, against 256, 220, and 206 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 226 and 212 in the two preceding weeks, further declined to 185 last week, and were 42 below the corrected average. The causes of 48, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Hull, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·0 and 21·3 per 1000 in the two preceding weeks, further declined to 20·2 during the week ending June 18th, but exceeded by 5·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·2 in Paisley and 18·7 in Greenock to 21·2 in Glasgow and 27·2 in Perth. The 609 deaths in these towns included 32 which were referred to measles, 22 to whooping-cough, 22 to diarrhœa, 8 to scarlet fever, and 8 to "fever" (principally enteric). In all, 92 deaths resulted from these principal zymotic diseases, against 112 and 116 in the two preceding weeks. These 92 deaths were equal to an annual

rate of 3·0 per 1000, which was 1·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 27 to 42 in the three preceding weeks, declined to 32 last week, and included 16 in Glasgow, 12 in Dundee, and 3 in Edinburgh. The deaths from whooping-cough, which had been 43 in each of the two preceding weeks, fell to 22 last week, of which 8 occurred in Glasgow, 5 in Edinburgh, 4 in Aberdeen, and 4 in Paisley. The 8 fatal cases of scarlet fever exceeded by 4 the number recorded in the preceding week and included 4 in Glasgow and 3 in Edinburgh. The 8 deaths referred to different forms of "fever" corresponded with the number in the preceding week, and included 3 in Glasgow and 3 in Paisley. The deaths from diseases of the respiratory organs in these towns, which had been 133 and 109 in the two preceding weeks, were 108 last week, and were within one of the number in the corresponding period of last year. The causes of 24, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·7 and 25·1 per 1000 in the two preceding weeks, declined again to 21·9 during the week ending June 18th. During the past four weeks the rate of mortality in the city has averaged 22·5 per 1000, the rate during the same period being 15·6 in London and 21·0 in Edinburgh. The 147 deaths registered in Dublin during the week under notice showed a decline of 21 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 10 and 4 in the two preceding weeks; of these, 4 resulted from different forms of "fever," 1 from whooping-cough, and 1 from diarrhœa, but not one from small-pox, measles, scarlet fever, or diphtheria. These 6 deaths were equal to an annual rate of 0·9 per 1000. the zymotic death-rate during the same period being 1·7 in London and 3·5 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 4 to 1 in the four preceding weeks, rose again to 4 last week. The mortality from whooping-cough showed a further decline from that recorded in recent weeks. The 147 deaths in Dublin last week included 29 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recent weekly numbers, while those of elderly persons showed a decline. Four inquest cases and 5 deaths from violence were registered; and 51, or more than a third, of the deaths occurred in public institutions. The causes of 11, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEON GEORGE FREDERIC DEAN, B.A., M.B., has been placed on the retired list of his rank.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Green, Surgeon-Lieutenant Hearn, Surgeon-Lieutenant McArdle, and Surgeon-Lieutenant O'Gorman are under orders for service in Egypt. Brigade-Surgeon-Lieutenant-Colonel Grier's appointment to the Scottish District is cancelled *pro tem.* and he is ordered to remain at Aldershot for the present. Surgeon-Major Addison joins at Woolwich for duty. Surgeon-Colonel William Graves is placed on retired pay. Surgeon-Major Arthur Harding is placed on temporary half-pay on account of ill-health.

THE SPANISH-AMERICAN WAR.

There is but little to chronicle regarding the Spanish-American War, which still drags its weary length along. The American transports conveying the military expedition are reported to have arrived in the vicinity of Santiago. With regard to the general invasion of Cuba and Porto Rico it is thought that some 200,000 troops will be required; but the President of the United States, who is apparently a strong man of independent and sound judgment, is averse to the conduct of military operations in Cuba for sanitary reasons until the end of the rains. Manila, if it has not already fallen, must certainly soon do so, and it is believed that the town will be occupied by forces from the war vessels together with the troops sent to Admiral Dewey's aid from America to form a land force. It was generally thought that this war would afford some interesting lessons in naval strategy, tactics, and new inventions. We had very sensational descriptions of the terrible effects of the dynamite shells fired by the *Vesuvius*, resembling those of an earthquake, but these have not been since followed up by any corroborative particulars. It was, at any rate, open to Spain to make a strong defence of her colonies and to harass the naval ships and transports of the States in various ways and directions, but the Spaniards have so far shown a lamentable want of naval skill and enterprise. They seem to have been content to exhibit their undoubted courage by dying at their posts in honour of their country. The Spaniards were not only entirely unprepared for war, but their Government has shown that it was quite incompetent to conduct any war. The Cadiz fleet has put to sea, but its destination and object are alike unknown, and it is not apparently strong enough, in any case, to do much. We hear very little news of the medical departments of either Spain or America; indeed, there has not seemingly up to the present time been very much to do so far as the sick and wounded are concerned. The Spanish losses about Manila must, however, have been large. Admiral Dewey's fleet is reported to be very healthy.

THE VOLUNTEER MEDICAL ASSOCIATION.

The annual meeting of the Volunteer Medical Association was held at 20, Hanover-square on Wednesday, June 15th. Brigade-Surgeon-Lieutenant-Colonel Andrew Clark, V.D., was re-elected Chairman of Council, and Surgeon-Captain Rory Fletcher and Surgeon-Captain J. Harper, honorary secretaries. Surgeon-Lieutenant J. Cantlie was appointed honorary treasurer, and Surgeon-Lieutenant-Colonel A. T. Norton, C.B., V.D., elected a Vice-President. The old council, with three exceptions, were re-elected and the name of Surgeon-Lieutenant L. A. Bidwell was added to that body. The report of the retiring council, which was of a highly favourable character, was adopted. The competition for the Ambulance Challenge Shield will take place at Wellington Barracks on Saturday, July 23rd, at 4 P.M. We may remind intending competitors that entries will close on July 1st.

THE WEST AFRICAN ARMY MEDICAL SERVICE.

Appointments in the West African Medical Service are again open and will be competed for at an examination of candidates for the Army Medical Staff to be held on Aug. 5th next. Applications should be sent to the Director-General of the Army Medical Department, 18, Victoria-street, London, W., before July 27th.

THE PRINCIPAL MEDICAL OFFICER IN INDIA.

It is announced that Surgeon-Major-General W. Taylor is to succeed Surgeon-Major-General Gore as Principal Medical Officer of H.M.'s Forces in India. Surgeon-Major-General Taylor is to be congratulated upon his good fortune. He has some thirty-six years' service and was in the last Ashanti campaign of 1895 in medical charge of the expedition under Sir Francis Scott.

THE COMING SOUDAN CAMPAIGN.

All the officers of the medical staff ordered from this country to Egypt will, it is understood, embark early next month. The Anglo-Egyptian force designed to take part in the advance on Khartoum will be a large one, as it is anticipated that there may be a good deal of fighting on the part of the Dervish forces. It may be assumed that on this occasion stretchers will be provided with moveable hoods for the protection of the wounded and sick against the sun, that the Roentgen ray apparatus will be carried with the field army, and that so far as is compatible with the nature of the operations the Government and military authorities will see that everything required by the medical staff for the efficiency of the hospital and transport service is forthcoming.

COUNTY LABORATORY FOR GLAMORGANSHIRE.—At the meeting of the Glamorganshire County Council held on June 16th it was decided to advertise for a bacteriologist and that 9, The Parade, Cardiff, should be taken and converted into a county laboratory.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following is a record of some of the principal amounts received at the Mansion House, according to the lists which have reached THE LANCET office up to our going to press on Thursday, when the total sum amounted to over £25,500. At the corresponding period last year the total was £23,000.

	£	s.	d.
St. Paul's Cathedral	290	16	2
St. Michael, Chester-square (Rev. Canon Fleming, B.D.)	1258	0	0
"Delta"	200	0	0
Mr. Geo. Herring	200	0	0
A. G. P.	300	0	0
Curzon Chapel, Mayfair	128	10	0
St. Matthew, Denmark-hill	100	17	10
St. Nicholas, Chislehurst, including £100 from Mr. H. Foster	276	15	4
Westminster Abbey	167	9	10
Holy Trinity, Sydenham	200	0	0
Holy Trinity, Tulse Hill	175	3	4
Union Chapel, Islington	145	7	7
Christ Church, Lancaster Gate (Rev. C. J. Ridgeway)	1367	4	0
All Saints', Ennismore-gardens	480	2	4
St. Andrew, Wells-street	118	10	8
St. Michael, Paddington	154	12	9
All Saints', North Peckham	175	4	0
Upper Norwood Baptist Chapel	73	11	6
St. German's, Blackheath	51	17	2
Stoke Newington Parish Church, £59 7s. 10d.; the Old Church, Stoke Newington, £34 9s. 4d.; Mission of the Holy Redeemer, Stoke Newington, £27 12s. 4d.	121	9	6
Metropolitan Tabernacle (Exeter Hall)	53	12	7
Hammersmith Parish Church	37	13	6
Allen-street Congregational Church, Kensington	57	13	0
West Wickham Parish Church and Mission	37	19	5
St. Gabriel, Warwick-square	50	4	7
Crouch-hill Presbyterian Church	58	12	0
St. Michael and All Angels, Blackheath-park	89	2	11
St. Thomas, Portman-square	63	3	5
Hornsey Parish Church	44	9	3
St. Mark, Reigate	78	6	1
Hampstead Parish Church	66	5	5
Greek Church, Bayswater	85	9	0
St. George's Chapel, Albemarle-street	64	13	4
Emmanuel Church, Wimbledon	69	0	1
Wanstead Parish Church and Christ Church	47	12	2
Putney Parish Church	28	1	5
St. John, Putney	59	7	9
Bromley Parish Church, Kent	74	1	6
St. Mary, Boltons	60	0	0
St. Saviour, Upper Chelsea	144	2	2
St. Marylebone Presbyterian Church	62	18	6
St. Luke, West Holloway	40	0	0
St. Andrew, Fulham	87	10	11
Christ Church, Mayfair	131	13	8
Christ Church, Gipsy Hill (morning collection)	123	8	4
Effra-road Unitarian Church, Brixton	48	17	2
St. Paul, Upper Norwood (morning offertory)	76	16	6
Christ Church, Ealing	43	16	2
St. Barnabas, Addison-road	128	12	8
Christ Church and St. Andrew, Hornsey	77	5	0
St. Mark, North Audley-street	72	15	7
St. Stephen, Ealing	91	12	6
St. Paul, Onslow square	447	3	0
F. G. D.	50	0	0
Holy Trinity, Marylebone	76	19	10
Church of Annunciation, Chislehurst	81	9	9
St. Agnes, Kennington Park	40	15	0
St. Saviour, Paddington	61	7	11
St. Stephen, South Kensington	124	15	2
St. Luke, Nutford-place	112	11	11
Immanuel Church, Streatham-common	96	13	2
St. Michael, Highgate	54	15	11
St. James, West Hampstead	128	14	6
Camden Church, Camberwell	68	6	8
St. Matthew, Bayswater	157	19	1
Bromley Congregational Church	60	18	11
Chapel Royal, Hampton Court	51	3	7
Christ Church, Hampstead	105	9	3
Christ Church, Lee Park	52	7	7
St. James, Kidbrook	115	13	7
St. Paul, Knightsbridge, and St. Mary, Graham-street	344	15	2
St. Peter, Vere-street	305	0	0
Holy Trinity, Upper Chelsea	201	5	6
St. Martin-in-the-Fields	212	7	9
Rosslyn-hill Unitarian Chapel	101	16	2
Holy Trinity, Paddington	121	4	6
St. Alban, Streatham Park	145	16	3
St. Mark, Hamilton Terrace	297	2	6
St. Mary, Kilburn	130	0	0
St. Bartholomew and St. Matthew, Sydenham	137	10	11
St. John, Paddington	150	4	9
Essex Unitarian Church, Kensington	140	0	3
St. George, Hanover-square, and St. Mary, Bourdon-street	198	5	5

The records of other amounts have been received and will be published in our next issue.

Correspondence.

"Audi alteram partem."

"VITALITY."

To the Editors of THE LANCET.

SIRS,—In his paper in THE LANCET of April 16th, Dr Beale denies that life can result from matter and forces, but does not give his own view as to its origin. It seems to me we must either admit that matter and forces can generate life or accept the statement in Genesis that the breath of God imparted life to inanimate matter. To me and to all who believe in the correlation and transmutability of physical forces, the matter and force origin of life is far more intelligible and probable than the miraculous and we see no good reason why life, the vital force, should be excluded from the list of convertible forces, such as heat, motion, chemical action, light, and electricity. The possibility of abiogenesis—the genesis of living from non-living matter—has been admitted by many profound thinkers and scientists, including Aristotle, and some years ago Dr. Charlton Bastian made a series of experiments (published at the time in *Nature*) which seemed to prove that abiogenesis was not only a possibility but a fact. He made infusions of hay, turnip, &c., and exposed them in hermetically sealed flasks to temperatures which Pasteur and Tyndall admitted were destructive of germs and every form of life; after some days he examined these infusions microscopically and found in them various forms of vegetable life. These experiments, however, did not convince Pasteur and Tyndall, who considered them fallacious and inconclusive. Tyndall had long before contended that the earth was once in a nebular condition, that it gradually cooled down and became solid, and that then low forms of vegetable life appeared upon it; but as he did not believe in abiogenesis how did he account for this first appearance of life? Assuming that living things can be generated by matter and forces, we can go back in imagination to the nebular period when the earth was "without form and void," then to the period when it cooled and solidified and produced low forms of vegetable life. Evolution would then carry us forward to the earliest and lowest forms of animal life and thence through the whole series of animals up to man and mind. In nature there are no hard-and-fast lines of demarcation; things run into one another, like the prismatic colours of the rainbow. The vegetable kingdom runs into the animal and vegetable and animal protoplasm are indistinguishable. When we arrive at fishes we find them gradually passing into reptiles, reptiles into birds, birds into mammals, apes into man; and on the borderland between any two kingdoms we find creatures with some of the characters of both, so that it is difficult to decide to which they belong. There are anthropoid apes and pithecoid men, and those who believe that man alone has a soul would find it difficult to determine which animal on the borderland possessed it and which did not and to say this monkey-like man has it, that man-like ape has not. If then in nature we find no hard and fast lines of demarcation why should we try to draw one between dead matter and living and at a certain point in evolution call in the aid of a miracle such as the breath of God? We can draw no hard and fast line between light and darkness, day and night, spring and summer, autumn and winter, boyhood and manhood, the ebb and flow of the tide, the terrestrial atmosphere and the illimitable ether beyond it; and if living matter runs into dead why not dead matter into living?—I am, Sirs, yours very truly,

D. HOOPER, B.A. Cantab., M.B. Lond.,
Physician to the Surrey Dispensary.

Trinity-square, S.E., June 10th, 1898.

POISONING BY STRYCHNINE.

To the Editors of THE LANCET.

SIRS,—THE LANCET of June 18th contains a letter from Dr. Robert Barnes, in which he emphasises the fact that the most effectual treatment of the convulsive state is absolute rest—a maxim with which, I think, everyone will be in accord. However, it is not sufficient only to protect the motor muscular system from every source of

external irritation, but great additional benefit may be obtained by deadening the acuity of the sensory organs of sight and hearing. I well remember when I was house physician at St. Bartholomew's Hospital having the charge of a case of hydrophobia in which strong tetanoid spasms had set in and these attacks were excited by the slightest noise or even by the sight of anyone moving in the room. In order to reduce these sources of irritation to a minimum I had the man's eyes blindfolded and his ears plugged with cotton-wool. Of course, it is needless to say that the patient did not recover; but I am sure of this, that by the measures adopted his last sufferings were greatly ameliorated, the convulsions being immediately lessened in frequency, duration, and in violence.

I am, Sirs, yours faithfully,

Worthing, June 20th, 1898. W. T. WYATT.

"PUBLIC SCHOOLS AND FOOD."

To the Editors of THE LANCET.

SIRS,—With reference to the subject of school diet so ably and sensibly handled in THE LANCET of June 18th I would ask, Why should not the physiologist construct a model diet table for schools, just as has been done in the case of prisons and kindred institutions with the very best results as regards the health of the inmates? Such a model diet would at one and the same time be the healthiest and the cheapest. Without attempting to construct one myself I would throw out the following suggestions. Breakfast should consist chiefly of porridge and milk, brown bread should be substituted for white, and tea and alcohol should be banished. Care should be taken, moreover, to give food which requires a good deal of mastication. Our children are fed for the most part on soft and pappy foods which are swallowed after little or no mastication, with the result that the teeth and jaws are not properly exercised. This is, I am convinced, one of the chief causes of the decay of the teeth so common among us.

I am, Sirs, yours faithfully,

Wimpole-street, June 20th, 1898. HARRY CAMPBELL.

"THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—In connexion with this subject, and more especially with a letter from "G. P." in the *British Medical Journal* of June 11th, it would be very interesting to know what "G. P." does really consider a "tempting" salary to offer to a qualified assistant. I have for the last few years been a constant peruser of the advertisement columns of THE LANCET and the *British Medical Journal* and I fail to recall to my memory any offer of such an alluring character as hinted at by "G. P." appearing in them, or, moreover, being made through the medium of an agent. Take, for instance, last week's medical journals: there are some twelve indoor appointments and six outdoor ones of which the salary is stated, the average remuneration of the former working out at some £98 per annum; of the latter—two with unfurnished houses, three with rooms and attendance, and one with unfurnished house—at the munificent sum of £138 per annum. Surely none of these offers can be a repetition of that "tempting" one that "G. P." almost pitifully tells us of? I do not know how "G. P." arrives at the conclusion that there are so many vacancies for qualified assistants, but admitting that such is the case I trust that most of these vacancies will remain unfilled until the monetary inducement for employment in this capacity is substantially increased and until the status, comfort, and general treatment of the qualified assistant are greatly improved. This piteous plaint of the scarcity of the qualified assistant is only a phase of the agitation for the retention of the unqualified one, but the sooner those men who have been employing the latter kind of aid make up their minds that the decision of the Council is irrevocable, the sooner will there be—owing to the better position and salary offered them—a sufficient supply of qualified men.

It is not, however, altogether the financial question which causes men to "bar" assistantships so persistently. Principals should bear in mind that they cannot treat men their equals in birth, if not of better, and in a great many instances professionally and generally better educated, as they have hitherto treated the broken-down failure or, in so many cases, the drunken wastrel *sine diploma* but with full curriculum. There is, again, another factor to be considered. The young practitioner has recognised the fact that the action of the Council has placed him in a much better position to combat the game of "grab" played by so many men who, finding that they have much more than they can do, are not willing to let the young ones have a chance, but "sweat" two, three, even five assistants, qualified and unqualified. *Apropos* of "sweating" there is an advertisement offering a man £150 per annum for working a branch avowedly worth £700 per annum. Surely this is "sweating" pure and simple, but he can now make his bid for a fair share of patronage, assured that—if the Council does its duty—he will be protected from the "underbidding" opposition of the unqualified and that the trading tactics of the "limited liability company" class of practitioner will be materially hampered. I challenge his statement that death and retirement absorb some 600 men annually. I have not the means of verification at hand, but he will find, I think, that during the last few years a surplus of some 300 or 400 (over and above the removals from the two causes mentioned) has been added yearly to the Register. As to his medical friend who was unable to obtain a "locum"—even for an advance of 25 per cent. on the usual terms—if he will consult the columns of the medical journals he will find (omitting the various agencies) some eight or nine gentlemen ready to accommodate him, though they require for remuneration something more than the benefits of "bracing air and an interesting country," so ingenuously offered by a practitioner as the sole salary for a three weeks' "locum"—25 per cent. increase on the *locum's* "usual terms"! Ye gods! I am in want of neither assistantship nor "locum" myself—as a matter of fact I am not in "general practice," else I might almost be tempted to offer my services to this belated and almost recklessly extravagant individual.

I am, Sirs, yours faithfully,

June 20th, 1898. M.A. CANTAB., M.A., M.B. DUBLIN.

To the Editors of THE LANCET.

SIRS,—The continuance of the correspondence against the act of the General Medical Council *re* unqualified assistants has a tendency at first sight to make one think that it has not been a popular one. From a personal knowledge of several large Lancashire towns I do not believe such to be the case, the different medical societies having approved of it. Nor have I noticed as an effect any more activity on the part of midwives, as was suggested by a correspondent in THE LANCET of June 18th. It appears to me that it must be the unqualified men and those who have made use of them that are keeping up the agitation. Amongst the younger men in these towns there is much jubilation and in the case of those who are assistants it has not only improved their status but has considerably improved their salaries. In one of these towns I know personally four men who were until recently diagnosing, prescribing, &c., daily who have never been near a medical school and who are ignorant of the rudiments of anatomy and physiology. It is this class that medical men want to see abolished. One can almost excuse the maintenance of a man who has really tried the legitimate study of medicine and has not succeeded in finishing his task, but to see qualified men wanting to maintain those whose knowledge is equivalent to that of a quack is a puzzle to me.

I am, Sirs, yours faithfully,

June 20th, 1898. AN ASSISTANT, M.D.

BORIC ACID IN BUTTER.—At the quarterly meeting of the Local Government Committee of the Glamorganshire County Council held on June 16th the county analyst (Mr. C. A. Seyler) presented his quarterly report. This stated that of 38 samples of butter which had been examined 25 were free from boric acid, the remaining 13 contained the acid, but the amount used had now decreased below the limit imposed by the council and in no case exceeded 0 5 per cent. Mr. Seyler had examined 5 hams, all of which contained boric acid, the average giving 0 24 per cent., and he suggested that the same limit should be placed on ham as on butter—viz, 0 5 per cent. The committee adopted the report.

THE MADRID MILITARY HOSPITAL.

(FROM A SPECIAL CORRESPONDENT.)

IT suffices to visit the Madrid military hospital to be convinced that sanitary progress in Spain is not only possible but has actually been achieved, at least in one direction, and this with no mean measure of success. At the same time it must also be recognised that such progress is fraught with exceptional difficulties. The poverty of the country is a valid excuse for delay, but the innate spirit of procrastination which is a prominent feature of the national character constitutes a still greater obstacle. This, however, adds to the credit of the energetic minority which has finally overcome both apathy and poverty. The history of the military hospital is a good illustration of the patience and perseverance which Spanish sanitary reformers must exercise before they can achieve their purpose. The hospital originated in a large edifice erected in the Calle de las Princesa by order of King Philip V. Here the sons of the nobility were to study theology and various sciences under the tutelage of the Jesuit Fathers. Some rooms in this building were set aside as a military hospital so that the pupils of the seminary might have facilities for studying medicine and surgery. Of course no one concerned in this enterprise had any idea of sanitation. Gigantic cesspools were constructed, as if the main object was to preserve pathogenic germs on the premises as long as possible. The patients were placed where there was hardly any light or ventilation, but a vast amount of space was wasted in building a monumental staircase, a magnificent chapel, and luxurious saloons and rooms for the wealthy pupils of the establishment. As a result it was found very difficult to successfully treat any of the patients and those who came in with slight complaints soon contracted much more serious illnesses as a consequence of their sojourn in such an unwholesome place. Nor did the mischief end here, for these diseases soon spread to the pupils and to others. There were no means of isolating infectious diseases and, the building being four storeys high, disease spread from floor to floor. In 1822 this edifice became the Imperial College and the birthplace of the Central University. In 1844 its use was restricted solely to that of the military hospital for Madrid. These changes did not alter the insanitary condition of the edifice, and even in 1885, when the cholera broke out in Madrid, the state of the military hospital was most unsatisfactory. Efforts were then made to render the hospital more wholesome. New doors were opened, extra windows were cut in the walls, partitions were erected for purposes of separation and isolation, and the patients had to lie close to the fresh whitewash and the moist mortar of new walls.

There had been some proposals made to build a new military hospital, but the chief argument was not based on the unwholesome character of the existing hospital: it rested on the fact that the building was old and likely to fall to pieces. These proposals date back to the year 1873. A commission was appointed and it suggested the construction of a new hospital with 300 beds and also indicated means by which the old hospital could be improved. Five years later there was another project for building a new hospital with 1000 beds. The military, medical, and engineering departments worked together and other schemes were propounded, notably one for the building of two hospitals as far apart as possible. Thus projects and reports accumulated, but nothing was done. In the meanwhile the old hospital showed signs of decay which became more evident every day. In 1887 it really seemed as if the crisis was at hand and to facilitate its solution the municipality of the outlying district of Lower Carabanchel offered, as a free gift to the Ministry of War, a large piece of land for the erection of a new hospital. This gift was nominally accepted, but still nothing was done. Discussions continued and there is no knowing how long they might have lasted but for an accidental circumstance which fortunately clinched the matter. Early in February, 1889, a fire broke out in the old hospital, destroying one of the wards, and the municipality of Carabanchel seized this opportunity of renewing its offer, which this time was definitely accepted. By a Ministerial order of May 23rd, 1889, measures were taken in view of the early construction of a new military hospital at Carabanchel.

The land offered is situated on a slope which is 40 metres above the lower levels of Madrid and 680 metres above the Mediterranean Sea at Alicante. The surface measurement of the ground is equal to 84,123 square metres. Close at hand there are two triangular plots of land measuring together 17,074 square metres, which it is proposed to purchase as a reserve in case of epidemic, where temporary huts or pavilions could be built to receive and isolate patients. The distance from the centre of Madrid to the new military hospital is 5 kilometres and an electric tramway will connect the hospital with the town. At present the only means of communication is by carriage, ambulance waggons, or the ordinary tramway drawn by mules which goes to the village of Carabanchel, whence the hospital can be reached after a few minutes' walk. The soil of the hospital grounds consists of a mixture of sand and clay, the latter becoming more and more compact deeper down till it finally constitutes an impermeable stratum.

After duly levelling the soil it was decided to build pavilions in a N.E. to S.W. direction, which suits best the climate of Madrid. The height of the buildings, in proportion to the width of the open spaces or streets, is as 1 to 1·748. Thus the highest pavilion with an upper floor and attic reaches a height of 13·77 metres. The pavilion opposite is at a distance of 21·88 metres. In all, 24 pavilions or separate blocks of buildings were erected and an effort has been made so to place them as to facilitate the services and yet not to mar the general aspect of the hospital. Though the land is in the shape of a somewhat irregular hexagon there is space enough to carry out a fixed design. The site is surrounded by an avenue which constitutes a promenade and also affords means of removing corpses without passing through the hospital grounds.

The principal entrance faces a garden which is spread out in front of the block of buildings devoted to the general directorship of the hospital. Here I was most courteously received and permitted to inspect the private rooms of the medical staff, their library, and on the ground-floor the offices where the entry and departure of patients and all other details are registered. Immediately behind this block there is a building which in itself constitutes a complete hospital. This is reserved exclusively for officers. There are quarters for two generals, each consisting of a small study or sitting-room, a bed-room, dressing-room, bath-room, and private lavatory. There are also 2 special apartments for colonels and 14 beds for officers of inferior rank. There is a small operating-room, a kitchen, and rooms for the medical staff and nurses attending the officers. Thus the officers have under the one roof all they need and their quarters constitute a small self-contained hospital, which is quite independent of the general hospital intended for the rank and file of the army. Behind these two buildings, the administrative offices, and the officers' quarters there is a vast garden with a chapel in the centre. On each side of this garden are three large pavilions. Four of these six pavilions have an upper floor and they are intended to receive medical cases. Two pavilions with no upper floor receive the surgical cases and are connected by a covered way with a separate building which contains a model operating-room.

Each pavilion has a large basement 2·50 metres high which is not utilised for any other purpose than that of warming and ventilating the ward above and of protecting it from damp. On the medical side each of the four pavilions consists of four wards, two on each floor. These wards have a surface measurement of 179 square metres, contain only sixteen beds, and this, taken with the height of the ward, gives 50·35 cubic metres of air-space to each patient, which is rather more than the amount required in the most recent model hospitals. At the outer extremity of these wards are situated the bath-rooms and the closets. These latter are on the flush-out system, and the flush, which I tested, is efficient. The drain-pipes and waste-water pipes are carefully trapped. The closets are far enough away for a current of air to be established between them and the wards. At the other end of the wards, or the centre of the pavilion, are two rooms where patients may be isolated. Here also are the rooms for the nurses, attendants, &c. In these smaller rooms, as in the wards, the angles have been rounded off to prevent the accumulation of dust, and the ceilings are arched so as to facilitate the evacuation of the vitiated air. There is a horizontal ventilating-shaft along the apex of the ceiling leading the vitiated air to a vertical shaft which communicates with a Boyle ventilator on the roof. For the inlet there are Tobin

tubes. A boiler placed in the basement provides a slight pressure of steam, which circulates in coils disposed so as to warm every part of the building.

The surgical wards only differ from the medical wards in so far that there is no second floor and in the fact that each ward has a little operating-room of its own. Instead of dressing wounds in the common ward and before the other patients this is done privately in these small operating-rooms. For serious operations a magnificent operating-room has been built, consisting of a rotunda of iron and glass which joins the roof by a parabolic segment. A large portion of the roof is of glass. The operating-room measures 85 square metres, so that if necessary several operations can be performed at the same time. Needless to say that the operating table, of nickel and plate glass, the cases for dressings, the trays for instruments, in fact, all the furniture, are made according to the most recent aseptic principles. The operation room, in spite of its loftiness, its size, and the fact that a portion of its walls are of glass, is so well provided with warming apparatus that the temperature can be raised to 38° C. The whole can be washed out with a fire hose. Adjoining and forming part of the same building there is a retiring room for the surgeons, a chamber for administering chloroform, a bath-room, and "arsenal" (so-called) for the surgical instruments, and a room where numerous coloured anatomical drawings of operations, &c., are kept for reference. The splendid light which the rotunda gives and all the surrounding conveniences have been carefully thought out and the Madrid military hospital can therefore be said to possess one of the best operating-rooms which have ever been constructed. In size and convenience it surpasses the operating-room of the Mahommedan Women's Hospital at Constantinople.

The four medical and the two surgical pavilions constitute the main portion of the hospital where the greatest number of patients will be found, but there is also a pavilion for soldiers under arrest. Here the windows have iron bars and there are other indications that this is a prison hospital. Then there is a separate building for the insane, surrounded by high railings with space within for the patients to take a little exercise. Right at the back, separated from the rest of the hospital, there are three pavilions reserved for infectious cases. The only difference between these and the other pavilions is that the wards contain only 12 instead of 16 beds. Adjoining is a building where the washing and the cooking can be done, not only for the patients in the pavilions set aside for infectious cases, but also for those who may in the event of an epidemic occupy the huts or tents which would be put up on the surrounding vacant ground. For the rest of the hospital there is a much larger laundry establishment with the most recent labour-saving machinery. A disinfecting stove is attached to this laundry so that linen, &c., can be sterilised before it is given over to the washerwomen. Another large building contains workrooms for the repairing of linen, vast warehouses for the storing of linen, blankets, &c. The cupboards are some 5 ft. deep; they open at the back and in front and there are holes in the door to permit a free passage of air. But many of these cupboards were empty, their contents had been sent to Cuba. In the basement of this building there is a vast bakery, where all the bread consumed in the hospital is made, and the pharmacy occupies the ground floor. In the kitchen, with the aid of steam, meals for 500 persons can be prepared and there are coke stoves as well in case the supply of steam should accidentally fail or in the event of a larger number of meals being required. Of course, there are vast store rooms for provisions, cellars for wine, and separate pavilions for the nursing sisters and other attendants.

At first it was proposed to build an anatomical and pathological institute and museum, but subsequently it was found more convenient to construct an institute of military hygiene in the town of Madrid itself. Thus there remains at Carabanchel only a small or branch museum. Nevertheless this contains all that is necessary to aid the professors of surgery and medicine in their work. One of the most remarkable installations is a separate building in which are situated the post-mortem room and the mortuary room. In the basement and connected by a lift with the upper part there is a refrigerating chamber where corpses can be kept for any time in a temperature, if necessary, of 10°C. below zero. As the entire hospital is lighted by electricity there has been no difficulty in providing all that is required for the employment of Roentgen rays whenever necessary.

For all these buildings the foundations are of granite. A stone wall surrounds the basement, which is 1 metre below ground and 1½ metres above ground. From the top of the basement the wall is in brick of the best quality, with an air space in the thickness of the wall so as to regulate the temperature and protect the patients from the risk of sudden changes. The walls are painted inside with the Psicroganoma varnish, manufactured at Turin, and which can be washed with antiseptic solutions without being damaged. In the basement the earth is covered over with compressed tar and asphalt. This forms a good damp-proof course. The sewers which drain the hospital are more than 2 miles in length and have their outfall in the river. They do not join any other system of sewerage. There are gullies to catch the sand and Doulton automatic flushing tanks to wash out the sewers at regular intervals. As the village of Carabanchel has not sufficient water for its own purposes a special canalisation had to be built for a distance of 9 kilometres, and by this means a supply equal to an average of 600 litres per patient per day has been obtained. As, however, the supply is somewhat irregular large tanks had to be constructed so as to keep a reserve ready at hand. Telephonic communication connects all the buildings and the services. The director from his office can speak with anyone in any part of this vast establishment. Finally, it should be noted that, though within easy reach of Madrid and close to the suburb of Carabanchel, the hospital is practically in the country; it stands by itself with cornfields just outside its walls, and the patients therefore enjoy pure air. Though there was much unnecessary delay in the building of this hospital everything that could be done to atone for this loss of time has been achieved. The military authorities of Spain can now boast that they possess a model institution. All who visit this hospital must acknowledge that sanitary progress in Spain is possible, that if a fair opportunity is afforded to the architects of the country they are fully competent to and would soon place Spain on a level with the most advanced nations in respect to public institutions of this description.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

Plague Administration in Bombay.—The Recrudescence in Karachi.—The Outbreak in Calcutta.

AFTER passing through many hands the responsibility for all plague operations in Bombay is now vested in the Municipal Commissioner. A special deputy commissioner will also be appointed. It is proposed in addition to appoint a special medical officer for the charge of plague hospitals and other plague medical duties, who will be deemed to be a joint health officer under the Municipal Act. These changes refer to plague, but there is also a scheme in hand for the re-organisation and extension of the Health Department. The general health of the city is now good and there does not seem to be any very active plague anywhere, although from 10 to 20 cases continue to be reported daily. Relapsing fever still lingers amongst the famine immigrants, but means are being taken to transport them back to their villages. It must be admitted that thousands of houses in the city of Bombay are cleaner than they ever were before, that sanitary supervision has improved, and that perhaps the plague has taught some people cleaner habits. Some ultimate good may thus arise from this disastrous epidemic.

At Karachi the disease is apparently subsiding, but large numbers of the inhabitants have gone out into the jungle. The worst houses have been emptied and the people sent into camps. General cleansing of dirty houses and removal of dangerous rubbish has been extensively carried out. No trouble has been experienced in carrying out the various operations, many of the natives voluntarily reporting their cases and otherwise assisting the authorities. Inoculation has been offered as an alternative to segregation and is now being freely accepted. With regard to the general administration of plague operations the same errors have been made here as elsewhere. Medical men are placed in subordinate positions while military and civil service officials reign supreme. In consequence of the little trust which can be placed in native medical men the duties of some of the

English practitioners have been considerably less technical than those of a sanitary inspector. The same disappointment in the duties allotted to them has been felt by the English medical men nearly everywhere. The rate of mortality from Plague in Karachi has been over 78 per cent. but the type seems now somewhat less virulent.

In Calcutta disturbances have been very numerous although not extensive. It is now found necessary to send a guard of European police with the English medical men on their rounds of district duty as in a recent disturbance Surgeon-Lieutenant-Colonel Laing narrowly escaped being severely handled by a large crowd and only saved himself by the use of his revolver. He had to fire three times, wounding three men, two of whom have since died. Considerable difficulty exists in carrying out any plague measures, but the number of cases so far recorded is only about 62. As plague has been existent in Calcutta for several weeks it is difficult to suppose that the few daily recorded cases represent the correct number. It is most probable that, as in Bombay, many cases are being concealed and that deaths are being returned as from other diseases.

June 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Presentation of the Freedom of the City of Edinburgh to Lord Lister.

ON Wednesday, June 15th, the M'Ewan Hall, Edinburgh, was for the first time utilised for a civic function and a large number of citizens assembled to witness the conferring of the freedom of the city on Lord Wolseley and Lord Lister. The medical and military professions were well represented and the hall was barely large enough to accommodate all those who had secured tickets of admission. Lord Lister appeared in morning dress, while Lord Wolseley was attired in the full-dress uniform of Commander-in-Chief. After the proceedings were opened by the Moderator of the Church of Scotland engaging in prayer the presentation was made first to Lord Wolseley and thereafter to Lord Lister. A minute of the council was read by the Town Clerk, in the course of which it was stated that the freedom of the city had been conferred on Lord Lister "in recognition of their very high admiration of his brilliant and distinguished career as a surgeon and particularly of his discovery and establishment of the antiseptic method of treatment in surgical operations." The Lord Provost, in his speech, referred to the considerations which had lead them to confer the freedom of the city on Lord Lister; he recalled Lord Lister's work in Scotland, beginning with his appointment as house surgeon under Professor Syme. Subsequently to this he became successively assistant surgeon to the Royal Infirmary, Lecturer on Surgery in the Edinburgh Extra-mural School, Professor of Surgery in Glasgow University, and, finally, Professor of Clinical Surgery in the University of Edinburgh. In 1877 he left Edinburgh and went to London, where he occupied the chair of Clinical Surgery in King's College Hospital until 1896. He was now President of the British Association and of the Royal Society of London. It was in Glasgow that Lord Lister commenced his investigations into the cause of the bad results which so often followed surgical operations in those days, with a view to finding a remedy for the evil, and these investigations, continued in Edinburgh, culminated in the institution of "the antiseptic system of surgery," which would always be associated with his name. He had revolutionised the science and practice of surgery and had done more to diminish suffering and prolong life than any other living man. It was surely the highest honour to which any man could wish to attain to be a benefactor of his species. It was the glory of such a discovery as his that its blessings were not confined to his own practice or to his own age; it was for all mankind and for all time. Many suffering ones in all lands had already reaped the fruit of his labours and untold numbers in the years to come would have cause to bless his name. The Lord Provost having in appreciative and eloquent terms indicated the reasons which had led the town council to confer the freedom of the city on Lord Lister then turned and addressed him as follows: "My Lord Lister, we have great pleasure in enrolling you an honorary burgess of this city, with which you have already such close associations. We and our fellow citizens—among whom there are many who are your devoted admirers and disciples and some who are your warm personal friends — welcome you to the highest honour it is in our power to bestow." The Lord Provost, on concluding his speech, handed to Lord Lister the burgess ticket enclosed in a silver casket. Lord Lister, in replying, expressed great gratification at the distinction which had been conferred on him by the city of Edinburgh. He had special reasons for feelings of gratitude to Edinburgh dating from the conclusion of his student days in London, when as a perfect stranger he had come to Edinburgh with a letter of introduction to Professor Syme. In Edinburgh he had spent his best and happiest years. He felt that the honour received by him that day was much enhanced by the fact that it was conferred at the same time on the illustrious head of the British army. The work of the surgeon was in some respects analogous to that of the soldier, although happily the analogy was not now so close as it once had been. He thanked the Lord Provost for his generous reference to the share which he had had in bringing about the latter result, for he regarded all worldly distinctions as nothing in comparison to the hope that he might have been the means of in some degree reducing the sum of human misery. On the conclusion of Lord Lister's speech the Lord Provost according to custom called for three cheers for the young burgesses. These having been heartily given the proceedings terminated.

Social Functions in Honour of Lord Lister.

Lord Lister's presence in Edinburgh was taken advantage of by the President and Fellows of the Royal College of Surgeons of Edinburgh to hold an afternoon reception in his honour at Surgeons' Hall. The invitations bore that it was "to meet the Right Honourable Lord Lister." Mr. Chiene, the President of the College, received the guests, while behind him stood Lord Lister and behind them the Vice-Presidents and other officials. The hall was crowded by members of the profession and their wives from the city and its neighbourhood, while many prominent men from Glasgow were also present.—The Lord Provost gave a dinner in his lordship's honour, while the Residents' Club had arranged their dinner for the following day so that he might be their guest also.

A Chair of Public Health for Edinburgh University.

The University Court of the University of Edinburgh has received the order of Her Majesty in Council declaring her approbation of the ordinance of the Scottish Universities Commissioners that a Professorship of Public Health and Sanitary Science be instituted in the University, the chair to be called "The Bruce and John Usher Chair of Public Health." The court in which the patronage of the chair is vested intends to make the appointment on Monday, July 18th next. The court has learned with great satisfaction that through the munificence of a benefactor of the University a sum sufficient to build and equip a laboratory and class-room in connexion with the chair is to be placed at the disposal of the Court.

June 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The City of Dublin Hospital.

THE sixty-sixth report of this institution has just been issued and includes an account of the new Drummond Wing which was opened in the beginning of the year for the treatment of patients suffering from infectious diseases. The building is completely detached from the main hospital, has a separate entrance, and is officered by a staff of nurses and probationers who reside in it.

A Catholic University in Ireland.

With the object of supporting the claim for a Catholic University in Ireland Mr. Dillon, M.P., intends to apply to the House of Commons for a return giving the names and numbers of matriculated students of the Royal University of Ireland who, in the years 1893-94-95-96-97 respectively, passed any of the University examinations in arts, medicine, or law from any of the Queen's Colleges, or from any other college in which the Fellows of the University

are required by the Senate to teach or from any college or medical school for men or women from which a total number of at least twelve matriculated students have presented themselves for the examination of the University during the year; the return to include also a list of the honours obtained and other matters connected with the Royal University of Ireland and its teaching staff.

The late Mr. O'Grady.

The oil paintings and library of the late Mr. O'Grady of Merrion-square, Dublin, are about to be sold by auction on the 22nd inst. and following day.

A Medical Coroner for Limavady.

The election of a coroner for Limavady took place at that town on June 16th. Both the candidates were medical men, Dr. B. Lane and Mr. J. C. Lynd. The franchise was the ordinary Parliamentary, but the system of voting was open and both candidates had conducting agents and a large staff of assistants. The candidates in these elections are allowed to use vehicles freely and to pay the expenses of electors. The contest was very keen and special trains were run on the railway lines to and from Limavady to carry voters. The following was the result of the poll, as declared on June 18th: Dr. Lane, 1141; Mr. Lynd, 1035; so that the former was elected by a majority of 106.

June 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Ophiasis of Celsus.

AT the meeting of the Society of Dermatology and Syphilography held on June 9th M. Sabouraud drew attention to "ophiasis," an alopecia peculiar to children. This disease makes its appearance almost invariably during early childhood, and is characterised by an alopecial spot situated either in the middle line of the occiput or by two lateral and symmetrical patches. It spreads along the edges of the hairy scalp, which it surrounds with a bald border some two or three fingers in breadth. It may occasionally commence at the forehead or the temples. The disease spreads irregularly, leaving isolated patches of hair intact upon the surface of the bald places. Sometimes total baldness results and the disease usually lasts eighteen months. Spontaneous recovery results at puberty in the vast majority of cases, but the disease sometimes returns in adult life or the recovery may be incomplete with persistence of the original bald patch upon the occiput. The hairs along the edge of the diseased area are atrophied and show a series of knobs and constrictions; they break at the level of a knob and this fracture leaves the broken end of the hair in a brush-like form. No specific microbe has been discovered and the symmetrical disposition of the patches points rather to a nervous origin. It is not contagious and an hereditary tendency has been noticed in only a very few cases. The best treatment is by using revulsives and vesicating agents, but epilation of the hairs at the edges of the diseased patches is of no good. The complaint has nothing in common with the seborrhœic alopecia of Bateman, for this latter is never seen before puberty, is contagious, occurs in round patches indifferently situated and is always accompanied by its proper microbe. The infantile form, however, was described long ago by Celsus in his usual masterly fashion and without doubt the best name for it is the old one of "ophiasis."

Transport of the Sick and Insane.

The Municipal Council has just been discussing the following proposals which were laid before it by M. Chassaigne Goyon: an ambulance carriage is to be kept in every one of the fourteen Paris hospitals, which are connected by telephone with the *mairies*, the police and ambulance stations, the look-out station, the principal druggists' shops, the chief factories, and the large builders' and engineers' yards. This carriage shall be ready to start at any moment of the day or night and shall be accompanied by one or two stretcher-bearers taken from the staff of the hospital, to whom a special grant shall be given for every attendance. A special course in first aid to those suddenly taken ill in the street or who have met with an accident shall be organised by the administration. A certain number of *gardiens de la paix* in every *arrondissement* shall be told off to undergo this course. Their duty shall be to remove the sick or wounded by means of stretchers, supposing that the ambulance carriage shall be detained, to the nearest hospital, such stretchers being taken from the police-station. A special grant is allowed for every journey. A closed-in vehicle fitted for the transport of furious maniacs is to be kept at the infirmary of the Police Prefecture. It is to be at the disposal of the police commissaries whenever they shall think it necessary and it can be summoned by telephone. Two attendants skilled in the management of dangerous lunatics will accompany this vehicle and will have with them a strait jacket.

The Diphtheria of Wounds.

At the meeting of the Biological Society held on June 11th M. Maurel and M. Rispail reminded the society that the older surgeons applied the name of diphtheria or *pourriture d'hôpital* to certain pseudo-membranous exudations occurring on the surface of wounds and accompanied by similar false membranes on the tonsils. M. Maurel and M. Rispail recently came across an analogous case in a patient who had undergone the radical cure of hernia. On the day of the operation the temperature rose to 39° C. (102·2° F.); the day after the operation it reached 40° C. (104° F.). The wound was opened up and found to be suppurating freely. Tubes of serum sown with some of the pus collected from the wound rapidly became filled with a bacillus presenting all the characteristics of the bacillus of diphtheria. When inoculated into a guinea-pig it killed it in forty-eight hours with the characteristic lesions. Bouillon cultures filtered through porcelain gave a not very active toxin, for it did not kill a guinea-pig in a smaller dose than $\frac{1}{10}$ c.c. A guinea-pig which had been immunised with Roux's serum and injected with $\frac{1}{2}$ c.c. of this toxin remained unaffected. The patient was treated with both the serum of Roux and the serum of Marmorek and the wound rapidly improved. Cicatrisation occurred at the normal rate and the temperature fell. In the false membranes, which were examined at different times, the bacillus of diphtheria was invariably found. It is considered, therefore, that the Klebs-Löffler bacillus is one of the pathogenic agents in the production of *pourriture d'hôpital*.

Radiography of Arteries and of Extra-uterine Pregnancy.

At the same meeting of the Biological Society M. Turbert showed some radiographs, the first of which, taken from a dead body, showed clearly the radial and ulnar arteries, and the course of these arteries could be followed even where their radiographic shadow was superimposed upon that of the bone. The vessels had not been injected. The second plate was taken from the foot of an old man. The anterior tibial artery could easily be seen and followed throughout the greater part of its course. These plates are the first where the shadow of the uninjected artery has been obtained. M. Turbert also obtained some months ago a radiograph of a young woman, about twenty-five years of age, who had been sent to the hospital with a diagnosis of extra-uterine pregnancy. He was able to confirm this diagnosis in opposition to the opinion of some of his colleagues, who considered that she was suffering from either a hæmatocele or a growth. The radiograph showed clearly the presence of a fœtus of about five or six months, and the head and body and lower limbs were clearly shown upon the plate.

June 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Syphilitic Inoculation in Medical Men.

ONE of the dangers incidental to medical practice formed the subject of a paper read a short time ago before the Medical Society of Bonn by Dr. Brandis, formerly a well-known practitioner in Aix-la-Chapelle. Among his patients in that city there were a considerable number of medical men who had contracted syphilis either while performing surgical operations or while making vaginal or rectal examinations in syphilitic cases. In ten instances they contracted the disease in its most malignant form. The place of infection was invariably the finger-tip and it was remarkable that the disease, after an incubation period of four weeks, developed in an exceedingly rapid way. The ulceration on the finger became phagedænic and suppuration of the axillary glands, deep ulceration of the palate or the skin, and necrosis of

the bones quickly ensued. There was also fever of a septic character which sometimes lasted several months. Notwithstanding these serious symptoms complete recovery followed mercury and iodine treatment. In every instance the diagnosis was made very late, which appeared rather strange in view of the fact that the patients were medical men and had consulted practitioners of recognised standing. The diagnosis, indeed, was far from easy, for the primary ulcers on the finger as a rule did not show the characteristic induration, and the patients themselves were slow to acknowledge the possibility of syphilitic infection, being generally of opinion that their symptoms were due to some septic or tuberculous inoculation to which they had also been exposed. In this way it happened that anti-syphilitic treatment was commenced rather late. One of these sufferers went to Aix-la-Chapelle after having made a journey to the Cape of Good Hope by the advice of his medical attendant, the effect of which was that he became worse instead of better; another had been sent to an Alpine health resort; and a third, who had become seriously ill during the journey home, happened to stop at Aix-la-Chapelle, where the nature of his illness was at last ascertained. Four of the ten patients are still alive at periods varying from five to twenty-five years after the infection. Five died either from enteric fever, pneumonia, or pulmonary tuberculosis; and one who had waited an exceedingly long time before consenting to anti-syphilitic treatment died from a cerebral affection which was reported to be due to arteriosclerosis. Dr. Brandis concluded from his experiences that medical men ought to be very careful when performing operations and making examinations in cases which are either known or suspected to be syphilitic; he himself had always used gloves at such times. He also pointed out the advantage of early diagnosis, especially in serious cases, where anti-syphilitic treatment ought to be commenced as soon as possible. Fever and prostration should not be regarded as a contra-indication of mercurial treatment.

June 20th.

Obituary.

GEORGE VERNON BLUNT, M.D. ABERD., M.R.C.S. ENG.

DR. BLUNT died at Birmingham on June 10th, in the seventy-sixth year of his age. The son of Alderman Blunt, who was for some years a member of the Birmingham Town Council, Dr. Blunt never took any part in public affairs, nor was he connected with any of the hospitals or public institutions. Possibly a defect in one limb which caused him to be lame and made walking uncomfortable and painful accounted for this. Still he exercised an important influence and possessed a wide reputation, more especially in medico-legal cases and in nervous disorders. He was educated at Queen's College and did not take any qualification until 1859, when he became a Member of the Royal College of Surgeons of England and M.D. of Aberdeen. His professional attendance upon the late Cardinal Newman and the confidence he possessed among the authorities of the Oratory at Edgbaston gave him a large *clientèle* in that direction. Shrewd and sagacious as an observer of human nature and character, reticent, and exclusive in his friendships, Dr. Blunt never took any prominent part in professional amenities or mixed with his brethren in any movements of a corporate or private kind. His life was a quiet and uneventful one, pursued with a reserve which was appreciated by those who consulted him but which did not tend to make his abilities so well known or so markedly advantageous to the medical profession as they otherwise might have been.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Levieux, honorary medical officer of the Bordeaux Hospital.—Professor F. J. Trier, a Copenhagen physician.—Dr. David W. Yandell, Professor of Clinical Surgery in the University of Louisville.—Dr. Charles Van Everbroeck, late President of the Medical *Cercle* of Turnhout, Belgium. He was very active in attending the wounded in the war of 1870 and many French and German soldiers have cause to remember him with gratitude.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having previously passed the necessary examinations, and having now conformed to the by-laws and regulations, have been admitted Members of the College:—

John Hamilton Crawford, M.B., B.S. Edin., Edinburgh University; Robert Henry Strong, M.B., B.S. Melb., Melbourne University and Kings College Hospital.

UNIVERSITY OF CAMBRIDGE.—At the congregation on June 16th the following degrees in medicine and surgery were conferred:—

M.D.—Edward Henry Douty, King's; Hugh Kerr Anderson, Caius; John Brian Christopherson, Caius; Joshua James Taylor, Emmanuel.

M.B. and B.C.—John Beuzeville Byles, King's; Henry Goodridge Deller, Trinity; John Edward Sandilands, Trinity; Frederick James Watson, Trinity; Edward Ernest Prest, St. John's; Percy William George Sargent, St. John's; Henry Stringfellow Pendlebury, Pembroke; Thomas Betteridge, Caius; William Ernest Heilborn, Caius; Arthur Cyril Ransome, Caius; John Lamplugh Kirk, Christ's; Clement White, Christ's.

M.B. only.—Henry Ernest May, Clare; Frederick André Mills, Clare.

SOCIETY OF APOTHECARIES OF LONDON.—In June the following candidates passed in the subjects indicated:—

Surgery.—J. C. Bell, Guy's Hospital; F. Elias, London Hospital; and J. Prentice, Liverpool.

Medicine.—J. S. Barnes, St. Thomas's Hospital; P. D'E. Burrell, St. George's Hospital; F. Ede, Royal Free Hospital; and J. M. Edwards (Section I.), and J. W. King (Section I. and II.); Charing-cross Hospital.

Forensic Medicine.—J. S. Barnes, St. Thomas's Hospital; P. D'E. Burrell, St. George's Hospital; F. Ede, Royal Free Hospital; J. M. Edwards, Charing-cross Hospital; D. Hamilton, Royal Free Hospital; and J. W. King, Charing-cross Hospital.

Midwifery.—C. J. Barnes, King's College Hospital; W. T. Davies, London Hospital; F. Ede and D. Hamilton, Royal Free Hospital; and J. W. King, Charing-cross Hospital.

The diploma of the Society was granted to the following candidates: J. S. Barnes, J. C. Bell, and J. Prentice.

FOREIGN UNIVERSITY INTELLIGENCE. — *Bonn:* Dr. H. Graff has been recognised as *privat-docent* of Surgery, and Dr. Walter Kruse has been promoted to an Extraordinary Professorship of Hygiene.—*Bologna:* Dr. Agatino Barbera has been recognised as *privat-docent* of Experimental Physiology, and Dr. Ettore Bidone as *privat-docent* in Midwifery and Gynæcology.—*Bordeaux:* Dr. Chavannaz has been appointed after a public competition *professeur agrégé* of Surgery, and Dr. Fieux has been similarly appointed *professeur agrégé* of Midwifery.—*Göttingen:* Dr. Reichenbach has been recognised as *privat-docent* of Hygiene.—*Innsbruck:* Dr. Adolf Posselt has been recognised as *privat-docent* of the Diagnosis and Therapeutics of Internal Diseases.—*Iurieff (Dorpat):* Dr. Chirvinski, Extraordinary Professor of Pharmacology, has been promoted to the Ordinary Professoriat.—*Lille:* Dr. Cousin has been appointed after public competition *professeur agrégé* of Anatomy, and Dr. Gaudier has been appointed after public competition *professeur agrégé* of Surgery.—*Lyons:* Dr. Nové-Josserand and Dr. Bérard have been appointed after public competition *professeurs agrégés* of Surgery.—*Montpellier:* Dr. Imbert has been appointed after public competition *professeur agrégé* of Surgery.—*Nancy:* Dr. Bouin has been appointed after public competition, *professeur agrégé* of Anatomy, and Dr. P. André has been appointed after public competition *professeur agrégé* of Surgery. — *Naples:* Dr. Angelo Lamari has been recognised as *privat-docent* of Medical Pathology; Dr. Carmelo Bruni as *privat-docent* of Surgical Pathology; Dr. Francesco Del Greco as *privat-docent* of Psychiatry; and Dr. Andrea Baroni as *privat-docent* of Midwifery and Gynæcology.—*Paris:* Dr. Launois has been appointed after public competition *professeur agrégé* of Anatomy; Dr. Langlois has been similarly appointed *professeur agrégé* of Physiology; and Dr. Legueu, Dr. Mauclaire, and Dr. Faure have been appointed after public competition *professeurs agrégés* of Surgery. Dr. Lepage and Dr. Wallich have been similarly appointed *professeurs agrégés* of Midwifery.—*Philadelphia (Medico-Chirurgical College):* Dr. E. R. Kirby has been appointed Professor of Genito-Urinary Diseases.—*Rome:* Dr. Gelosio Chiucini has been recognised as *privat-docent* of Laryngology; Dr. Roberto Magnanimi as *privat-docent* of Forensic Medicine; Dr. Giuseppe Pacinotti as *privat-docent* of Surgical Pathology; and Dr. Geronzi as *privat-docent* of Laryngology.—*Toulouse:* Dr. Bardier has

been appointed after public competition *professeur agrégé* of Physiology, and Dr. Cestan and Dr. Banby have been appointed after public competition *professeurs agrégés* of Surgery. Dr. Andebert has been similarly appointed *professeur agrégé* of Midwifery and Dr. Verdun *professeur agrégé* of Natural History.—*Tübingen:* Dr. Hofmeister has been promoted to an Extraordinary Professorship of Surgery.—*Vienna:* Dr. Moritz Heitler and Dr. R. von Limbeck, *privat-docenten* of Internal Medicine, have been granted the title of Professor; Dr. L. von Frankl-Hochwart, *privat-docent* of Neurology, Dr. M. von Zeissl, *privat-docent* of Dermatology, Dr. A. Felsenreich, *privat-docent* of Midwifery and Gynæcology, and Dr. F. Frühwald, *privat-docent* of Children's Diseases, have also been granted the title of Professor.—*Warsaw:* Dr. Kolosoff has been promoted to an Ordinary Professorship of Histology and Embryology. Dr. Ushinski has been promoted to an Ordinary Professorship of General Pathology.

DEATH OF MR. JOHN JOHNSTONE OF LIVERPOOL.—The death of Mr. John Johnstone, L.R.C.P., L.R.C.S. Edin., occurred on June 14th under very distressing circumstances, he having been found dead in his consulting-room on the morning of that day. In close proximity to the couch upon which the deceased gentleman was found lying was an empty bottle which had contained hydrocyanic acid. The medical evidence at the inquest was to the effect that death had resulted from poisoning by prussic acid, which had probably been mistaken for a solution of morphia which the deceased had been in the habit of administering to himself to allay the pain caused by the passage of gall-stones. A verdict of "Death through misadventure" was returned by the coroner's jury.

PRESENTATIONS TO MEDICAL MEN.—On the distribution of certificates and badges to the St. John Ambulance Class of Abersychan and Talywain, Mon., on May 26th, Mr. John W. Mulligan, M.D. Irel., of Abersychan, was the recipient of a silver-mounted driving whip as a recognition of his instructions to the class.—Mr. P. J. Finigan, L.R.C.P., L.R.C.S. Irel., has been presented with an address and service of plate by his friends in the dispensary district of Carlingford Cooley, county Meath, and neighbourhood, on the occasion of his marriage.—On June 2nd, at a meeting of the ambulance class for Braemar and district held in the Victoria Hall, Auchindryne, Mr. James Noble, M.D. Aberd., of Braemar, the lecturer, was presented with a driving whip and also with a travelling rug having Macduff tartan on one side and Farquharson on the other, thus representing the two estates to which the class belonged.—On June 4th the members of the Curzon-street division of the St. John Ambulance Association, Birmingham, presented Mr. W. A. Loxton, F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., of Birmingham, the honorary instructor of the class, with a stationery cabinet, as a mark of respect.—Mr. D. M. Forbes, L.R.C.P., L.R.C.S. Edin., the medical superintendent of the Shoreditch Infirmary, was the recipient on June 6th of several presents on retiring into private life. On that day, as many of the patients as were able assembled in the open air and presented him with a "literary machine" (reading-desk, lamp, and table combined). A patient, Thomas Landon, who has been under Mr. Forbes's care for many years, handed to him a gilt framed testimonial, on which the good-will of the patients was expressed in the form of an acrostic. Later in the evening the nursing staff and officers assembled at the Nurses' Home to wish him God-speed and to present him with a silver salver and tea and coffee service in recognition of the good work he had successfully carried on at the infirmary for the past thirty years.—Mr. John E. H. Davies, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., of Wrexham, North Wales, has been presented with a silver-mounted walking-stick, suitably engraved, by the members of the Great Western Railway class of the St. John Ambulance Class as a mark of appreciation of his services as honorary lecturer.—Mr. M. Bryson, L.F.P.S. Glasg., of York, was presented, on June 16th, by the members of the Midland Railway Engineer's Ambulance Class at Denaby, in connexion with the St. John Ambulance Association, with a case of razors, as a token of appreciation for his gratuitous lectures for the past four years.—Mr. R. Hensleigh Walter, M.B., C.M. Edin., of Stoke-under-Ham, Somerset, has been the recipient from the members of the Tintinhull Medical Club, on the occasion of his marriage, of a handsome entrée dish and preserve stand.

THE North London Hospital for Consumption has received a donation of £1000 from "R. S. P.," per Canon Fleming, the rector of St. Michael's, Chester-square, to endow a bed in the hospital.

TYPHOID FEVER AT CAMBORNE.—The Camborne District Council have instructed their clerk to write to the water company informing them that the Council hope such compensation will be paid as will meet the extraordinary expenditure incurred.

AN EXPENSIVE CASE OF SMALL-POX.—At the meeting of the Bideford board of guardians held on June 14th it was stated that a recent case of small-pox at Appledore had cost the Northam Council £94 and there was more to pay.

MR. CHARLES GRIER, M.R.C.S., died at St. Ives, Cornwall, on June 11th. For many years the deceased had an extensive practice in Canada and about eight years ago went to St. Ives, where he soon made many friends. Mr. Grier, who was seventy-six years of age at the time of his death, leaves four sons, one of whom is a member of the profession. Mr. Grier was very popular at St. Ives and much regret is felt there at his death.

ASSAULT ON A MEDICAL MAN.—Recently at the Cheltenham police-court two men were charged with assaulting Mr. J. P. Bevan, L.R.C.P. Lond., M.R.C.S. Eng., and Mr. Brown. On June 4th one of the defendants having struck a woman down Mr. Bevan, who was passing along the street, stopped to see if he could be of any assistance, whereupon he received a blow on the lower jaw which knocked him down, and whilst on the ground he was kicked. Mr. Brown went to his assistance and he also was knocked down. One of the prisoners was sentenced to six weeks' imprisonment with hard labour and the other was fined 28*s*.

A NEW FORM OF TESTIMONIAL.—We are glad to be able to report an interesting variant in the matter of testimonials. On June 8th a meeting was held at the Castle, Ryde, for the purpose of presenting to Dr. A. G. Davey, the senior medical officer of the Isle of Wight Infirmary, a cheque for £1000 to endow a cot in the children's ward of that institution. The following inscription is to be placed upon the cot: "The Alexander Davey Cot.—This cot was named and endowed in perpetuity by the friends of Alexander George Davey, M.D., in recognition of his great professional skill and of the devotion and sympathy with which he has ever sought to alleviate pain and sickness. 1898." The presentation was made by Colonel Cradock, J.P., who gave a short history of the inception of the scheme and alluded to the fact that it had been intended to make the presentation at the end of February. It was, however, found necessary to postpone the function and therefore they had waited until that very appropriate day, Dr. Davey's birthday. Dr. Davey, in reply, thanked all his friends in the warmest way. No merely personal gift could, he said, have given him such pleasure. He had been thirty years on the staff of the hospital and the one thing he wanted now was to live long enough to see the hospital take its proper place as a county hospital and as a training school for nurses. The rector of Whippingham, on behalf of those living outside the borough of Ryde, wished to congratulate Dr. Davey, to wish him "many happy returns of the day," and to hope that he might be spared to them for many years to come. The proceedings terminated with a vote of thanks to Colonel Cradock and the members of the committee.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Habitual Inebriates Bill.

WHEN this measure goes before the Grand Committee on Law Mr. Hobhouse proposes to move the insertion of words enabling county and town councils, singly or in combination, to contribute to the establishment or maintenance of retreats for inebriates.

Lunacy Bill.

On Tuesday, June 21st, the Lunacy Bill passed the Standing Committee of the House of Lords. Practically the only point in the Bill discussed was the provision requiring local authorities to grant

superannuation allowances to their officers and servants in lunatic asylums, and though an amendment was proposed, it received very little support.

HOUSE OF COMMONS.

THURSDAY, JUNE 16TH.

The Inspection of Match Factories.

Mr. Tennant asked the Home Secretary whether he was aware that in match factories provisions for the health of the workers largely turn upon questions involving structural alterations which by the regulations are *ultra vires* for the women inspectors; whether, when visiting a match factory, a woman inspector has no direct power under Special Rules Nos. 2 and 3 to require the separation of the dangerous from the non-dangerous departments by the erection of a door or an addition to washing appliances by the erection of a basin and tap; and whether such matters must be referred by her to the district inspector.—Sir M. White Ridley replied: Structural questions are undoubtedly very important. Any such questions, other than questions of sanitary accommodation for females, which appear to the lady inspector to require attention are referred by her to the district inspector. It then becomes his duty to take immediate steps to secure the enforcement of the law or of the special rules, to inform the lady inspector of the result, and to forward to headquarters her communication, with a statement of the steps he has taken upon it. This practice applies to all factories, whether special rules are in force or not, and the matters mentioned in the question would in the ordinary course be dealt with in this way.

FRIDAY, JUNE 17TH.

The Army Medical Service.

Captain Norton asked the Under-Secretary of State for War if he could state whether there were sufficient army medical officers in the United Kingdom to meet the full requirements of two army corps upon a war footing without denuding the military medical establishments of the United Kingdom of their entire executive staff and thus disorganising the Army Medical Service both at home and abroad.—Mr. Powell Williams, replying for Mr. Brodrick, said that the Army Medical Staff when at its full strength was fully adequate to meet the requirements of two army corps. Recently the staff had not been at full strength, but in case of general mobilisation there was a reserve of 268 medical officers who could be called upon.

Queen Charlotte's Hospital and Vaccination.

Mr. Channing asked the President of the Local Government Board whether his attention had been called to the case of Elsie Boon, of 116, Euston-road, who was vaccinated when only five days old at Queen Charlotte's Hospital; was he aware that the child's arm was in so serious a state that it had to be treated by Dr. Thompson at the parish dispensary in Clarendon-square, St. Pancras, for the results of vaccination, a few days after leaving the hospital; whether the Local Government Board had given its assent to the conditions under which mothers are admitted to Queen Charlotte's Hospital, which compel the child to be vaccinated within fourteen days of birth; whether he was aware that the average number of children born in the hospital is about 1100; whether the fees payable for the successful vaccination of these children go to the medical staff or to the funds of the hospital; and whether, in the Bill now before Parliament, he would introduce words forbidding compulsory vaccination in hospitals immediately after birth and placing such children on the same footing as other children for whom the period of twelve months is to be allowed.—Mr. Chaplin replied: I have made inquiry as to the case referred to. The child was vaccinated on the sixth day after birth at Queen Charlotte's Hospital and left the hospital quite healthy eight days afterwards. The mother took the child to a tenement house and some five days afterwards paid a single visit to the district medical officer in consequence of an extension of the ordinary areola around the vesicles. I am informed that the case never was serious, that the excess of redness rapidly disappeared and that the child became and remains perfectly well. The conditions under which mothers are admitted to the hospital in question are not subject to the jurisdiction of the board. But I am informed that although vaccination is referred to in a notice as a condition of admission to the hospital, no mother who objects to the vaccination of her child before leaving the hospital is ever compelled to have it vaccinated. The average number of children born at the hospital during the last three years is as stated. The fees for vaccination are received by a member of the hospital staff who acts as public vaccinator. The hon. Member has given notice of an amendment to the Vaccination Bill for which, I think, there is a good deal to be said, to the effect suggested by him, and my views will be stated when the amendment is moved.

The Administration of the Food and Drugs Act.

General Laurie asked the President of the Local Government Board whether he had received a communication from the vestry of Paddington relative to the failure to obtain a conviction against the proprietor of certain stores for selling as coffee a mixture found on analysis to contain 50 per cent. of chicory, and as butter a mixture containing 88 per cent. of margarine; whether he had been informed that the summonses were served by the warrant officer of the Marylebone Police-court, leaving them at the shop, and that the magistrate decided that this was not a service in accordance with Section 20 of the Sale of Food and Drugs Act, 1875, and Section 10 of the Amendment Act, 1879; whether he had been informed it had been ascertained that the defendant has no address in this country other than his stores in various districts and that the same difficulty was experienced in 1896 in connexion with a purchase of coffee from the same defendant, in the same shop, and which coffee was found to be adulterated with 60 per cent. of chicory; and whether he would make such provision in the new Bill it was proposed to introduce or would introduce such amendments in the present Act as would enable local authorities who are anxious to carry out the law to enforce it against those who so persistently sell adulterated food products.—Mr. Chaplin replied: I have received a communication from the Vestry of Paddington containing the statements referred to in the question of my hon. friend and I am considering what amendments of the law may be desirable in view of the circumstances.

The Crypt of St. George the Martyr, Southwark.

Sir Charles Cameron asked the Home Secretary whether he was yet in a position to describe the purport of the Inspector of Burials' report upon the state of matters alleged to exist in the church and crypt of St. George the Martyr, Southwark, and whether he proposed to take any action in connexion with it.—Sir M. White Ridley said, in reply, that the report disclosed a state of affairs which he was satisfied constituted a sanitary danger and he had issued a notice to the churchwardens under Section 23 of the Burial Act, 1857, calling upon them to remove the human remains from the crypt.

Lead Poisoning in the Potteries.

Mr. Tennant asked the Home Secretary whether his attention had been called to the report of the adjourned inquest upon the body of Mary Ann Poole, supposed to have died from lead-poisoning; whether, in view of the very unsatisfactory nature of the medical evidence, he would direct that the body be exhumed and a chemical analysis be conducted; and whether he was now prepared to lay before the House the report of the certifying surgeon in this case.—Sir M. White Ridley replied: My attention has been called to this case. I regret that the medical evidence was inconclusive as to the origin of the epilepsy which was the immediate cause of death. Exhumation is, however, I fear out of the question. This course is never taken except where there is a suspicion of foul play or in very special cases at the request of relatives. I have received the report of the certifying surgeon. Like other reports of the kind it contains confidential information which it would be detrimental to make public. The facts bearing on the cause of death appear to have fully come out at the inquest, at which the factory inspector of the district was present. On that point the report throws no fresh light.—Mr. Woodall asked whether it was not stated in the course of the medical evidence that there were no symptoms in this case which were not attributable to other causes than lead poisoning.—Sir M. White Ridley said he was aware that there were certain marks in the case of death from epilepsy due to lead poisoning which were not present on this occasion.—Mr. Woodall asked whether the jury did not decline to attribute the death to lead poisoning.—Sir M. White Ridley said that was the case.—Sir Charles Dilke asked whether they did not also decline to take an opposite course.—Sir M. White Ridley said that was so and that was what he meant when he said that the verdict was inconclusive. If there were any object to be gained he would be prepared to make further inquiry, but he saw no object.

MONDAY, JUNE 20TH.

Proposed Factory Legislation.

Sir M. White Ridley introduced a Bill to amend the Factory and Workshops Acts, 1878 to 1895, as to the time of employment of women and young persons in processes necessary for the preservation of perishable materials. He explained that in the main the Bill provided exemptions from the Factory Acts for the fish-curing trade connected with Scotland and for creameries in Ireland, both of which were liable to suffer at certain seasons if work were prohibited. The Bill repealed all existing exemptions and enabled the Secretary of State to grant exemptions by means of orders which were strictly defined and which would be laid before Parliament and made subject to the vote of the House. The measure applied only to the hours of daily labour and affected women and young persons, but in no circumstances children, and its scope was confined to processes where exemption was absolutely necessary to preserve perishable materials from destruction.—Sir Charles Dilke took exception to the Bill as a relaxation of factory legislation and announced that he would oppose it on that and other grounds.

Before the close of the sitting, Sir Charles Dilke gave notice that on the second reading of the Bill he would move: "That this House regrets that it should be proposed to amend the Factory Acts by relaxing the law as to fish curing without dealing at the same time with lead processes in the potteries, with the use of phosphorus, and with the failure of the sweated districts clause."

Dangerous and Injurious Employments.

On the motion of Mr. Hedderwick a Bill was introduced "to extend the provisions of the Workmen's Compensation Act, 1897, to injuries to health and loss of life suffered by persons employed in certain dangerous and injurious occupations."

THE VACCINATION BILL.

PROCEEDINGS IN THE GRAND COMMITTEE.

The Grand Committee of the House of Commons on Law met again on Friday, June 17th, with Sir Henry Campbell Bannerman in the chair, for the consideration of the Vaccination Bill introduced and promoted by the Government.

Discussion was resumed upon the amendment moved by Sir Walter Foster at the previous sitting to insert in Clause 1 of the Bill the following words, viz.:—"2. Where a child is by this Act required to be vaccinated within a certain time (hereinafter called the appointed time) the parent or person having the custody of the child may, not less than two months before the expiration of the appointed time, make in the prescribed form a statutory declaration of conscientious objection to the vaccination of the child, and if the statutory declaration is within seven days after its date delivered to the registrar of births for the district in which the child resides the registrar shall register the same, and shall, if required, deliver to the parent or other person making the declaration a certificate of such registration, and shall also send a copy of the certificate to the public vaccinator of that district, and thereupon an order shall not be made or proceedings taken with reference to the non-vaccination within that appointed time of the child mentioned in the certificate. 3. The parent or other person registering a statutory declaration under this section shall, if he requires a certificate of such registration, pay to the registrar the prescribed fee for a certificate of registration."

Mr. Logan, speaking as one who represented people with conscientious objections to vaccination, appealed to the committee to modify the Bill in the manner suggested by the amendment and by the recommendation of the Royal Commission on Vaccination. In one of his speeches the President of the Local Government Board had spoken of there being only one prosecution for each child, but he (Mr. Logan) was advised that there might be three prosecutions and the total expenses and costs to the parent might be as much as £4 per child. This Bill, he said, did not pretend to enforce compulsory vaccination, for it contained a provision whereby those who suffered a certain amount of inconvenience and persecution would not be troubled any

more. That was not enforcing compulsory vaccination; it was merely punishing a man for conscience' sake. It would punish the well-to-do just a little, but the poor it would punish cruelly and in some cases utterly ruin. The Royal Commission in their report said that there would have been more persons vaccinated if the law had been enforced with more discretion. With that he absolutely agreed. Men in his constituency (Harborough Division of Leicestershire) had been prosecuted 17 times and a man was sold up the other day and he would be sold up a hundred times before he would have his child vaccinated. Persistent prosecutions which were contemplated under this Bill were certain to arouse hostility throughout the length and breadth of the country and they would create sympathy with the prosecuted and lead to a further defiance of the law and he appealed to the Government in the interests of law and order if nothing else to accept this amendment. If they did not and the Bill went to the country in its present form the troubles and difficulties which vaccination officers and others who tried to enforce vaccination had experienced in the past would be mere child's play to what they would experience in the future.

Mr. Carlile said he was a believer in the efficacy of vaccination and had perfect faith in the safety of calf lymph and he was prepared to support this amendment. His wish was that vaccination should be increased and made more popular and he was perfectly certain that the only way to do that was to kill the present agitation against it. He had been at some trouble to find out the wishes of the medical profession in his own constituency (North Bucks) and with one exception they believed in an amendment such as that now proposed. Personally he should very much like to see the promoters of the Bill taking a stronger line altogether. In the elections of 1892 and 1895 the question of vaccination was often raised and on both occasions he gave an evasive reply for the simple reason that it was the only thing to do. His opinions were not very strong then and he thought it better to wait until the Royal Commission reported. He was not a medical man and could not claim the knowledge of the subject which the Royal Commission had and therefore he gave this reply. Now the Royal Commission had reported and having read the report and in fulfilment of his pledge he was going to support the recommendation of the Royal Commission which said most emphatically that conscientious objection should be allowed.

Sir William Priestley said that while in this matter he was very much in accord with Sir Walter Foster he regretted he could not support his amendment. They were both most anxious to promote vaccination by every means in their power but he took a somewhat different view from him with regard to this matter. All those who knew anything about this subject were of opinion that a very large number of those—by far the largest number of those who now allowed vaccination to go by default—were not conscientious objectors but parents who were careless and heedless of their children. There was no doubt about this, and it was emphasised in the report of the Royal Commission. He took it that the trend of the opinion of the Commission was not that penalties should be abolished altogether but that repeated penalties which were so irritating should be abolished. His view was that penalties should not be abolished altogether, but after the first penalty which would whip up all the indifferent parents they, at any rate, should try to disarm all those who had conscientious objections by not pursuing the penalties further. The object, of course, was to make vaccination more efficient. He was very much in sympathy with many of those parents who really believed that if their children were injured by vaccination it was very hard indeed to impose it upon them. He believed they were absolutely wrong. He thought they had been misled by agitators. The whole scientific world, so far as its best members were concerned, was unanimously in favour of vaccination. On one occasion, when Oliver Cromwell was extremely angry with the Assembly in Edinburgh, he said: "I beseech you by the mercy of God to consider that you may be mistaken." He (Sir William Priestley) would say that to those who were opposed to vaccination, to consider whether it was not possible that they might be wrong in this matter. What he suggested was not that the parent should go scot free after the first penalty was inflicted—that would be illogical; but that after the first one the penalty should be suspended, say, until the child was four years of age, when it was likely to go to school and become a source of danger to other children. He would then give the parent with conscientious objections an opportunity of making a statutory declaration.

Colonel Long moved in the place of "parent or person having the custody of the child" to insert "father of the child, or if the father is dead or the child illegitimate then the mother of the child."

Mr. Chaplin intimated in a few words that so far as he was concerned he must oppose both the amendment and this amendment to it.

Sir Charles Cameron said he was extremely sorry to hear this intimation. He was a firm believer in vaccination. He had devoted many years to the study of it and the more he studied the firmer became his belief. He agreed with the Royal Commission that vaccination would have been very much more general had it not been for errors in the administration of the law. The chief of these had been the creation of martyrs. Every martyr who had been created by the operation of the vaccination laws had become the centre of an agitation against them. It had been said that this proposal was illogical, but the whole thing was illogical. The State at the present moment said, "You must vaccinate the child," but if the parent refused the State did not vaccinate the child—it simply punished the parent for not doing what it would not undertake itself. Until very recently repeated penalties were never enforced in Scotland and the consequence was that martyrs had not been created, and until the very latest years anything like organised resistance and agitation against vaccination had been unknown in Scotland. In all the circumstances he thought the amendment of Sir Walter Foster met the case. A number of children might go forth into the world unvaccinated if it were carried, but a vast number did so at present, and the question was whether they would not bring about a better state of things by adopting this proposal than by insisting upon the course which Mr. Chaplain had foreshadowed.

After there had been some discussion among the legal members of the Committee as to the meaning and necessity of Colonel Long's amendment to the amendment Colonel Long agreed to withdraw his proposal altogether.

Colonel Long then moved to substitute for "statutory declaration" the words "declaration before not less than two magistrates in petty sessions or before any of the persons authorised to administer oaths by the Commissioners for Oaths Act, 1889."

This amendment was defeated by 28 to 15 votes and thereafter the Committee resumed the discussion of Sir Walter Foster's amendment as originally proposed.

Mr. Radcliffe Cooke submitted that a great deal too much had been made of the conscientious objectors to vaccination. He believed there would not be one in a hundred of them if it were not for paid agitators who kept instilling in the minds of the ignorant doctrines which in their heart they knew to be false. If they took the case of Gloucester they found that the moment these conscientious objectors saw they were likely to die from small-pox they hurried off to the public vaccinator. He objected to the amendment, believing that if they were to have a law they must have one with some force in it and not one which could be obeyed at pleasure.

General Russell said that as a matter of expediency, purely in the interests of vaccination, he was prepared to urge the Government to accept such an amendment as had been proposed.

Mr. Hazell also spoke in support of the amendment.

Mr. Chaplin said that the Government were perfectly aware of all the difficulties in connexion with this exceedingly thorny question, and it was because he recognised the extent of the feeling in certain classes—feeling which he regarded as to a great extent the result of popular ignorance and the clamour raised upon the question—that he felt it his duty to propose this fresh legislation and to resist the amendment now proposed. It had been stated with perfect truth that this amendment embodied the recommendation of the Royal Commission, although he was bound to say that the members of the Commission were not wholly unanimous on this particular point. There were, however, two considerations which had always weighed with him in this connexion. The first of them was that a very large number of children throughout the country remained unvaccinated at the present moment, not so much from any deep-rooted dislike on the part of the parents to vaccination in itself, but owing largely to their carelessness and neglect to perform their duty. Another consideration was that with the law amended, as he hoped it would be in the future, and with many of the present objections, in which there was great force, to vaccination removed, it was not unreasonable on his part and that of the Government to hope and expect that a better feeling would prevail in the country and that much of the present opposition would vanish. He was willing to make this admission, that when he read and studied the report of the Commission he thought there might be something in their proposal and he was prepared to, and did, most carefully consider it, but later information on the subject had entirely decided him against it. It must be remembered that the Commission reported in 1893 and a good deal had happened since then. A great deal of information bearing on this subject had come to his notice at the Local Government Board which was not before the Royal Commission and which, if it had been, probably would have very considerably modified their views. He begged the Committee to observe what the difference was between the mover of the amendment and himself. They were absolutely at one as to the importance and necessity of vaccination; they were also both agreed as to the great advantages of the new methods by which it was proposed to carry out vaccination; where they differed was as to the best means of accomplishing their common objects. The mover of the amendment believed in objectors being allowed to make a statutory declaration. He (Mr. Chaplin), on the other hand, believed that if that were done in many districts of the country vaccination would become a dead letter altogether. It happened that at the present moment the Local Government Board had some experience of the system advocated in the amendment. It appeared that in the union of Barton Regis, near Bristol, the guardians pending fresh legislation had taken the law into their own hands. Acting, he supposed, on suggestions contained in the report of the Royal Commission these guardians some eighteen months ago elected to issue a circular on their own account to this effect. It set forth that the vaccination officer had informed the guardians that the person addressed had not had his child vaccinated and that the officer had given the usual notice. Having given these and other particulars the circular went on to say: "If you have a conscientious conviction that the vaccination of your child is calculated to do it injury, and will furnish me a declaration to that effect within fourteen days from the date of this letter on a form which you can get from me, and which must be signed by yourself and witnessed by a magistrate, the guardians will favourably entertain your objection." That was to say the guardians would take no further steps in the matter. Now what had been the effect of this action? First, he was informed there was an increasing demand for these forms, a demand made daily, and the result was that parents who had been in the habit of getting their children vaccinated as a matter of course and without mishap of any kind now applied for the forms and had their children vaccinated no longer. Conscientious objectors, as it was described to him, were springing up like mushrooms and whole districts were in danger of remaining unvaccinated altogether. The system only began in 1896 and out of 300 cases reported in default in the last two quarters of 1897 no less than 183 availed themselves of this expedient. He submitted to the Committee with all seriousness that if this was what was being done while the system was illegal, what was likely to be the case if the system were sanctioned and encouraged by the actual passing of a law? Remember this also, that they would have the Anti-Vaccination League ceaselessly working for the great object they had in view—namely, the abandonment of vaccination altogether—everywhere encouraging and assisting and organising conscientious objections by the thousand. What a weapon for evil they would be putting in the hands of this body. If a single board of guardians could accomplish these results illegally in two quarters of a single year, what would be the effect all over the country with the Anti-Vaccination League absolutely unchecked in their operations? The birth population of this country was estimated at 922,000. According to the vaccination returns 150,000 remained unvaccinated in 1895. In 1897 the return had increased to something like 250,000 and at the present moment he did not hesitate to say it was 300,000, or one-third of the entire birth population. He was perfectly aware that with these facts before him he laid himself open to much blame for going so far as he had done in agreeing that repeated prosecutions should not be permitted, but if he were to accept this further demand it would not only be fatal to the future of vaccination, but in his judgment it would be to invite a recurrence, continuance, and repetition of those disastrous epidemics of small-pox which had occurred too frequently all over the country. It had been said that they must abandon compulsion—that

the Royal Commission had killed it. That was a counsel of despair and he refused for a moment to entertain it. Great and beneficent results had been obtained in Germany, small-pox almost having been stamped out. How was it done in Germany? By compulsion; and what Germans had done in Germany surely Englishmen could do in England if they had only the pluck and determination to try and the courage to face popular clamour and ignorance. He hoped that under the scheme of this Bill they would accomplish something of what had been done in Germany and he relied on the patriotism and the courage and the judgment of the Committee to assist him.

Mr. Channing asked why if the President of the Local Government Board had so much belief in Germany he had not proposed the methods of compulsion adopted in that country.

Sir Charles Dalrymple said that in spite of the strong speech of the President he stood by the report of the Royal Commission which he had signed. The state of things in Barton Regis was startling and unsatisfactory, but there was all the difference in the world between the independent action of one board and that which was authorised after careful consideration by an Act of Parliament.

The Solicitor-General (Sir Robert Finlay), speaking against the amendment, said that the proposed declaration would be made with absolute impunity because it would be idle to talk of a prosecution for making a false declaration.

After some further discussion the debate on the amendment was adjourned until the next meeting of the Committee.

The Committee met again on Tuesday, June 21st, and resumed the debate on Sir Walter Foster's amendment, which in the end was lost by 2 votes, 26 voting against it and only 24 in its favour.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARRS, A. G., M.D. Edin., F.R.C.P. Lond., has been appointed Professor of Medicine, Victoria University (Yorkshire College), vice J. E. Eddison, resigned.

BEATTY, W. J., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Referee under the Workmen's Compensation Act for the County Court District of Stockton-on-Tees, County Court Circuit No. 15.

BILL, J. FRANCIS, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer for the London Temperance Hospital, Hampstead-road, N.W.

BONNEY, W. F. V., M.B., B.S., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Chelsea Hospital for Women.

BROWN, W. H., F.R.C.S. Irel., M.R.C.S., of Leeds, has been appointed Medical Referee under the Workmen's Compensation Act, 1897.

CLARK, W. ADAMS, M.D., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

COOKE, G. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act for the Birkenhead County Court District.

DENNY, E. B., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Medical Officer for the Hainton Sanitary District of the Louth Union.

ELLIS, W. H., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act for County Court Circuit No. 11, Shipley, Yorks.

EVANS, T. H. FENCOTT, M.R.C.S., L.R.C.P., has been appointed Medical Superintendent for the Small-pox Lazaretto at Rietfontein, South Africa.

FAWCETT, HENRY, M.D., B.S. Durh., has been re-appointed Medical Officer of Health by the Middlesbrough Rural District Council.

FRASER, P., M.D. Edin., has been re-appointed Medical Officer of Health by the Llanrwst Urban District Council.

FURNESS, T., L.D.S., F.P.S. Glasg., has been appointed a Dentist for the Industrial Schools by the Chesterfield Board of Guardians.

GIBB, R. S., M.B., C.M. Aberd., has been appointed Medical Officer of Health for Berwickshire.

GOLDING-BIRD, C. H., M.B. Lond., L.R.C.P., F.R.C.S., has been appointed an Examiner in Surgery at Cambridge University.

HENCHLEY, A. R., L.R.C.P.E., L.R.C.S.E., L.F.P.S. Glasg., has been appointed Junior House Surgeon for the General Dispensary, Nottingham.

HUNTER, G. H., M.R.C.S., has been appointed Medical Officer for the Haughley Sanitary District of the Stow Union.

HUNTER, R. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act for Pontypridd, the Rhondda Valleys, Aberdare Merthyr, and Breconshire.

LAVERY, ANTHONY, L.R.C.P. & S. Edin., has been appointed Clinical Assistant for the Birmingham and Midland Hospital for Skin and Urinary Diseases.

LEIGH, J. DICKINSON, M.B., F.R.C.S., D.P.H. Edin., of Scarborough, has been appointed Medical Referee under the Workmen's Compensation Act, 1897, for the Malton, Whitby, and Scarborough Districts.

LEWIS, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Stevning Union.

LEWIS, J. K., M.R.C.S., has been appointed Medical Officer for the Rewe Sanitary District of the St. Thomas Union, Devon.

MACGREGOR, P., L.R.C.P., F.R.C.S. Edin., has been appointed Medical Referee under the Workmen's Compensation Act for the Huddersfield County Court area.

MITCHELL, T., M.D. Glasg., D.P.H. Cantab., has been re-appointed a District Medical Officer of Health by the Llangyfelach District Council.

MORGAN, E. R., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act for the County Court District No. 30, which includes the County Court Districts of Swansea and Bridgend, and has been re-appointed a District Medical Officer of Health by the Llangyfelach District Council.

NASH, W. GIFFORD, F.R.C.S., has been appointed a Medical Referee under the Workmen's Compensation Act for County Court Circuit No. 35, which includes Bedford and several adjacent towns.

NORTON, E. E., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Shoreditch Board of Guardians.

PETHICK, C. S., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Referee under the Workmen's Compensation Act for the County Court Circuit of St. Helens and Widnes.

PORTER, J. F., M.D. Dub., M.R.C.S., has been re-appointed Medical Officer of Health by the Helmsley Rural District Council.

ROBINSON, H., M.B., C.M. Edin., has been appointed Medical Officer for the Cottage Homes of the Soulcoates Union.

SAYERS, M. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Berks Hospital, Reading.

SYRETT, E. F., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Seventh Sanitary District of the Sudbury Union.

THYNE, W., M.D., C.M., L.R.C.P., L.R.C.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

TUXFORD, A., M.D. Edin., has been appointed Medical Referee under the Workmen's Compensation Act for the County Court Circuit No. 17, of Boston, Holbeach, Sleaford, Spalding, and Spilsby.

WALLACE, A. J., M.D. Edin., has been appointed Honorary Assistant Medical Officer for the Hospital for Women, Shaw-street, Liverpool, vice J. E. Gemmell.

WATSON, C. GORDON, M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon for the Norfolk and Norwich Hospital, Norwich.

WEBB, T. L., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Pathologist for the Salop Infirmary.

WHITAKER, E. T., M.B., Ch.M., B.Sc., F.C.S., D.P.H., has been appointed Medical Officer of Health by the Oakengates Urban District Council.

WIGHAM, W. HARPER, M.B. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the South Molton (Devon) Urban District Council.

WILLIS, A., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the Newmarket Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—House Surgeon. Salary £50, with board, apartments, and laundry. Applications to Mr. F. H. Carver, Hon. Sec., 5, Rumford-place, Liverpool.

BLACKBURN INFIRMARY.—Locum Tenens from July 1st for six weeks to perform the duties of House Surgeon. Terms two guineas per week and travelling expenses paid.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Registrar (Honorary).

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, board and residence.

CARDIFF INFIRMARY.—Assistant House Physician for six months. Board, washing, and apartments provided, and an honorarium of £10.

COUNTY OF LANARK, District of the Middle Ward. Resident Physician for the Middle Ward Isolation Hospital. Salary £140 per annum, with board, &c. Applications to Mr. T. B. Ferguson, County Buildings, Hamilton.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Resident Dispenser and Assistant to the House Surgeon. Board, lodging, and washing provided, and an honorarium at the rate of 20 guineas given conditionally.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Salary at the rate of £40 per annum, with board, lodging, and washing in the hospital.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Surgeon.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship for a Senior Student for six months. Honorarium 10 guineas.

NORFOLK AND NORWICH HOSPITAL, Norwich.—House Physician for two years, unmarried. Salary £60 per annum, with board, lodging, and washing.

RIPON DISPENSARY AND COTTAGE HOSPITAL, Ripon.—Resident House Surgeon and Dispenser, unmarried. Salary £70 first year, and advancement after, with board and lodging.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per year up to £100, with residence, board, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon. Also Junior House Surgeon. Salary £50, with board and residence in the hospital.

SALISBURY INFIRMARY.—Assistant House Surgeon for six months, unmarried. Board, lodging, and washing provided, and an honorarium of £10 given.

SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby, near Liverpool.—Junior Medical Officer. £50 per annum, with board, lodging, and washing. Applications to A. A. Gill, M.D., Formby, Lancashire.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80, rising £10 annually to £100, with board and residence.

UNIVERSITY COLLEGE, London.—Resident Medical Officer.

VICTORIA UNIVERSITY (THE YORKSHIRE COLLEGE, LEEDS): DEPARTMENT OF MEDICINE.—Professor of Materia Medica, Pharmacology, and Therapeutics. The emoluments are from fees alone.

WEST RIDING ASYLUM, Menston, near Leeds.—Fourth Assistant Medical Officer. Salary to commence at £100, rising £10 annually to £150, with board and apartments.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—House Surgeon and to act as Surgical Registrar. Salary £100 a year, with board, lodging, and washing. Also Assistant House Surgeon for six months. Board, lodging, and washing provided, and a small honorarium will be given.

Births, Marriages, and Deaths.

BIRTHS.

ECCLES.—On June 20th, at Hertford-street, Mayfair, W., the wife of A. Symons Eccles, M.B, of a son.

FARR.—On June 20th, at Heath House, Andover, the wife of Ernest A. Farr, J.P., M.R.C.S. Eng., of a daughter.

HILL.—On June 21st, the wife of G. William Hill, M.D. Lond., of Weymouth-street, W., of a son, who only survived one day.

MACNAMARA.—On June 12th, at the Royal Hospital, Chelsea, the wife of Surgeon-Major W. J. Macnamara, A.M.S., of a son.

MORGAN.—On June 19th, at Old Steine, Brighton, the wife of George Morgan, F.R.C.S. Edin., of a son.

PERKINS.—On June 14th, at Ael-y-Bryn, Sketty, R.S.O., Glamorgan, the wife of Alfred Ll. Perkins, L.R.C P. Ed., of a son.

ROBINSON.—On June 11th, at York House, Stourport, the wife of B. Stanley Robinson, L.R.C.P. Lond., M.R.C.S., of a son.

SILLAR.—On June 15th, at George-square, Edinburgh, the wife of W. Cameron Sillar, M B., of a daughter.

MARRIAGES.

BROOK—HINE.—On June 16th, at Hillingdon Church, near Uxbridge, William Frederick Brook, F.R.C.S., of Swansea, to Agnes Beatrice Hine, younger daughter of S. D. Hine, M.R.C.S , of Renson.

COLLIS—FAIRBAIRN.—On June 17th, at Mansfield College Chapel, Oxford, Edgar Leigh Collis, L.R.C.P. Lond., M.R.C.S., fourth son of W. B. Collis, Esq , Stourbridge, to Barbara Shields, elder daughter of the Rev. the Principal Fairbairn.

GRAHAM—BLACKBURN.—At the Parish Church, Batley, Yorks, on June 14th, by the Vicar, the Rev. T. G. Davis, M.A., Vyner Graham, M.R.C.S., L.R.C.P., of Westbrook House, Aston Village, Birmingham, third son of T. Graham, Esq., of Elmcroft, Moorlands-avenue, Dewsbury, to Sarah Alice (Sissie) eldest daughter of Alderman J. W. Blackburn, J.P. (Mayor of Batley), Field House, Batley.

LISHMAN—GARRATT.—On June 11th, at All Saints' Church, Puerto Oratava, Frederick Lishman, M.D., son of W. Lishman, Esq., Sunderland, to Lucy Foster, second daughter of the Rev. C. F. Garratt, of Little Tew Grange, Oxfordshire.

MACKINTOSH—BALLARD.—On June 18th, at Christ Church, Lancaster-gate, John Stewart Mackintosh, M.R.C.S., L.R.C.P., second son of J. S. Mackintosh, of Wetherby-gardens, South Kensington, to Alice Emmeline, daughter of the late Edward Ballard, M.D., F.R.C.P., F.R.S.

MITCHELL—CROUCH.—On June 14th, at Trinity Church, Hampstead, Arthur Brownlow Mitchell, M.B., of College-square, Belfast, to Mabel Christina, youngest daughter of Charles W. Crouch, of Maitland-park, N.W.

NEWBOLT—ASHBURNER.—By special licence, on June 18th, at St. Peter's Church, Kirk Onchan, Isle of Man, by the Rev. S. A. P. Kermode, M.A., Vicar, assisted by the Rev. Canon Savage, Incumbent of St. Thomas', Douglas, and the Rev. F. Caywood Deardon, B.A., Vicar of Bamford, and the Rev. Henry Sharland, Curate, George Palmerston Newbolt, M.B., F.R.C.S., of 42, Catherine-street, Liverpool, only son of the late K. Kent Newbolt, Esq., of Weymouth, to Mary, only child of Robert Ashburner, Esq., of Douglas, Isle of Man.

RODDIS—LAWSON.—On June 17th, at All Saints' Church, Clapham-park, Thomas Ernest Earl Roddis, M.B., second son of G. Roddis, of Highclere, Hastings, to Caroline Emma Louisa, elder daughter of H. Lawson, of Seacombe, King's-road, Clapham-park.

STEAD—HARRISON.—On June 14th, at St. Paul's Church, Clifton, Bristol, by the Rev. S. Stead, formerly Archdeacon of Bombay, assisted by the Rev. Canon Mather, Vicar of St. Paul's, Clifton, Charles Clement, elder son of the Rev. S. Stead, to Adelaide Mary, third daughter of Dr. A. J. Harrison, Failand Lodge, Clifton.

THOMPSON—HODSON.—On June 15th, at All Saints' Church, Alrewas, by the Rev. W. Townshend, cousin of the bride, assisted by the Rev. W. A. Webb, vicar of the parish, Charles Thompson, M.R.C.S., L.R.C.P., of Heath Cottage, Stapenhill, Burton-on-Trent, to Lena, daughter of W. H. Hodson, Esq., of Tonbridge.

THOMSON—WOTHERSPOON.—At St. Giles' Cathedral, Edinburgh, on June 8th, 1898, by the Very Rev. J. Cameron Lees, D.D., LL.D., Dean of the Chapel Royal and of the Order of the Thistle, assisted by the Rev P. Hay Hunter, St. Andrew's Parish Church, Edinburgh, and the Rev. W. H. Gray, B.D., Minister of Aberdour, Henry Alexis Thomson, M.D., F.R.C.S. Edin., to Ethel Kate, fourth surviving daughter of C. Grey Wotherspoon, of Hillside, Aberdour, Fife, and the Temple, London, Barrister-at-law.

WALKER—ROUTLEDGE.—On June 15th, at Eastbourne Parish Church, Basil Woodd Walker, M.D., of Chepstow-place, W., to Margaret (Daisy) only daughter of the late James Routledge, of Heathcote, Worthing.

DEATHS.

ADLEY.—On June 18th, Surgeon-General William Henry Adley, of Cleddy Lodge, Haverfordwest, late of Her Majesty's Indian Medical Service, aged 70.

CLIFFORD.—On June 15th, at St. George's-road, Frederick Morrison Clifford, late Surgeon-General, I.M.S.

YOUNG.—On June 18th, at Wiltshire-road, Brixton, Surgeon-General Young, M.D., aged 81.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 23rd, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb	Remarks at 8.30 A.M.
June 17	30·30	S.E.	...	112	73	52	54	58	Fine
,, 18	30·20	S.W.	...	120	80	55	59	65	Fine
,, 19	30·17	W.	...	114	76	61	61	65	Cloudy
,, 20	30·02	W.	...	121	77	56	59	62	Overcast
,, 21	29·92	S.W.	...	125	79	61	63	67	Cloudy
,, 22	29 76	N.W.	...	117	73	59	59	64	Cloudy
,, 23	29 91	N.W.	...	110	67	51	58	59	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (28th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. W. Hwart: The Treatment of Chronic Bright's Disease, Tubal Nephritis, reconsidered.—Dr. D. B. Lees and Dr. F. J. Poynton: Acute Dilatation of the Heart in the Rheumatism and Chorea of Childhood.—Dr. D. B. Lees: Acute Dilatation of the Heart in Rheumatic Fever.

WEDNESDAY (29th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—8 P.M. Paper:—Dr. R. Walters: An Unusual Eruption in Two Children.

THURSDAY (30th).—NEUROLOGICAL SOCIETY (Medical Society's Rooms, 11, Chandos-street, W.).—8.30 P.M. Discussion on the Accurate Localisation of Intracranial Tumours (opened by Dr. C. E. Beevor). Dr. B. Bramwell, Dr. M. Clarke, Dr. Ormerod, Dr. N. Pitt, Dr. Sharkey, and Mr. M. Gunn will take part in the discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (27th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. H. Tilley: Demonstration of Selected Cases (Ear, Throat, and Nose).

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Mr. Wyatt Wingrave: The Normal and Morbid Histology of the Accessory Sinuses of the Nose.

TUESDAY (28th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Victor Horsley: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Mr. D. Grant: On Disorders of the Nose and Throat in their relation to Diseases of the Nervous System.

CITY ORTHOPÆDIC HOSPITAL.—5.30 P.M. Mr. C. Williams: Lateral Curvature of Spine.

WEDNESDAY (29th).—HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Schorstein: Fibroid Phthisis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. C. B. Keetley: The Treatment of the Various Kinds of Hernia.

THURSDAY (30th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Dr. D. Grant: Diseases of the Sphenoidal and Ethmoidal Cells.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. A. Routh: Demonstration of Gynæcological Cases. (Post-graduate Class.)

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1898, which is completed with the issue of to-day, will be given in the next number of THE LANCET.

"THE CAPACITY OF THE FEMALE BLADDER."

To the Editors of THE LANCET.

SIRS,—Owing to absence from town it was only to-day that I read in THE LANCET of May 21st, p. 1397, that Dr. Simpson asks what is the largest quantity of urine which has been drawn off from the female bladder. I find in the *British Medical Journal*, 1885, vol. i., p. 177, a note of Mr. W. H. Green, stating that he has drawn off nine imperial pints (180 oz.).

I am, Sirs, yours faithfully,
Geneva, June 9th, 1898. A. CORDES, M.R.C.P.Lond.

ANNUAL ERYSIPELAS.

To the Editors of THE LANCET.

SIRS,—I have a patient, aged thirty-four years, who has had since 1892 annual attacks of erysipelas chiefly confined to the nose. Each attack follows a cold and commences with a rigor, and in four consecutive years the attack has commenced in the month of March and on the same day of the month. His father had erysipelas when nineteen years of age. Other than that I can find no cause for the repeated attacks. My patient is steady and very regular in his habits, and is very much annoyed at the frequency of the attacks which necessitate his staying from work (that of a fitter) for ten days or so each time. Will anyone be good enough to suggest the probable cause and the best line of treatment as a preventative? I am, Sirs, yours faithfully,
June 20th, 1898. M.B. AND C.M.

A PLUCKY HOSPITAL PORTER.

AN inquiry was held on June 11th by Mr. Langham, the City and Southwark coroner, into the circumstances attending the death of Frederick Webb, who died in Guy's Hospital. The patient was suffering from pneumonia and, according to the evidence of his widow, was addicted to drink. He was admitted to the hospital on June 7th. The hospital porter deposed that on the morning of June 8th at about a quarter-past nine he saw deceased get out of the window of one of the wards and drop a distance of some 6 ft. on to a parapet. He (the porter) got a ladder and managed to get hold of deceased, who struggled with him, when another porter came to help. They all fell and rolled to the edge of the parapet, when deceased suddenly became quiet. He was taken back to the ward, but died within five minutes of being put back into bed. The house surgeon gave evidence that the cause of death was cardiac failure following upon exertion, and a verdict in accordance with this evidence was returned. It should be added that the night nurse deposed that Webb had slept quietly all night until ten minutes to nine. It is, of course, well known that sudden accesses of delirium are common in pneumonia, during which patients are likely to do rash acts, but we do not suppose that this unfortunate man knew in the least what he was doing or had any suicidal intent. The porter deserves every credit for his pluck, for to struggle with a delirious patient upon a roof is by no means a safe thing to do.

"VESALIUS."

To the Editors of THE LANCET.

SIRS,—In reply to "Frequent Correspondent" in THE LANCET of June 18th I beg leave to inform him that a paper by J. M. Ball on Andreas Vesalius, the Greatest of Anatomists, appeared in the *St. Louis Medical and Surgical Journal*, 1897, vol. lxxii., pp. 9-21.

I am, Sirs, yours faithfully,
June 22nd, 1898. W. F.

THE TREATMENT OF SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—As I am shortly sailing as surgeon on a passenger boat I should be much obliged if you or your readers could tell me what treatment for sea-sickness they have found, from personal experience, to be the best as to diet, medicine, &c. The majority of the text-books are practically silent on the subject. I am, Sirs, yours faithfully,
June 18th, 1898. M.R.C.S., &c.

Justitia may be alluding to the case, but apparently he does not know all about it. He will nowhere find in our remarks any attempt or intention to bolster up the position of the unfit. But it is for the general practitioner to recommend to a patient the need for consultation; and if a consultant, whether practising on general or special lines, is aware that his practice is growing at the expense of his fellow practitioners through the kind offices of a tradesman, it is, in our opinion, his duty to beg the tradesman to desist from volunteering his praises. If the tradesman is distinctly asked to name a medical man of course there is no harm in his doing so, but the gist of the matter to which we have referred is that, according to our informant, the tradesman was not asked.

Mr. Charles Nye.—The pamphlet is unsuitable for public circulation in the way that all quack literature is unfit. It is a direct invitation to the public to find themselves martyrs to neurasthenia and dysmenorrhœa, to say nothing of organic disease of kidneys, bladder, &c. Of course the remedial action of the nostrum is purely imaginary.

The Wedding Garment.—There does not seem to us any suggestion that the expense of the robes should be borne by the College. We do not see the force of the simile, "when suitably attired as so many old ladies," while we are certain that the cause of reform was never advanced by rudeness.

Provincial.—We cannot hazard a guess as to which course would be the most remunerative, but a man is generally paid best for what he does best. Surely our correspondent is not equally equipped in all directions. Has he no bias or special knowledge?

Medical Ethics.—We agree with our correspondent that the publication of such a list places the profession frankly in the category of tradesmen bidding for the support of the visiting population.

M.B. B.Ch., R.L., and *Qual. Asst.*—We have received several letters on the subject with which our correspondents deal for which we are unable to find room, at any rate in this issue.

Rusticus will find letters in our columns this week and in previous issues of THE LANCET giving publicity to different sides of a vexed question.

Poste Restante, Glasgow.—We will obtain the information if possible; in any case it will take a few days to procure it.

Apothecary's course is the right one.

During the week marked copies of the following newspapers have been received: *Lancashire Express, Newcastle Weekly Chronicle, Western Mercury, Times of India, Pioneer Mail, Eastern Morning News, Harrogate Advertiser, Architect, Sun, Kingston News, Leeds Mercury, Builder, Sheffield Telegraph, Scotsman, Citizen, Birmingham Gazette, Bristol Mercury, Glasgow Herald, Croydon Guardian, Herald of Wales, Berkhampstead Times, Stafford Advertiser, Liverpool Daily Post, Worcester Herald, Sussex Daily News, Bedfordshire Times, Manchester Courier, Yorkshire Post, Derbyshire Times, Leicester Post, Portsmouth Times, Brighton Gazette, Sanitary Record, Local Government Chronicle, City Press, Hertfordshire Mercury, Reading Mercury, Staffordshire Sentinel, Mining Journal, Le Courrier de la Presse, Local Government Journal, Weekly Free Press and Aberdeen Herald, Guy's Hospital Gazette, Isle of Wight County Press, Surrey Advertiser, Hong-Kong Weekly Press, Manchester Weekly Times, Le Temps, Epsom Herald, Derbyshire Courier, Western Mail, Kidderminster Sun, West Middlesex Herald, Guernsey Advertiser, Inverness Courier, Rawtenstall Times, Sevenoaks Chronicle, Tadcaster News, &c., &c.**

Communications, Letters, &c., have been received from—

A.—Dr. R. Y. Aitken, Blackburn; Messrs. Allen and Hanburys, Lond.; Mr. A. E. Abrahams, Lond.; Messrs. Armour and Co., Lond.; Dr. G. A. Abrath, Bradford; A. S.; "Amiral" Soap Syndicate, Lond.

B.—Dr. W. Cameron Blair, King's Langley; Messrs. John Bell and Co., Lond.; Dr. H. C. Bastian, Lond; Mr. F. W. Beville, Lond.; Mr. C. W. Baylis, Evesham; Bristol Royal Hospital for Sick Children, Secretary of; Bradford Union, Clerk of; Messrs. Brown Bros, and Co., Glasgow; Mr. E. A. Bourke, Curragh Camp; Messrs. Baillière, Tindall, and Cox, Lond.; Messrs. Bayard, Sons, and Bayard, Lond.

C.—Dr. Harry Campbell, Lond.; Chesterfield Hospital, Secretary of; Messrs. Crossley, Moir, and Co., Lond.; Mr. V. B. Collins, Lond.; Dr. M. Craig, Lond.; Mr. J. B. Cameron, Lond.; Dr. James Collier, Lond.; Dr. Paul Chapman, Hereford; Cortland Wagon Co., Lond.; Messrs. Currie and Hutchinson, Newcastle-on-Tyne.

D.—Mr. R. D. Dobie, Liverpool; Doncaster General Infirmary, House Surgeon of.

E.—Dr. W. Ewart, Lond.; E. C.

F.—Dr. Foster, Blackburn; Mr. C. M. Fegen, Toddington; Mrs. F. A. Fulcher, Lond.; F. C. T., Abingdon; Messrs. Fletcher, Fletcher, and Co., Lond.; Mr. J. B. Ferguson, Hamilton.

G.—Dr. R. Ritchie Giddings, Nottingham; Dr. M. Greenwood, Lond.; Mr. H. Gold, Lond.; Dr. J. A. Gibson, Lond.; Messrs. A. Gallenkamp and Co., Lond.; Great Eastern Railway, Lond., Continental Traffic Manager of; Dr. S. A. Gill, Formby; Messrs. Giles, Schacht, and Co., Clifton; Mr. A. E. Gilbert, Newcastle-on-Tyne; Messrs. E. W. Greeff and Co., Lond.; Mr. J. J. M. Giffen, Chester.

H.—Mr. J. S. Hunt, Brisbane; Dr. W. K. Hunter, Glasgow; Haydock Lodge, Newton-le Willows; Mr. J. Heywood, Manchester; Mr. G. Yeates Hunter, Lond.

J.—Dr. L. Jones, Lond.; Jenner Institute for Calf Lymph, Lond., Secretary of; *Journal of State Medicine*, Lond., Editor of; Mr. W. H. Jalland, York; Justitia.

K.—Mr. W. King, Lond.; Dr. A. E. Kelsey, H.M.S. *Collingwood*, Devonport; Messrs. Kilner Bros, Lond.

L.—Mr. W. C. Leslie, Glasgow; Mr. H. K. Lewis, Lond.; Liverpool Stanley Hospital, Secretary of.

M.—Dr. J. Milne, Lond.; Metropolitan Provident Medical Association, Lond., Secretary of; Mr. J. Maberly, Cape Town; Sir Wm. MacCormac, Lond.; Mr. C. W. Marriott, Reading; Mr. J. J. de Z. Marshall, Teddington; Dr. R. D. MacGregor, Lond.; Manchester Ear Hospital, Secretary of; Mountjoy Brewery, Dublin; Maltine Manufacturing Co., Lond.; Mr. F. S. Moger, Carshalton; Messrs. Macduff and Co., Lond.; Dr. Sidney Martin, Lond.

N.—Mr. C. Nye, Lond.; New York Post graduate Medical School, Secretary of; Nurse, Stamford.

P.—Dr. John Phillips, Lond.; Dr. F. J. Poynton, Lond.; Mrs. M. A. Powne, Chard; Mr. Y. J. Pentland, Edinburgh; *Press Bazaar News*, Lond., Hon. Editor of.

Q.—Queen Charlotte's Lying-in Hospital, Lond., Secretary of.

R.—Mr. James Ray, Beccles; Mr. F. Robertson, Liverpool; Dr. A. Rose, Horwich; Royal Statistical Society, Lond., Hon. Secretary of; Dr. J. S. Risien Russell, Lond.; Dr. John Rose, Chesterfield; Messrs. Reynolds and Branson, Leeds; Messrs. R. W. Richards and Co., Carmarthen; Messrs. W. P. Richardson, Newcastle-on-Tyne; Mr. F. Reynolds, Harrogate; Mr. J. R. Rolston, Plymouth; Rebman Publishing Co, Lond.

S.—Dr. H. Hill Shaw, Brighton; Society of Apothecaries, Lond., Secretary of; Mr. S. H. Snell, Grays; Mr. G. Stevens, Saltwood; *Scientific Press*, Lond.; Dr. T. W. Smith, Bath; Mr. E. Schloesser, Paris; Mr. F. Steele, Lond.; Mr. S. Stephenson, Lond.; Mr. F. C. Shaddick, Weston-super-Mare; Sun Life Assurance Society, Lond., Secretary of; Sanitas Co., Lond.; Messrs. Street and Co., Lond.

T.—Toddington Orchard Co., Winchcombe; Mr. H. G. Turner, Manchester; Dr. W. Taylor, Edinburgh.

V.—Volunteer Medical Association, Lond., Hon. Secretary of; Vinolia Co., Lond.

W.—Messrs. Woolley, Sons, and Co., Manchester; Worthing Corporation, Clerk of; Worshipful Company of Plumbers, Lond.; Mr. W. G. Westcott, Chichester; West Riding Asylum, Menston, Clerk of; *West Sussex Gazette*, Arundel, Managing Director of; Dr. F. J. Waldo, Lond.; Very Rev. F. M. Wyndham, Lond.; Dr. H. Woods, Lond.

Y.—Yorkshire College, Leeds.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. A. Ambrose, Buckhurst Hill; Mr. W. J. Allkin, Denton; A. K.; A. B., Sheffield.

B.—Mr. F. Bauermeister, Glasgow; Mr. A. Butler, Epsom; Belfast District Asylum, Clerk of; Borough of Grantham, Town Clerk of; Berrow's Worcester Journal Co.; Mr. T. Bryant, Lond.; Blackburn Infirmary, Senior House-Surgeon of; Mrs E. A. Blackmore, Wandsworth; Mrs. S. A. Bennett, Lond.

C.—Mr. W. J. Chamberlain, Lond.; City of London Lunatic Asylum, Dartford, Clerk of; C. J. D.; Mr. C. Coles, Erith; C. R. K.; C. P. C.; Dr. Cotton, Dersham.

D.—Mr. T. Domela, Macolin, Switzerland; Messrs. Dowsett, Knight, and Co., Lond.; Mr. J. E. Dunn, Preston.

E.—E. M. C., Falmouth; E. G. F.

F.—Mr. H. Frederick, Sidcup; Dr. F., Ecclesball; F. W. E. H.; F. T.; F. W. G.

G.—Dr. Gregor, Lond.; G. H. G.; Messrs. Gilyard Bros., Bradford; G. E. Y.; Mrs. M. Goodson, Abingdon.

H.—Mr. F. A. Hall, Lewes; Dr. R. Hamilton, Douglas, Isle of Man; H. E. C.; Messrs. Hodder and Stoughton, Lond.; Mr. R. A. Hyde, Brighton; Mr. J. Harper, Ledbury; Mr. J. Hall, Brinklow; Dr. A. J. Harrison, Clifton; Haste, Lond.

J.—Mr. G. James, Tenby; J. S. R.; Dr. R. W. Jones, Penrhiwceiber; J. G.; J. J. M.; Mr. O. M. Jones, Victoria, B.C.; J. H. L.

K.—Mr. R. Knowles, Haslingden; Messrs. T. Kirby and Son, Walsall; Messrs. A. W. Knox and Co., Lond.; Messrs. Keith and Co., Edinburgh.

L.—Llanelly Hospital, Secretary of; Leamington Corporation, Accountant of; Leeds Trained Nurses' Institute, Secretary of; L. B.; Mr. H. B. Long, Wimbledon; Messrs. Lockie Bros., St. Helens.

M.—Mr. G. S. Messiter, Burton-on-Trent; Middlesborough Corporation, Accountant of; Dr. F. K. March, Bradford; Mr. Marshall, Kensington; Mr. A. S. McCully, Farnworth.

N.—Mr. G. P. Newbolt, Great Marlow; Newark-on-Trent Hospital, Secretary of.

O.—Mr. R. C. Owen, Scunthorpe; Dr. E. Oliphant, Bucksburn; Mr. M. O'Brien, Dudley; Mr. Oldham, Whalley Range.

P.—Messrs. Pilditch, Chadwick, and Co., Lond.; Mrs. E. M. Perrot, Luppitt; Messrs. C. Pool and Co., Lond.

R.—Mr. R. M. Ralph, Lond.; Dr. R.; R. K. D.; R. M. R.; Rochford Union, Clerk of; Royal College of Surgeons, Lond., Secretary of.

S.—Mr. B. S. Sanders, Ilfracombe; Dr. Spence, Lichfield; Dr. R. le F. Shepherd, East Barkwith; Dr. S.; *The Scotsman*, Edinburgh; Mr. E. Swindles, Torcross; Mrs. Skinner, Winchelsea; Mr. H. K. Smyth, Cork; Mr. J. Sparks, Burton-on-Trent; Messrs. Shaw and Co., Manchester; Dr. T. W. Shortridge, Honiton; Stamford Infirmary, Secretary of; Mr. H. W. Scriven, Lond.; S. S.; Messrs. S. Smith and Co., Lond.

T.—Mr. J. J. Tate, Manorhamilton; T. H. K.; T. L.; Mr. J. Thin, Edinburgh; Tropon Agency.

V.—Dr. J. M. Vallance, Thornley; Messrs. C. Vaux and Sons, Sunderland.

W.—Dr. G. G. Whitwell, Shrewsbury; Messrs. J. Wright and Co., Bristol; Mr. H. B. Wilkinson, Powick; Mr. M. Walsh, New Ross; W. W., New Romney; W. B. R., Lond; Messrs. Wright, Layman, and Umney, Lond.; Miss K. Walton, Wem.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ... Seven Lines and under	£0	5 0
Official and General Announcements Ditto	0	5 0
Trade and Miscellaneous Advertisements Ditto	0	4 6
Every additional Line	0	0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

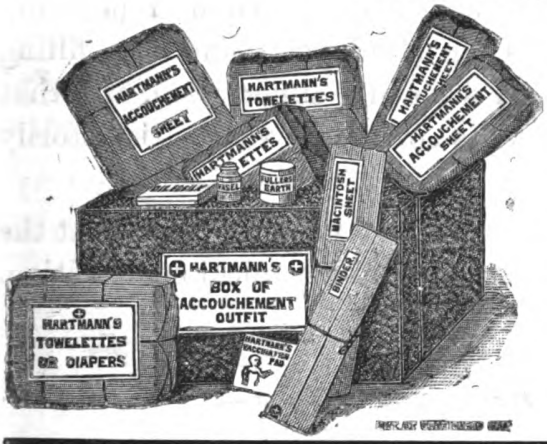
THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

IMPROVED OBSTETRIC REQUIREMENTS.

RISK OF PUERPERAL SEPTICÆMIA

IS REDUCED TO A MINIMUM BY USING



HARTMANN'S

COMPLETE

GUINEA OUTFIT FOR ACCOUCHEMENT.

It contains 3 different sizes of Hartmann's Absorbent Wood Wool Sheets, 4 dozen Hartmann's Hygienic Towelettes, Binder, Safety Pins, Antiseptic Ointment, Thread, Umbilical Pad, Fuller's Earth, Oiled Silk, Mackintosh Sheeting, &c.

It affords great cleanliness and comfort to the patient, and diminishes the risk of puerperal fever.

Too much attention cannot be given in selecting the best articles for use during confinement; and in the interest of their patients we ask physicians to recommend Hartmann's Complete Guinea Accouchement Outfit.

A Smaller Outfit is also put up, price 10/6.

REDUCED PRICES to DOCTORS & NURSES.

The above Boxes will be sent to any Medical Man or Nurse on receipt of 19/- or 9/6.

HARTMANN'S HYGIENIC WOOD WOOL TOWELETTES.

Five Sizes—but one Quality.
From 6d. to 2s. per Doz.



Put up in the following sizes:—

In BROWN paper, -/6 per doz. size (our new halfpenny size).
In WHITE paper, 1/- per doz. size.
In BLUE paper, 1/4 per doz. size (new make).
In GOLD paper, 2/- per doz. size.
In YELLOW paper, 2/- per doz. size (special make for use after accouchement).

} Superior to any other make.

FOR HOME USE, DELICATE HEALTH, FOR LADIES TRAVELLING AND ACCOUCHEMENT THEY ARE INVALUABLE AND INDISPENSABLE. THEY ARE SOFT, LIGHT, ANTISEPTIC, AND ARE SUPPLIED AT THE ACTUAL COST OF WASHING. AFTER USE THEY ARE SIMPLY BURNT.

Carriage Paid to the Medical Profession only. Samples free on application.
Sample Packets of 1 dozen at 2/-, 1/4, 1/-, and -/6, post free; or 12 Packets at 19/6, 13/6, 9/6, and 5/6.

ACCOUCHEURS WILL FIND IT A GREAT COMFORT TO THEIR PATIENTS BY USING

HARTMANN'S SANITARY WOOD WOOL SHEETS



For Accouchement, Bedsores, Operations, &c.

PERFECTLY ANTISEPTIC, CLEAN, & COMFORTABLE.

The most comfortable Appliance for Accouchement ever made. "Risk of Puerperal Fever diminished."

A Great Boon for Patient, Nurse, and Physician in attendance.

Used in the Principal Lying-in Hospitals of London, Manchester, Edinburgh, Glasgow, &c.

These Sheets are made of Hartmann's Patent Wood Wool Wadding, the most absorbent substance ever known. They are most comfortable and healthy, are perfectly antiseptic, have not the disagreeable smell so common to indiarubber sheets, and are much cheaper. In Accouchement a large sheet is laid under the patient, it absorbs the discharge completely, and is SIMPLY BURNT after use. No soiled clothes; risk of puerperal fever greatly lessened; and perfect comfort and cleanliness.

Prices of the Three Sizes - - 1/-, 1/6, and 2/6.

Sizes: 24 by 18 in., 26 by 20 in., 32 by 32 in.

Reduced Prices to Doctors and Nurses.

The SANITARY WOOD WOOL COMPANY, Limited,

26, Thavies Inn, Holborn Circus, London, E.C. *Telegraphic Address*—"LIGATURE, LONDON."

BUDAPEST, *January 27th, 1898.*

CERTIFICATE.

At the request of the Apenta Company of Budapest, I hereby certify to them that I have for a considerable time repeatedly examined the **APENTA SPRINGS** at Ofen (Budapest) and the filling of the water, which were placed under my scientific supervision, and that I have become convinced that the working is conducted very satisfactorily from a hygienic point of view.

I have also satisfied myself by repeated personal investigations that the **APENTA WATER** as despatched is constant in its chemical composition.

Josef von Fodor

Royal Hungarian Ministerial Councillor; Director of the Hygienic Institute of the Budapest University; Knight of the Austrian Order of the Iron Crown; LL.D. Cambridge; Hon. Memb. Sanitary Institute of Great Britain, Royal Institute of Public Health, &c.

Sole Importers: THE APOLLINARIS COMPANY, Limited,
4, STRATFORD PLACE, OXFORD STREET, LONDON, W.

Palatable.

BAKED BY ALL

HOVIS BREAD

FAMILY BAKERS.

Nutritious.

BOVRIL

is prepared by a process which retains the entire nourishing as well as the stimulating properties of Prime Ox Beef, thereby differing from ordinary fluid extract of Beef or meat extracts, which merely stimulate without nourishing.

BOVRIL is manufactured under the supervision of eminent Analysts, and every package is guaranteed.

INVALID BOVRIL

is specially made for use in the sick room, being highly concentrated and containing no seasoning. INVALID BOVRIL is a perfect Beef Tea *plus* the Albumen and Fibrine of Beef in a form capable of digestion and assimilation by the most sensitive and debilitated stomach, thus providing the substantial nourishment necessary to furnish renewed strength and vitality to carry the patient through the crisis of an ailment to convalescence and recovery.

VIROL

is an ideal strengthening Food for Infants, Growing Children, Invalids, and others. It enriches the blood, and supplies all the elements for growth and nutrition, being composed of finest Extract of Malt, Bone Marrow, Fresh Eggs, and Lemon Juice. It is extremely palatable, and may be used with advantage in place of nauseating mixtures of cod-liver oil.

BOVRIL LIMITED, Food Specialists and Hospital Purveyors, **LONDON,**

Contractors to Her Majesty's and Foreign Governments.

CHAIRMAN:
J. LAWSON JOHNSTON.

VICE-CHAIRMAN:
THE VISCOUNT DUNCANNON, C.B.

CONSULTING CHEMIST:
SIR EDWARD FRANKLAND, K.C.B., D.C.L. F.I.C.,
Corr. Mem. French Institute.

ANALYTICAL CHEMIST:
WILLIAM HARKNESS, F.I.C., F.C.S., F.R.M.S.,
40 Years Food Analyst to H.M. Government.

Re PHENACETINE.

IMPORTANT WARNING to MEDICAL MEN.

As discoverers and original makers of this **safe and valuable antipyretic,** we consider it to be our duty to **warn** the Medical Profession that an adulterated substance is now on the market, and is being sold as genuine Phenacetine. (*Vide* current Chemical and Pharmaceutical periodicals.) Our name is so well known in connexion with this product, that, for our reputation's sake, we are compelled to issue this notice.

Medical Men can protect themselves and their patients, and can rely upon obtaining a thoroughly pure product by adding the name BAYER when prescribing Phenacetine.

PHENACETINE-BAYER

is the pure and original product: the name is a guarantee of purity. Phenacetine-Bayer is put up in 4, 5, 8, and 16 grain Tablets, as well as in the Powder and Crystal form.

Samples and Literature can be obtained on application to the Wholesale Depots for all Bayer's Pharmaceutical Specialties—

ELBERFELD FARBEN FABRIKEN CO., Ld., 19, St. Dunstan's Hill, LONDON, E.C.

Also at MANCHESTER, GLASGOW, and BRADFORD.

Veritable Ferruginous Salt assimilable

Discovered by **M. Maurice ROBIN** in **1881**



Fac simile of the box reduced to the fourth.

The ROBIN'S PEPTONATE of IRON

is Sovereign against

Anemia, Chlorosis and Hemorrhages

OF ALL KINDS

ASSISTS NUTRITION and NEVER CAUSES CONSTIPATION

15 to 20 drops at meal time.

The only **preparation of Iron** *which will* **really assimilate,** *Prescribed the world over by the entire medical profession.*

SAMPLES FREE TO DOCTOR ON APPLICATION

TO AVOID COUNTERFEIT **INSIST** ON HAVING THE NAME **ROBIN**

WHOLESALE: **13, Rue de Poissy, PARIS.**

AGENCY: **London, JOZEAU, 49, Haymarket, W.**

Thyroid.

To name the affections in which the Thyroid treatment has been tried would necessitate the enumeration of a long list of pathological conditions.

It is a specific of the first importance in Myxœdema, Cretinism, Goitre and Obesity. It is of great value in Acute and Chronic Melancholia and Acute Delirium. The results following its employment in Psoriasis, Scleroderma, Eczema, Tetany, and certain phases of Insanity, and in retarded development of children, have been such as to warrant further experiment.

Armour's Desiccated Thyroid
Thyroid Tablets
and Elixir Thyroid

are carefully made from selected material, and may be depended upon in all cases where the Thyroid treatment is indicated.

Bone Marrow

acts as a Stimulant to the Formative Processes and increases the production of red blood corpuscles and hæmoglobin, making it the ideal remedy in all diseases due to defective hæmogenesis.

The best results follow the use of a preparation made with Marrow taken from the animal immediately after it is killed.

Glycerine is practically the only medium for preserving the product in an unaltered condition.

Armour's Extract of Red Bone Marrow

Is made from absolutely fresh material and pure Glycerine, and contains all the essential ingredients of raw Marrow.

ARMOUR & COMPANY (Chicago), LONDON, S.E.

Will be pleased to send Samples of any of their Laboratory Products to Physicians interested, with Pamphlets.



TANNALBIN
(KNOLL).

This non-toxic **INTESTINAL ASTRINGENT and ANTI-DIARRHŒAL** occurs in the form of a light-brown powder, which is insoluble in the gastric juice and only slowly soluble in intestinal fluids; it causes no disturbance in the stomach, no nausea, no anorexia; it is tasteless, odourless, and is readily taken by adults and children. Dr. von ENGEL, Brunn, and Prof. Dr. VIERORDT, University Clinic, Heidelberg, and many other observers recommend **TANNALBIN in all cases of Subacute and Chronic Enteritis, whether of Children or Adults, as it unquestionably deserves the first place among astringent medicines.** See pamphlet just published: *Hints on the Use of Tannalbin* (1) in Acute, Subacute, and Chronic Enteritis, Dysentery; (2) in Diarrhœa of Phthisical Patients; (3) in Diarrhœa of Infants and Children; and (4) its Preventive use in conjunction with other remedies.

TANNALBIN is sold in Powder and 5-grain Tablets.

DOSE.—Fifteen grains three times a day for Adults; eight grains three times a day for Children.

PAPAÏN-FINKLER.

The ideal purely vegetable digestive ferment is largely used in the curative treatment of Gastric Ulcer (THE LANCET, Feb. 9th, 1895, p. 333), and as an aid to the nutrition of patients suffering from Phthisis, its value cannot be overrated (see THE LANCET, April 27th, 1895, page 1050). The solvent action of Papaïn on albuminous bodies is also turned to account in Diphtheria. Under the application of a 5 per cent. aqueous mixture the false membranes promptly disappear, leaving the mucous membrane accessible to the action of suitable antiseptics. The importance of this effectual local treatment is in no wise diminished by the constitutional effects of the Antitoxin treatment. Papaïn is further indicated in all forms of dyspepsia, its action being fully maintained in acid, alkaline, and neutral medium, exhibiting at the same time a tonic and antiseptic effect.

Sold by all Wholesale and Retail Chemists, or where not obtainable apply direct to

B. KÜHN, 36, St. Mary-at-Hill, LONDON.

SAMPLES AND LITERATURE FREE TO THE MEDICAL PROFESSION ON APPLICATION.

THE LANCET.

No. 3664.] LONDON, SATURDAY, JUNE 25, 1898. [Pp. 120+24.

CONTENTS.

THE CROONIAN LECTURES on the Chemical Products of Pathogenic Bacteria considered with Special Reference to Enteric Fever. Delivered before the Royal College of Physicians of London by SIDNEY MARTIN, M.D. Lond., F.R.S., Fellow of the College; Professor of Pathology, University College; and Assistant Physician to University College Hospital and to the Hospital for Consumption, Brompton. Lecture II. 1737

THE INGLEBY LECTURES on Extra-uterine Pregnancy. Delivered at Mason College, Birmingham, on May 11th, 18th, and 25th, 1898. by JOHN W. TAYLOR, F.R.C.S.Eng., President of the Midland Medical Society; Surgeon to the Birmingham and Midland Hospital for Women; Consulting Surgeon to the Wolverhampton Hospital for Women, &c. — Lecture III. (*concluded*) 1739

ORIGINAL ARTICLES.

Blood-pressure in the Insane. By MAURICE CRAIG, M.A., M.D. Cantab., M.R.C.P. Lond., Assistant Medical Officer, Bethlem Royal Hospital, London; Lecturer in Mental Diseases, Post-Graduate Course, London ... 1742

Note on Lumbar Colotomy. By LAWSON TAIT, F.R.C.S. Eng., Consulting Surgeon to the Birmingham and Midland Hospital for Women, &c..... 1747

A Note on the Etiology of Beri-beri. By WALTER K. HUNTER, M.D., B.Sc.Glasg., Assistant Physician to the Royal Infirmary and to the Royal Hospital for Sick Children, Glasgow 1748

Case of Fractured Spine with some Unusual Complications; Recovery. By A. W. LYONS, M.B. Lond., M.R.C.S. Eng., Honorary Medical Officer to the Thames Ditton Cottage Hospital 1749

Three Cases of Prolonged Labour. By JOHN MABERLY, M.R.C.S. Eng., L.R.C.P. Lond. 1751

A Preliminary Note on the Action of Roentgen Rays upon the Growth and Activity of Bacteria and Micro-organisms. By R. NORRIS WOLFENDEN, M.D. Cantab., and F. W. FORBES-ROSS, M.D. Edin. 1752

CLINICAL NOTES:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

Notes on a Case of Puerperal Eclampsia occurring in the Sixth Month of Pregnancy; Death. By H. HOWARD MURPHY, M.D. Cantab. 1753

A Case of Concealment of Birth. By SANDERSON MELLOR, L.R.C.P., L.R.C.S. Edin., L.F.P.S.Glasg. 1753

A Case of Gumma inside the Sternum. By THOMAS COLE, M.D., F.R.C.P. Lond. 1754

Notes on Two Cases of Congenital Absence of the Right Eye (Anophthalmos). By JOHN R. ROLSTON, L.R.C.P. Edin., M.R.C.S. Eng. — (*Illustrated*) 1754

Note on a Case of Fatal Heart Affection in Scarlatinal Rheumatism. By FRANK ROBINSON, M.D. Vict. 1754

A MIRROR OF HOSPITAL PRACTICE.

EVELINA HOSPITAL FOR SICK CHILDREN:
A Case of Alveolar Abscess; Death from Pyæmia in Eight Days; Necropsy. (Under the care of Dr. F. Willcocks).— (*Illustrated*) 1755

MEDICAL SOCIETIES.

OPHTHALMOLOGICAL SOCIETY: Retinitis Proliferans.—Case of Œdema of the Conjunctiva due to Obstruction of the Lymph Stream 1756

REVIEWS AND NOTICES OF BOOKS.

Forensic Medicine and Toxicology. By J. Dixon Mann, M.D. St.And., F.R.C.P. Lond. 1757

L'Allaitement Mixte et l'Allaitement Artificiel. By Henri de Rothschild 1758

The Water-supply of London. By C. H. F. Routh, M.D., M.R.C.P. Lond. 1758

The History and Technique of the Vaginal Radical Operation. By Prof. Dr. Leopold Landau and Dr. Theodor Landau. English Translation by B. L. Eastman, M.D., and Arthur E. Giles, M.D. Lond. 1759

Transactions of the Iowa State Medical Society. Vol. XIV. 1759

Statistical Tables of Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1896. By J. Calvert, M.D., F.R.C.P., A.E. Garrod, M.D., F.R.C.P., and J. Berry, B.S., F.R.C.S. 1759

La Cura Razionale dei Tisici e i Sanatorii. By Dr. Ausonio Zubiani. Raggi di Röntgen e loro Pratiche Applicazioni. By Italo Tonta 1759

La Protection et la Santé de l'Ecolier. By Dr. C. Delvaille 1760

Elementary Physics. By John G. Kerr, M.A. 1760

NEW INVENTIONS.

Combination Surgical Scissors and Dressing Forceps — (*Illustrated*) 1760

LEADING ARTICLES.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT 1761

THE CASE OF MARY ANNE POOLE 1761

PHOSPHORUS POISONING 1762

ANNOTATIONS.

Hospitals and Homes for Sick and Disabled Soldiers 1763

The New Medical Schools at Cambridge 1764

Rectal Aspiration 1764

The Bradfield Play 1764

Army Medical Appointments in the West African Service 1765

Street Noises 1765

The Prosecution of John Hamilton, M.D. New York 1765

The Dental Hospital of London 1765

Medical Journalism and Medical Libraries 1765

The United Hospitals Athletic Sports 1766

Midwives at Huddersfield 1766

Chronic Hydrarthrosis of Small Joints 1766

The Hospital for Epilepsy and Paralysis 1766

The Abuse of Medical Charity in New York 1766

The Report of the Petroleum Committee 1767

"Only a Pauper" 1767

Large Number of Foreign Bodies in the Stomach; Gastrotomy 1767

Deaths in Child-birth 1767

The Smoke Nuisance 1768

The "Repression" of Tuberculosis 1768

Cottage Baths 1768

THE BRITISH PHARMACOPŒIA.—VI. 1771

VITAL STATISTICS:
Health of English Towns ... 1775
Health of Scotch Towns 1775
Health of Dublin 1776

SPECIAL ARTICLES.

Deaths under Anæsthetics 1780

The Medical Service of our Army 1769

Royal College of Surgeons of England 1770

The Thirteenth International Medical Congress, Paris 1770

The Royal Commission on the Metropolitan Water-supply 1772

The Rebuilding of University College Hospital 1774

Queen's Birthday Celebrations at Tampa Bay, Florida 1775

The Services 1776

The Madrid Military Hospital 1779

Notes from India 1780

Scotland 1781

Ireland 1781

Paris 1782

Berlin 1782

THE METROPOLITAN HOSPITAL SUNDAY FUND:
List of Donations to the Fund 1777

CORRESPONDENCE.

Vitality (Dr. D. Hooper) 1777

Poisoning by Strychnine (Dr. W. T. Wyatt) 1777

Public Schools and Food (Dr. Harry Campbell) 1778

The Alleged Dearth of Qualified Assistants 1778

The Capacity of the Female Bladder (Dr. A. Cordes) 1789

Annual Erysipelas 1789

Vesalius 1789

The Treatment of Sea-sickness 1789

OBITUARY.

George Vernon Blunt, M.D. Aberd., M.R.C.S. Eng. 1783

Deaths of Eminent Foreign Medical Men 1783

MEDICAL NEWS.

Pass-lists of the Royal College of Surgeons of England, University of Cambridge, and Society of Apothecaries of London 1783

Foreign University Intelligence 1783

Presentations to Medical Men.. 1784

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics 1784

House of Commons 1785

The Vaccination Bill 1785

Appointments 1787

Vacancies 1787

Births, Marriages, and Deaths 1788

Medical Diary 1788

Notes, Short Comments, and Answers to Correspondents.. 1789

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

NOW READY, with Photographic and numerous Illustrations, Third Edition, enlarged, price 10s.

On Diseases of the Eye. By Charles BELL TAYLOR, F.R.C.S. & M.D.Ed., Fellow Medical Society, London; late President of the Parisian Medical Society; Surgeon, Nottingham and Midland Eye Infirmary.
London: Kegan Paul, Trench, Trübner, & Co. (Ltd.), Paternoster House, Charing-cross-road, W.C.

Now ready, Royal 8vo, 280 pp. Price 16s. Second Edition. With over 60 Original Illustrations by Chromo-lithography, Wood Engravings, and Photo-Micrographs.

Diphtheria and its Associates. By LENNOX BROWNE, F.R.C.S.E., Senior Surgeon to the Central London Throat, Nose, and Ear Hospital.
"An excellent monograph. ..... Will be a classic."—MEDICAL PRESS AND CIRCULAR.
Baillière, Tindall, & Cox, 20 and 21, King William-street, Strand.

Fifth Edition, Revised and Enlarged, price 5s.

A Handbook of Diseases of the Skin, with especial reference to DIAGNOSIS and TREATMENT.
By ROBERT LIVEING, M.A. & M.D. Cantab., F.R.C.P. Lond., Physician to the Department for Diseases of the Skin at the Middlesex Hospital; formerly Physician to Middlesex Hospital.
London: Longmans, Green, & Co.

Now ready, at LONGMANS and CO.

Tablets of Anatomy. By Mr. Thomas COOKE, F.R.C.S., Surgeon (out-patients) Westminster Hospital. Thoroughly brought up to date and with over 700 illustrations from all the best sources. In Three Parts, published separately:—Bones, 7s 6d.; Limbs, Abdomen, Pelvis, 10s. 6d.; Thorax, Head and Neck, Brain, 10s. 6d. net.
"Contain in the fewest words and plainest language the matter which is found in the most accredited standard works."—THE LANCET.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS.

COVER.

PAGE

ARROWSMITH (BRISTOL):—
Smith ..... Abdominal Surgery 1

BAILLIERE, TINDALL, & COX:—
Allingham .. Colotomy &c. 1
" .. Diseases of the Rectum 1
Campbell.... Respiratory Exercises in the Treatment of Disease 1
Haab..... Ophthalmoscopy &c..... 1
Hirschfeld .. Indigestion 1
Jacob ..... The Nervous System .. 1
Lehmann & Neumann.. Bacteriology 1
Schaeffer.... Hand-Atlas of Obstetrics 1
" .... Gynæcology 1

BAUERMEISTER (GLASGOW):—
Handbuch der Gynäkologie 1
Pollack .... Methods of Staining the Nervous System 1

CHURCHILL, J. & A.:—
Chavasse.... Advice to a Mother 1
" .... Advice to a Wife 1
Cripps ..... Ovariotomy &c. 1
White ..... Materia Medica &c. 1

CORNISH BROS. (BIRMINGHAM):—
Foxwell .... The Enlarged Cirrhotic Liver..... 1
" .... Spas of Mid Wales 1

GRIFFIN & CO.:—
Foxwell .... Heart and Lung Disease 1

LEWIS:—
Jones ..... Medical Electricity 1

LONGMANS & CO.:—
Althaus .... Failure of Brain Power 1
" .... Sclerosis of the Spinal Cord 1

PAGE

PENTLAND, Y. J.:—
Kelynack .. Renal Growths 1
Waring..... Operative Surgery 1
Webster .... Diseases of Women.... 1

SEGG:—
Pedley ..... Dis. of Children's Teeth 1

MEDICAL LIBRARIES, &c.:—
Davidson—Sight Testing for the G.P. 1

BAILLIERE, TINDALL, & COX:—
Browne .... Diphtheria &c. 1

BALE, SONS, & DANIELSSON:—
Journal of Tropical Medicine 9
Moullin .... Treatment of Sarcoma and Carcinoma..... 6
Treves ..... Peritonitis 7

BURLEIGH:—
Churchill.... Consumption &c. 9

CASSELL & CO.:—
Herman .... Diseases of Women 7
Hutchinson & Rainy .. Clinical Methods 7
Klein & Eddins .... Elements of Histology 7
Manson .. .. Tropical Diseases 7
Marsh ..... Diseases of the Joints.. 7
Morris ..... Ringworm 7
Scholtz ..... South African Climate 4
System of Surgery 7
Treves..... Intestinal Obstruction 7

CHURCHILL, J. & A.:—
Angus ..... Spinal Curvatures &c.. 9
" ..... Deformities of the Head and Neck 9
" ..... Manual of Orthopædy 9
Marley ..... Diseases of the Liver .. 6
" ..... Sounding for Gall-stones, &c. 6
" ..... Extrusion of Gall-stones, &c. 6
Squire ..... Companion to the Brit. Pharmacopœia 6

PAGE

GILL:—
Seaside Watering-places.....

HODDER & STOUGHTON:—
Kidd ..... Heart Disease 7

KEGAN PAUL & CO.:—
Taylor ..... Diseases of the Eye 1

LEWIS:—
Aldersmith.. Ringworm and Alopecia Areata 3
Anderson .. Yellow Fever in the West Indies 3
Baber ..... Examination of the Nose 3
Beevor..... Diseases of the Nervous System 3
Campbell.... Hæmœna &c. 9
" .... Flushing and Morbid Blushing 9
" .... Nervous Organisation of Man &c..... 9
" .... Causation of Disease .. 9
Carter ..... Practical Medicine 3
Lothersen .. Obstetric Practice..... 3
Penwick .... Dyspepsia of Phthisis.. 6
" .... Disorders of Digestion 6
Legg ..... Examination of the Urine 3
Lewers..... Diseases of Women 3
Ringer & Sainsbury.. Handbook of Therapeutics..... 3
Roose .. .. Gout &c. 3
Wetherod .. Medical Microscopy.... 3
Weakes .... On Deafness &c..... 3

LONGMANS & CO.:—
Cooke's Tablets of Anatomy..... 1
Liveing .... Handbook on Diseases of the Skin..... 1
Spriggs .... The Life and Times of Thomas Wakley 8

MACMILLAN & CO.:—
A New System of Medicine 5
A System of Gynæcology 5
Biedermann. Electro-Physiology ... 5

PAGE

MACMILLAN—(Continued.)
Brunton .... Lectures on the Action of Medicines 5
" .... Text-book of Pharmacology &c. 5
" .... Disorders of Digestion 5
" .... Pharmacology &c. 5
" .... Materia Medica 5
" .... Modern Therapeutics .. 5
" .... Harvey's Work 5
Treves ..... Peritynhlitis &c. 7
Tubby ..... Deformities 6

PENTLAND, Y. J.:—
Williamson.. Diabetes Mellitus..... 9

REDDICK & CO.:—
Indian Medical Record 6

REDSHAW:—
Milton ..... Spermatorrhœa 7
Wood ..... Application of Trusses 7

SCIENTIFIC PRESS:—
Burdett's Hospitals and Charities, 1898 6

SIMPKIN, MARSHALL, & CO.:—
Startin..... Pharmacopœia of Dis. of the Skin..... 7

SPRAGUE & CO:—
Brust..... Orthopædic Apparatus Guide 6

THE LANCET:—
Difficulties under the Infectious Disease (Notification) Act, 1889 9

WOOD & CO. (NEW YORK):—
Medical Publishers 8

WRIGHT & CO. (BRISTOL):—
Saundby .... Renal Diseases 4

MEDICAL LIBRARIES &c.:—
Behnke—Stammering 8

OFFICIAL AND GENERAL ANNOUNCEMENTS.

APPOINTMENTS VACANT:—
Birkenhead &c. Children's Hospital .. 79
Blackburn Infirmary..... 79
Bradford Poor Law Union..... 78
Bristol Royal Hos. for Sick Children 78
Cancer Hospital 78
Cardiff Infirmary..... 79
Doncaster General Infirmary 79
Guest Hospital, Dudley 79
Hospital for Consumption &c..... 78
Liverpool Stanley Hospital 78
Manchester Ear Hospital 78
Middle Ward Isolation Hos., Lanark 79
Norfolk and Norwich Hospital 78
Ripon Dispensary 79
Royal Halifax Infirmary..... 79
Royal London Ophthalmic Hos. 78
Salisbury Infirmary 78
Secretary, Fenchurch-avenue 79
Shaftesbury House Private Asylum .. 79
Sunderland Infirmary 79
University College, London 78
West Riding Asylum, Menston 78
Wolverhampton &c General Hos. 78, 79
Yorkshire College, Leeds 79

ASSISTANCIES, MEDICAL:—
A. B., Sheffield..... 85
Adams & Parkes, Adelphi 84
Aitkin, Denton..... 84
Dr. F., Eccleshall 84
Dr. M., Fulham-road..... 85
Dunn, Preston 85
E., Manchester..... 85
Harper, Ledbury..... 85
 Izal, Manchester 84
Jones, Penrhiwceiber 84
Long, Wimbledon 84
March, Bradford..... 85
No. 210, L.O., Strand..... 84
No. 222, L.O., Strand..... 85
No. 256, L.O., Strand..... 84
No. 295, L.O., Strand..... 84
No. 303, L.O., Strand..... 84
No. 304, L.O., Strand..... 84
No. 305, L.O., Strand..... 84
No. 308, L.O., Strand..... 85
No. 309, L.O., Strand..... 85
No. 310, L.O., Strand..... 84
No. 311, L.O., Strand..... 84
No. 313, L.O., Strand..... 84
No. 314, L.O., Strand..... 85
No. 315, L.O., Strand..... 84
No. 316, L.O., Strand..... 84
No. 317, L.O., Strand..... 84
No. 318, L.O., Strand..... 84
No. 319, L.O., Strand..... 84
No. 320, L.O., Strand..... 84
No. 324, L.O., Strand..... 84
No. 326, L.O., Strand..... 85
No. 327, L.O., Strand..... 84
No. 329, L.O., Strand..... 85
No. 333, L.O., Strand..... 85
No. 334, L.O., Strand..... 85
No. 356, L.O., Strand..... 84
Shortridge, Honiton 85
Stocker, Strand 84

ASSISTANCIES—(Continued.)
Turner, Adelphi 84
W. W., New Romney 84

ASYLUMS, HOMES, &c.:—
Aberystwith, the Diarrits of Wales .. 78
Ashwood House, Kingswinford 78
Aston Hall, Warwickshire..... 73
Barnwood House Hospital..... 74
Bournemouth Hydropathic 77
Brentwood House Hospital..... 77
Clapham Common Home &c. 77
Clifton Grand Spa Hydro, Bristol 77
Coppice, The, Nottingham 74
Dalrymple Home, Rickmansworth .. 77
Dorchester Asylum 73
Exeter Asylum..... 74
Flower House, Catford..... 77
Gordon, Eythorne 77
Grove House, Church Stretton 74
Grove, The, Catton, Norwich 74
Haydock Lodge, Newton-le-Willows.. 75
High Shot House, Twickenham 77
Hitch, Mrs., Hollington 74
Huguenots, The, Wandsworth..... 74
Kingswood-park, near Bristol 75
Lady Superintendent, Croydon 77
M. H. G., L.O., Strand 77
Melbourne House, Leicester..... 74
Moat House, Tamworth 74
Moger, Carshalton 77
M. O. S., Bouverie-street 77
Northlands, Old Wandsworth 77
Northwoods House, Winterbourne .. 77
No. 145, L.O., Strand..... 77
No. 174, L.O., Strand..... 77
Overdale Asylum, Whitefield 77
Pendleton, Brighton 74
Perteau, Winchelsea 75
Resident Physician, Aylesbury 77
Smedley Hydropathy, Matlock 73
Southport Private Convalescent Home 73
Springfield House, Bedford 74
St. Andrew's Hospital, Northampton 74
St. Luke's Hospital, E.C. 74
Stocker, Lancaster-place..... 77
Stretton House, Church Stretton 74
Tower House, Leicester 74
Tower House, Westgate-on-Sea 75
Warneford Asylum, Oxford 74
West Malling-place, Kent 75
Women's Temp. Home, Sydenham .. 77
Wonford House, Exeter 77
Worthing 77
Wye House, Buxton 74
Wyke House, Isleworth..... 77

BATHS:—
Bath Petersthal 73
Baths of Homburg..... 76
Buxton Mineral Waters 76
Campbell 75
Kreuznach Baths 73
Neuenahr 76
Ragats-Pfäfers..... 75
Todtmoos 73
Uriage les Bains 73
Woodhall Spa Baths..... 75

COMPANIONS &c.:—
Colenso, Cromwell-road 78

FINANCIAL &c.:—
Birkbeck Bank..... 71
Equitable Reversionary Interest Soc. 71
Southall Bros. & Barclay, Ltd..... 17

HOTELS:—
Ilfracombe Hotel 71
St. Beatenberg Grand Hotel Victoria 78

HOUSE AND ESTATE AGENTS:—
Aldridge, Southampton-row 79
Dowsett & Co. Lincoln's-inn-fields .. 79
F. O. T., Sutton Courtenay..... 79
Kemp, Beaumont-street..... 79
Oldham, Whalley Range..... 79
Ridley, Burgh 79
Sutton, Cavendish-square 79
Swain, Notting-hill 79

CONSULTING-ROOMS:—
H. B. C., Piccadilly 79

LIFE AND FIRE ASSURANCES:—
Prudential 71
Union Assurance Society 71

MASSAGE:—
Nauheim Treatment in London 75
Society of Trained Masseuses 75

MEDICAL ACCOUNTANTS &c.:—
Kemble 83
Morris 83
Turner 83

MEDICAL AGENTS:—
Adams & Parkes 81
Lee & Martin 79
Manchester Medical &c. Assoc., Ltd. 79
Meedes, Herbert..... 83
Meedes, J. C. 82
Orridge..... 83
Peacock & Hadley 83
Scholastic, Clerical, & Med. Assoc. .. 80
Turner 81
Wilson..... 81

MEDICAL SCHOOLS (LONDON):—
Cooke's School of Anatomy 70

MEDICAL SCHOOLS (PROVINCIAL):—
New Veterinary College, Edin. 70

NURSING INSTITUTES:—
Baker-street Assoc. of Trained Nurses 72
Clapham &c. Nursing Institution 72
General Lying-in Hospital, Lambeth 75
General Nursing Institution 75
Hamilton Association 72
Hos. for Sick Children, Gt. Ormond-st 72
Leeds Trained Nurses' Institute..... 72
London Nurses' Association..... 75

NURSING INST.—(Continued.)
Male and Female Benefit Association 72
Male Nurses (Abstainers) Association 72
Male Nurses' Co-operation 72
Middlesex Hos. Trained Nurses' Inst. 72
Nurses' Co-operation, Portland-place 72
Queen Charlotte's Lying-in Hospital 73
St. John's House..... 72
Temperance Male and Female Assoc. 72
Wigmore Nurses' Co-operation 72
Wilson's Nursing Institute 71

OFFICIAL NOTICES:—
Army Medical Staff 70
Examination Hall 70
Indian Medical Service 70
Royal College of Physicians, London 70
Royal Institute of Public Health 70
Royal Westminster Opathalmic Hos. 70
St. John Ambulance Association 70
St. John's Hospital for Skin Dis. 70
West-end Pathological Laboratory .. 70

PARTNERSHIPS & PRACTICES:—
Haste, Pall-mall 84
Knox & Co., Broad-street 82
Livingston & Dickson, Edinburgh .. 85
No 259, L.O., Strand..... 85
No. 280, L.O., Strand..... 85
No 307, L.O., Strand..... 85
No 308, L.O., Strand..... 85
No 312, L.O., Strand..... 85
No 321, L.O., Strand..... 85
No 322, L.O., Strand..... 85
No 323, L.O., Strand..... 84
No 325, L.O., Strand..... 85
No 329, L.O., Strand..... 85
No 330, L.O., Strand..... 84
No 331, L.O., Strand..... 85
No. 332, L.O., Strand..... 84
No 335, L.O., Strand..... 85
No 337, L.O., Strand..... 84
No. 338, L.O., Strand..... 85

RAILWAY & STEAMSHIP CO.'S:—
Albion Steamship Co.—
Norway Cruises 71
New Zealand Shipping Company 71
Orient Co.—Pleasure Cruises 71
Royal Mail Steam Packet Company .. 71

SCHOOLS, PREPARATORY, &c.:—
Messiter, Burton-on-Trent..... 72
Pelican House School 71
Pockington School, Yorks 72
Scholastic, Clerical, and Med. Assoc 71

TUTORS AND LECTURERS:—
Fellowships 72
Jennings 72
Kerin 71
M.D 72
Tutor..... 72
Van Praagh 71
Weymouth..... 72

(For Index to Trade and Miscellaneous Advertisements see page 4.)

H. K. LEWIS'S PUBLICATIONS.

Just published, with 13 Plates and other Illustrations, crown 8vo, 10s. 6d.

DISEASES OF THE NERVOUS SYSTEM.

A HANDBOOK FOR STUDENTS AND PRACTITIONERS.

By CHARLES E. BEEVOR, M.D. Lond., F.R.C.P.,

Physician to the National Hospital for the Paralysed and Epileptic, the Great Northern Central Hospital, and the National Orthopædic Hospital.

[Lewis's Practical Series.

"The author is to be congratulated on having produced a treatise on nervous diseases which is likely to be as interesting to the general reader of medicine as to the specialist. The remarks on treatment are excellent and practical throughout. We feel sure that Dr. Beevor's book will be of the greatest value both to the student and to the practitioner."—BRITISH MEDICAL JOURNAL.

"It is a great pleasure to come across a work that we can so strongly advise our readers to purchase. It should certainly be in the library of every general practitioner."—QUARTERLY MEDICAL JOURNAL (SHEFFIELD).

"We have great pleasure in very cordially recommending this book as a handy and reliable manual for the study of diseases of the nervous system. The volume is remarkable for the conciseness and lucidity of its style throughout. We wish the book every success."—GLASGOW MEDICAL JOURNAL.

"This is a good clinical guide to diseases of the nervous system. In its description of facts it is accurate, and in regard to treatment it is safe."—THE HOSPITAL.

Just published, THIRTEENTH Edition, thoroughly revised, 8vo, 16s.

A HANDBOOK OF THERAPEUTICS.

By SYDNEY RINGER, M.D., F.R.S.,

Holme Professor of Clinical Medicine in University College; Physician to University College Hospital; and

HARRINGTON SAINSBURY, M.D., F.R.C.P.,

Physician to the Royal Free Hospital and the City of London Hospital for Diseases of the Chest, Victoria Park.

"We welcome a new edition of this familiar work, which still remains one of the most useful alike to advanced student and practitioner. The article on Serum Therapeutics is excellent. The admirable introduction on symptoms as a guide to prognosis and treatment ought to be studied by every practitioner."—LIVERPOOL MED.-CHIR. JOURNAL.

Just published, FIFTH Edition, thoroughly revised, with 4 Plates and 174 Illustrations, crown 8vo, 10s. 6d.

DISEASES OF WOMEN: a Practical Text-book.

By ARTHUR H. N. LEWERS, M.D.Lond.,

Obstetric Physician to the London Hospital, and Joint Teacher of Practical Midwifery at the London Hospital Medical School; Examiner in Midwifery and Diseases of Women at the Conjoint Board of the Royal College of Physicians, London, and Royal College of Surgeons, England, &c. *[Lewis's Practical Series.*

"This work can be recommended to practitioners and students as giving a concise view of the present state of gynæcological knowledge and practice."—THE LANCET.

"One of the safest guides upon diseases of women both for the practitioner and student."—BRITISH MEDICAL JOURNAL.

"Dr. Lewers has found a large demand for his popular treatise on gynæcology. Those who have ceased to be students will be interested in Dr. Lewers' report on his operation cases for cancer of the uterus. This edition will no doubt meet with continued favour at the hands of the profession."—BRITISH GYNÆCOLOGICAL JOURNAL.

"It is one of those interesting and practical records of an extensive individual experience in which English literature is specially rich, and it is thus eminently readable."—SCOTTISH MEDICAL AND SURGICAL JOURNAL.

SEVENTH Edition, crown 8vo, 10s.

ELEMENTS OF PRACTICAL MEDICINE.

By ALFRED H. CARTER, M.D. Lond., F.R.C.P. Lond.,

Professor of Therapeutics in Mason College, Birmingham; Senior Physician to the Queen's Hospital, Birmingham.

"It merits its popularity in that it contains accurate information. Thoroughly practical in its aim and sound in therapeutics."—THE LANCET.

"We can thoroughly recommend the work to all who stand in need of an introduction to medicine." EDINBURGH MEDICAL JOURNAL.

Just published, with numerous Illustrations, crown 8vo, 6s.

A Manual of Obstetric Practice for

STUDENTS and PRACTITIONERS. By Prof. A. DÜHRSSEN, M.D. Translated and Edited from the SIXTH German Edition by J. W. TAYLOR, F.R.C.S., and F. EDGE, M.D. Lond., M.R.C.P., F.R.C.S.

"We are grateful to the translators for introducing to us so extremely practical and clearly written a book. May be read with much interest and benefit by all."—BRITISH GYNÆCOLOGICAL JOURNAL.

FOURTH Edition, with Illustrations, 8vo, 10s. 6d.

On Deafness, Giddiness, and Noises in

the HEAD. By EDWARD WOAKES, M.D. Lond., Senior Aural Surgeon, London Hospital; Lecturer on Diseases of the Ear, London Hospital Medical College; assisted by CLAUDE WOAKES, M.R.C.S., L.R.C.P., Assistant Surgeon to the London Throat Hospital.

"It is clearly written, and contains much that is likely to be most useful from the point of view of treatment."—BRITISH MEDICAL JOURNAL.

SEVENTH Edition, crown 8vo, 4s. 6d.

Gout and its Relations to Diseases of the

LIVER and KIDNEYS. By ROBSON ROOSE, M.D., F.R.C.P.Ed.

"It is one of the clearest and most complete reviews, in a small space, of existing knowledge with regard to this disease which we remember to have read, and it may be strongly recommended to the study of the young practitioner."—BRITISH MEDICAL JOURNAL.

With Illustrations, small 8vo, 5s. 6d.

A Guide to the Examination of the Nose;

with REMARKS on the DIAGNOSIS of DISEASES of the NASAL CAVITIES. By B. CRESSWELL BABER, M.B.Lond., Surgeon to the Brighton and Sussex Throat and Ear Dispensary.

Just published, crown 8vo, 3s. 6d.

Yellow Fever in the West Indies. By Izett

ANDERSON, M.D. Edin., Extraordinary Member of the Royal Society, Edinburgh; Honorary Member of the Institute of Jamaica.

"The symptoms and course of the disease and the state of the urine in yellow fever are discussed; the observations regarding the latter point are valuable."—THE LANCET.

FOURTH Edition, entirely rewritten and enlarged, with new Illustrations, demy 8vo, 10s. 6d.

Ringworm and Alopecia Areata: their

Pathology, Diagnosis, and Treatment. By H. ALDERSMITH, M.B. Lond., F.R.C.S., Medical Officer, Christ's Hospital, London.

"It is certainly the most complete treatise on Ringworm which has yet appeared."—EDINBURGH MEDICAL JOURNAL.

"The work throughout is characterised by simplicity of style, directness of diction, and strong common sense. Every practitioner ought to possess and read it."—BRITISH JOURNAL OF DERMATOLOGY.

With Illustrations, crown 8vo, 9s.

Medical Microscopy: a Guide to the Use

of the MICROSCOPE in MEDICAL PRACTICE. By FRANK J. WETHERED, M.D., M.R.C.P., Medical Registrar to the Middlesex Hospital; Demonstrator of Practical Medicine at the Middlesex Hospital Medical Schools. *[Lewis's Practical Series.*

"This work is a very complete manual, containing all that a student need learn of the various modes of preparing and mounting sections, and of examining the fresh tissues and fluids of the body."—THE LANCET.

SEVENTH Edition, with Illustrations, fcap. 8vo, 3s. 6d.

A Guide to the Examination of the Urine.

By J. WICKHAM LEGG, F.R.C.P., formerly Assistant Physician to St. Bartholomew's Hospital, &c. Revised by H. LEWIS JONES, M.A., M.D., F.R.C.P.

INDEX—(CONTINUED).

TRADE AND MISCELLANEOUS ADVERTISEMENTS.

COVER.

CYCLES AND TRICYCLES:— PAGE
Gimson & Co. Cycle Saddle Co — Gimson Saddle iii

CHEMISTS AND DRUGGISTS:—
Squire & Sons— Chemical Food iv
Syrup of Senna iv
Confectio Rosæ Gallicæ iv
Kassk Elixir iv
Liquor Morphiæ Bimeconatis iv
Lobilia iv

FILTERS:—
Defries & Sons— Pasteur Chamberland Filter iii

FOODS:—
Wellcome & Sons— Humanised Milk &c. i

MED. AND SURG. APPLIANCES:—
Macfarlan & Co — Antiseptic Dressings, &c. iii

SANITARY APPLIANCES &c.:—
Defries & Sons— Sanitas Disinfection Appliances iii
Steam Stoves iii
Sprayers iii

CYCLES AND TRICYCLES:—
Cooper—"Coopee" Cycles 10
Gamage—Cocoa Saddle 10
Humber & Co., Ltd.— Humber Cycles 10
Longford Wire Iron & Steel Co., Ltd.— Wire Cycle Saddles 88
Metropolitan Machinist Co — Juno Cycles 11

BOTTLE MERCHANTS:—
Isaacs 9
Islington Glass Bottle Company 9
Kilner Brothers 9

CARRIAGES, HORSES, &c.:—
Aldridge's Horse Repository 10
Cortland Wagon Co — Cortland American Carriages 10
Gastgas— Triano Single Broughams .. 11
Imperial Accident &c. Insurance Co — Horse Insurance 11
Mayhorn & Son— County Victoria 11
Minor Paper 11
Gentleman's Belvoir Cart 1
Offord & Sons— Light Single Broughams 10
Reading—Improved Carriages 10

CHEMISTS AND DRUGGISTS:—
Allen & Hanburys— Castor Oil 57
Bynol 29
Bynol-Hypophosphites 35
Saccharin Tablets 32
Cascara Sagrada Tablets 32
Sulphonal Tablets 32
Phenacetin Tablets 32
Angier Chemical Co — Petroleum Emulsion 48
Armour & Co — Desiccated Sheep's Thyroid 45
Thyroid Tablets 45
Elixir Thyroid 45
Bailey & Watson— Liq. Scoalis Concent. 59
Blake, Sandford & Blake— Pure Guaiacum Capsules 56
Brin's Oxygen Co —Brin's Oxygen .. 57
Bullock & Co — Pepsina Porci 57
Acid Glycerine of Pepsine 57
Burroughs, Burbridges, & Co.— Maltopepsyn 57
Burroughs, Wellcome, & Co.— Lanoline 34
Toilet Lanoline 36
Lanoline Toilet Soap 33

CHEMISTS—(Continued.)
Burroughs, Wellcome, & Co.— Kepler Malt Products 36
Kepler Malt Extract 36
Kepler Solution 36
Soloid Carbolic Acid 39
Tabloid Ophthalmic Drugs 39
Cox's Tasteless Pills 49
Dinneford's Fluid Magnesia 56
Distillers Co., Ltd — D. C. L. Malt Extract 47
Dr. Zed's Syrup &c. of Codein &c. 58
Elberfeld Farben Fabriken Co.— Bayer's Pharmaceutical Preparations 19
Protargol 14
Phenacetine 44
Somatose 18
Iron-Somatose 18
Fairchild Bros. & Foster— Pepsencia 35
Fuller's, Ltd.—Fuller's Substitute 59
Gale & Co.— Liquor Bismuthi et Pepsin 56
Elixir Manna 56
Giles, Schacht & Co.— Pepsina Liquida 40
Pepsina Liq. c. Bismutho 40
Pepsina Liq. c. Euonymin 40
Liquor Bismuthi 40
Liq. Bismuthi Sedativus 40
Bi-Digestive 40
Grillon's Tamar Indien 56
Hewlett & Son— Liq. Santal Flav. c. Buchu et Cubeba 56
Hoff's Malt Extract 58
Ichthyol Co.— Ichthyol 48
Ichthalbin 48
Joyce' Sanitary Compounds Co.— Medical Preparations 31
Jozeau- Robin's Pep'onate of Iron . 41
Kreochyle Co.—Barff Boro-Glyceride 56
Kuhn— Colchi-Sal 46
Betuli-Ol 46
Tannalbin 46
Papain-Finkler 46
Maltine Manufacturing Co.— Maltine 37
Newbery & Sons— Ingluvin 20
Tono Bumbal Cordial 20
Richards— Lactopeptine 49
Rio Chemical Co —Celerina 50
Robbins & Co.—Methylene &c. 53
Roberts & Co — Bromidia 24
Salamon & Co.—Purest Chloroform .. 59
Sanger & Son— Nutrient Suppositories 58
Taylor—Citrolits 58
Vinolia Co., Ltd — Premier Vinolia Soap &c. 25
Zimmermann—Schering's Sanose 57

FILTERS:—
Berkefeld Filter Co., Ltd.— Berkefeld Filter 66

FOODS:—
Allen & Hanburys— Allenburys Milk Food 31
Allenburys Malted Food 31
Anglo-Swiss Condensed Milk Co.— Milkmaid Brand Condensed Milk 16
Ideal Milk 18
Aylesbury Dairy Company— Humanised Milk 34
Armour & Co.— Bone Marrow 45
Extract of Red Bone Marrow 45
Beanes & Co — Diastased Farina Food 59
Bellis- Real Turtle Jelly 63
Benger's Food 23
Blatchley's Diabetic Preparations.... 62
Bonthron & Co.—Gluten Bread &c. .. 63
Bovril (Limited)— Bovril 43
Invalid Bovril 43
Virol 43
Butler & Crispe— Denseyer's Peptones of Beef 59
Cadbury's Cocoa 55

FOODS—(Continued.)
Callard & Co.—Diabetic Foods 63
Chivers' Jellies 65
Elberfeld Farben Fabriken Co.— Milk-Somatose 18
Fairchild Bros. & Foster— Whey 35
Junket 35
Hovis Bread-Flour Co., Ltd — Hovis Bread and Rusks 42
Heerlein's Milk 54
Rice Self-Raising Flour Co.— Rice Flour 59
Savory & Moore— Best Food for Infants 27
Peptonised Milk 26
Peptonised Cocoa and Milk 26
Servus Co.—Hausen's Oatmeal Cocoa 62
Smith & Co.—Hall's Wine 62
Van Abbott & Sons— Foods for Diabetes and Obesity .. 59
Vejos 55
Vi-Cocoa Co.—Vi-Cocoa 61
Vimbos 54

FURNITURE &c.:—
Carter, J.—Invalid Furniture 13
Shaw & Co.—Bath Chairs &c. 11

HOSIERS &c.:—
British Hygienic Woollen Co.— Pure Wool Underclothing &c. 11

MED. AND SURG. APPLIANCES:—
Bailey & Son— Patent Abdominal Belts 13
Clinical Thermometers 13
Domen Belts Co.—Domen Belts 66
Down Bros.— Electric Hand Lamp 15
Metal Aseptic Hypodermic Syringe 15
Ferris & Co — Ever-ready Caddy 23
" Cabinet 23
Holland—Instep Arch Sock 69
Manley— Abdominal Belts &c. 68
Lattice Elastic Stocking Co.— Lattice Elastic Stockings &c ... 69
Longford Wire Iron & Steel Co., Ltd.— Wood's Patent Galvanised Spring Steel Wire Mattress 68
Matto, Limited—The Matto Chair 9
Maw, Son, & Thompson— Stethoscope 14
Antiseptic Dressings 14
Millikin & Lawley—Osteology &c. 68
Milne— Ligatures 66
Lister's Double Cyanide Gauze .. 66
Antiseptic Dressings 66
Plaster of Paris Bandages 66
Ribbon Gauze 66
Pococks Tubular Water Bed 66
Pope & Plante— Elastic Stockings &c. 12
Abdominal Supporting Belts 12
Robinson & Sons—Gamgee Tissue .. 9
Salmon—Abdominal Belts &c. 65
" Obstetric Binder 65
Scales & Co.—Medical Bag 11
Sykes, Josephine, & Co.— Surgical Corsets &c. 69

MINERAL WATERS:—
Æsculap Water Co.—Æsculap 51
Apollinaris Company— Apenta 42
C.A.s. W.A.L. Waters 60
Contrexeville Pavillon 60
Cooper & Co.— Oxycarbonated Mineral Waters .. 61
Davis—Natural Mineral Waters 64
" Pure Aërated Waters 64
Franz Josef Aperient Water 61
Gazalla—Vals 60
Hoey & Son—Aërated Lysidine Water 64
Hunyadi Janos 55
Ingram & Royle, Ltd.— Vichy 60
Riddle & Co.— Stower's Lime Juice Cordial 63
Rose—Aërated Table Waters 64
St. Ronan's Wells Co.—St. Ronan's .. 61
Voigt & Co.— Wiesbaden Goutwater 60
Zimmerman—Levico Water 66

OPTICIANS:—
Curry & Paxton—Glasses 8
Rose, Ltd.—Spiral Clips &c. 7

PRINTERS AND ENGRAVERS:—
Cooke & Co.—Brass Name Plates ... 8
Cullerton— Heraldry &c. 5
Brass Door Plates 5

SANITARY APPLIANCES &c.:—
Allen & Hanburys— Medical Inal 3
Inal Preparations 3
Condy's Fluid 2
Joyce Sanitary Compounds Co., Ltd.— Medical Preparations 3
Lever Brothers, Limited— Lifebuoy Soap 2
Sanitary Wood Wool Co.— Hartmann's Guinea Outfit for Accouchements &c. 6
" Hygienic Wood Wool Towelettes 6
" Wood Wool Sheets .. 6
Sanitas Co.— Sanitas Fluid Soap Powder 5

STATIONERY &c.:—
Burge, Warren, & Ridgley— British Stylographic Pens 8
Jewel Pen Co.— Calcos Stylographic Pen 8
Richardson Bros. & Co.—Usual Bond 5

SURGICAL INSTRUMENTS &c.:—
Down Bros.—Surgical Bag 15
Evans & Wormull— Aseptic Pocket Instruments 6

TAILORS, BOOTMAKERS, &c.:—
Dowie & Marshall—Rosy Roses 5
Fisher & Sons— Frock Coat and Vest 6
Morning Coat and Vest 6
Suit Alike 6
Trousers 6
Spring Overcoat 6
Dress Suit 6

TOBACCO, CIGARS, &c.:—
Benson & Co.—Foreign Cigars 8

VACCINE LYMPH:—
Faulkner's and The British Calf Vaccine Institutions 2
Hime's Pure Calf Vaccine 12
Jenner Institute for Calf Lymph .. 12
Markt Bros. & Co.— Mariemont's Glycerinated Calf Vaccine 2
Rebman—Pure Calf Lymph 12
Renner's Calf Lymph Establishment 12

WALL-PAPERS &c.:—
Woollams & Co.'s Non-Arsenical Wall-papers 1

WINES, BEER, SPIRITS, &c.:—
Allsopp & Sons' Pale Ale 6
Buck & Co.—"G B" Diabetic Whisky 3
Dewar & Sons— Anti-Diabetic Whisky 6
Douglas & Mason—Scotch Whisky.. 6
Gallais—Saint-Raphael 6
Grant & Sons—Onomesto 6
Harvey & Co.— Sugar-free Pale Ale 6
Keith's "Cadsow" Whisky 6
Kinahan's LL and Glenlola Whiskies 6
Mountjoy Brewery, Ltd — Nourishing Stout 6
Pease, Son & Co.—R.O.S. Whisky... 6
Powneeby & Co.—Wines &c. 6
Waltham Bros.—S.N. Stout 6
" Malt-guinea Ale 6

MISCELLANEOUS:—
Box 1788, Bradford—Tennis Outfit.... 35
Kropp's Razors 8
Tod & Co.—Doctor's Requisites &c. .. 6

INDIAN MEDICAL RECORD.

A Fortnightly Journal of Medicine, Surgery, Obstetrics, and Sanitation.

EDITED BY JAMES R. WALLACE, M.D., F.R.C.S.

THE LEADING ORGAN OF THE MEDICAL PROFESSION THROUGHOUT THE INDIAN EMPIRE.

Contains ORIGINAL ARTICLES, A MIRROR OF PRACTICE, EDITORIALS, COMMENTS AND NEWS, "CURRENT MEDICAL LITERATURE," CORRESPONDENCE, BOOK REVIEWS AND TRADE NOTICES, COMPLETE GOVERNMENT GAZETTE, &c. &c.

THE "RECORD" PRESS, CALCUTTA and LONDON

A. REDDICK & CO., 12, Furnival St., Holborn, E.C.

By ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Professor of Medicine, Mason University College; Physician to the General Hospital, Birmingham.

Lectures on Renal and Urinary DISEASES. Price 10s. 6d.

Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent, & Co., Ltd.

Now ready, price 5s.

The South African Climate.

Embracing Climatology and Balneology, and Pointing out the Advantages, Peculiarities, and Capabilities of the Country as a Health Resort—more particularly with reference to Affections of the Chest. By WILLIAM C. SCHOLTZ, M.D.Edin., of Cape Town.

"A book with this title is what medical men, both in South Africa and in Europe, have long been on the look out for, and there is no doubt that any reliable information upon the subject will be always welcome to the members of the medical profession."—SOUTH AFRICAN MEDICAL JOURNAL.

Cassell & Company, Ltd., London, and all Booksellers.

MACMILLAN & CO.'S LIST.

VOLUME V. NOW READY.

A NEW SYSTEM OF MEDICINE.

BY MANY WRITERS.

Edited by Professor T. CLIFFORD ALLBUTT, M.D., F.R.S., &c.

Demy 8vo, 25s. net each Volume.

VOL. I.—PROLEGOMENA AND INFECTIOUS DISEASES.

THE LANCET.—"Will most certainly be found to be of high value to the student and practitioner, and we await the appearance of the remaining volumes with great interest."

VOL. II.—INFECTIOUS DISEASES *(continued)*, INTOXICATIONS AND INTERNAL PARASITES.

BRITISH MEDICAL JOURNAL.—"The high standard of the first volume is well maintained, and the title, 'A SYSTEM OF MEDICINE,' is so fully justified that the editor must be heartily congratulated on the success of his constant labours and anxieties."

VOL. III.—CERTAIN GENERAL DISEASES, DISEASES OF THE STOMACH AND BOWELS.

TIMES.—"The high standard of the previous volumes is well maintained."

BRITISH MEDICAL JOURNAL.—"A worthy successor to the previous instalments, and remarkable for the combination of conciseness and completeness in its articles."

VOL. IV.—DISEASES OF LIVER AND OTHER GLANDS, DISEASES OF THE THROAT

BRITISH MEDICAL JOURNAL.—"Thoroughly maintains the high standard of excellence and efficiency that has characterised it from the outset."

VOL. V.—DISEASES OF THE RESPIRATORY SYSTEM, DISEASES OF THE CIRCULATORY SYSTEM.

UNIFORM WITH THE ABOVE.

A SYSTEM OF GYNÆCOLOGY.

BY MANY WRITERS.

Edited by T. CLIFFORD ALLBUTT, M.A., M.D., F.R.S., and W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.

Demy 8vo, 25s. net.

PRACTITIONER.—"Will no doubt be widely studied by members of the profession who are interested in this branch of medicine."

EDINBURGH MEDICAL JOURNAL.—"Will undoubtedly take an important place in the ranks of modern gynæcological literature."

Volume II. Now ready.

ELECTRO-PHYSIOLOGY. By W. BIEDERMANN,

Professor of Physiology in Jena. Translated by FRANCIS A. WELBY. With 149 Figures. Vol. II., 8vo, 17s. net.

NATURE.—"The second volume is equal to the first in scientific interest and importance, and the technical difficulties of rendering it into English have been overcome with even greater success. ..... The student who desires to appreciate the experimental basis of Hering's doctrine cannot have a better guide than is here provided for him. It must not, however, be supposed that the work is mainly theoretical; on the contrary, on the subjects of which it treats, it is the best 'reference-book' that the physiological worker has at present at his disposal."

Now Ready, demy 8vo, half bound, 17s. net.

DEFORMITIES.

A TREATISE ON ORTHOPÆDIC SURGERY. By A. H. TUBBY, M.S. Lond., F.R.C.S. Eng. Illustrated by 15 Plates and 300 Figures.

BRITISH MEDICAL JOURNAL.—"Standard work on the subject in the English language."

GUY'S HOSPITAL GAZETTE.—"The printing and get-up are excellent. We have no hesitation in strongly recommending this volume to the young practitioner and advanced students for whom it was written."

CLINICAL JOURNAL.—"A book which we confidently anticipate will be the work of reference on the subject of Deformity."

Works by T. LAUDER BRUNTON, M.D., &c.

A TEXT-BOOK OF PHARMACOLOGY, THERAPEUTICS, and MATERIA MEDICA. Adapted to the United States Pharmacopœia by F. H. WILLIAMS, M.D., Boston, Mass. Third Edition, containing the Additions, 1891, to the British Pharmacopœia. 8vo, 21s. In 2 Vols., 22s. 6d.

ON DISORDERS OF DIGESTION, their CONSEQUENCES and TREATMENT. 8vo, 10s. 6d.

PHARMACOLOGY & THERAPEUTICS; or, MEDICINE PAST and PRESENT. The Goulstonian Lectures, delivered before the Royal College of Physicians in 1877. Cr. 8vo, 6s.

TABLES OF MATERIA MEDICA. A Companion to the Materia Medica Museum. New Edition, 8vo, 5s.

AN INTRODUCTION TO MODERN THERAPEUTICS. Being the Croonian Lectures on the Relationship between Chemical Structure and Physiological Action in Relation to the Prevention, Control, and Cure of Disease. Delivered before the Royal College of Physicians in London, June, 1889. 8vo, 3s. 6d. net.

MODERN DEVELOPMENTS OF HARVEY'S WORK. The Harveian Oration, 1894. Delivered before the Royal College of Physicians, 18th October, 1894. 8vo, 2s.

LECTURES ON THE ACTION OF MEDI- CINES. Being the Course of Lectures on Pharmacology and Therapeutics delivered at St. Bartholomew's Hospital during the Summer Session 1896. 8vo, 10s. 6d. net.

MACMILLAN & CO., LIMITED, LONDON.

NINTH YEAR. Crown 8vo, over 1000 pp., cloth gilt. Price 5s.

BURDETT'S
HOSPITALS AND CHARITIES, 1898.

The YEAR-BOOK of PHILANTHROPY and HOSPITAL ANNUAL.

Contains a Review of the Position and Requirements, and Chapters on the Management, Revenue, and Cost of the Charities.

AN EXHAUSTIVE RECORD OF HOSPITAL WORK FOR THE YEAR.

It also contains a full account of the Effects of the Diamond Jubilee on the Resources of the Voluntary Charities, together with the facts showing the Maximum Yield of Charitable Contributions.

Edited by **SIR HENRY BURDETT, K.C.B.**

"The book is one which not only provides an indispensable work of reference for hospital experts, but is invaluable to all interested in philanthropic work."—DAILY TELEGRAPH.

London: THE SCIENTIFIC PRESS, Limited, 28 & 29, Southampton Street, Strand, W.C.



Founded 1804

WILLIAM WOOD AND COMPANY

MEDICAL PUBLISHERS

43, 45, 47 East Tenth Street, New York

Medical Authors are invited to consider the superior advantages of this house for the manufacture and publication of Medical Books in America.

The same terms offered as to native authors. Copyright protection can only be had in the United States when works are printed there. Correspondence is solicited.

IN PREPARATION.

SEVENTEENTH EDITION.

SQUIRE'S COMPANION
TO THE
BRITISH PHARMACOPŒIA.

London: J. & A. CHURCHILL, 7, Gt. Marlborough-street, W.

By W. SOLTAU FENWICK, M.D., M.R.C.P.,
Physician to Out-Patients at the Evelina Hospital for Sick Children; Physician to the London Temperance Hospital.

DISORDERS OF DIGESTION IN INFANCY & CHILDHOOD.

With numerous Illustrations, demy 8vo, 10s. 6d.

By the same Author.

THE DYSPEPSIA OF PHTHISIS.

Demy 8vo, 6s.

Being the FIRST TWO VOLUMES of a SERIES of MONOGRAPHS on DISEASES of the STOMACH.

London: H. K. Lewis, 136, Gower-street, W.C.

By Dr. George Harley, F.R.S.

	s.	d.
Diseases of the Liver, with and without Jaundice ... price	21	0
Sounding for Gall-stones, and their Symptomatology "	0	6
Extrusion of Gall-stones by Digital Manipulation ... "	1	6

J. & A. Churchill, 7, Great Marlborough-street, W.

By C. MANSELL MOULLIN, M.D. Oxon., F.R.C.S.
Surgeon and Lecturer on Surgery at the London Hospital; Examiner in Surgery at the University of Oxford.

THE TREATMENT OF SARCOMA AND CARCINOMA
BY INJECTIONS OF MIXED TOXINS.

With an Appendix of Cases.

Demy 8vo, price 3s. 6d. net.

J. Bale, Sons, and Danielsson, Ltd., 85-89, Great Titchfield Street Oxford Street, London, W.

Profusely Illustrated, price 10s. 6d.

A GUIDE TO THE SELECTION AND ADAPTATION OF
ORTHOPÆDIC APPARATUS.

With a Detailed Description of their Salient Points.

By F. GUSTAV ERNST,
Orthopædic Mechanician.

"The illustrations of this work are excellent. The descriptions of the instruments are also good."—THE LANCET.

".....We cannot but admire the ingenuity and skill shown in the instruments illustrated. Gentlemen who make a speciality of correcting deformities of the limbs or trunk will find the book a useful one for reference on the subject of apparatus."—MEDICAL PRESS.

".....It is manifest, from the cleverly-designed apparatus illustrated and explained in this book, that Mr. Ernst is a thorough master of his vocation; and surgeons who may require mechanical support for their patients might consult Mr. Ernst's 'Guide' with great profit."—THE HOSPITAL GAZETTE.

SPRAGUE & Co., 22, Martin's-lane, Cannon-street, E.C.

Now ready, price 1s.

Application of Trusses to Herniæ.

Clinical Lecture delivered at King's College Hospital. By the late JOHN WOOD, F.R.S., F.R.C.S., Professor of Clinical Surgery at King's College, Senior Surgeon to King's College Hospital. Reprinted from "Medical Examiner," and illustrated by Matthews Brothers, Surgical Instrument Makers, 10, New Oxford-street, W.C.
London: Henry Renshaw, 356, Strand.

Now ready, price 2s. 6d., Fourth Edition.

A Pharmacopœia of Diseases of the SKIN, containing a Classification, Rules of Diet, Baths, Concise Formulæ, and Therapeutical Index.
By JAMES START IN,
Senior Surgeon and Lecturer to the London Skin Hospital, Fitzroy-square, W.
Bristol: Wright & Co. London: Simpkin, Marshall, & Company, Ltd.

Now ready, Twelfth Edition, price 10s. 6d.

Spermatorrhœa; its Results and COMPLICATIONS. Enlarged and reprinted from the original papers published in THE LANCET for 1852, and the "Medical Circular" for 1856. By J. L. MILTON, Surgeon to St. John's Hospital for Diseases of the Skin. Twelfth Edition, Illustrated with Engravings.

"To those desirous of acquiring a scientific knowledge of this affection, together with its treatment, we most heartily recommend this excellent treatise on the subject."—CANADA MED. AND SURG. JOUR. "The work is clearly and intelligibly written, and supplies a want."—GLASGOW MED. JOUR. "The treatment especially is founded on common sense in many important particulars."—EDIN. MED. JOUR. "We cordially recognise the completeness of his monograph."—MED. EXAM. "Should be read by every practitioner." "We earnestly commend this book."—N.Y. MED. JOUR.
London: Henry Renshaw, 356, Strand, W.C.

Crown 8vo, cloth, 1s.

HEART DISEASE AND THE NAUHEIM TREATMENT.

SECOND EDITION. With a NEW CHAPTER on REST.
By JOSEPH KIDD, M.D.,
Author of "THE LAWS OF THERAPEUTICS," &c.

London: HODDER & STOUGHTON, 27, Paternoster-row.

Just published, price 12s. 6d.

DISEASES OF THE JOINTS & SPINE.

NEW EDITION.
By HOWARD MARSH,
Surgeon to, and Joint Lecturer on Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Hospital for Sick Children; Examiner in Surgery at the University of Cambridge.

"It is clear, well arranged, full of practical work, and excellent alike for reading and for reference. The chapters on Charcot's disease, on bone-setters, and on the different forms of epiphysitis, are models of good clinical teaching: and the chapters on diseases of the spine, now first published, are admirable. The illustrations are well chosen; the whole book is the outcome of wide experience, careful observation, and what is called 'surgical instinct.'"—BRIT. MED. JOUR.

London: CASSELL & Co.

By FREDERICK TREVES, F.R.C.S.,
Surgeon to the London Hospital;
Surgeon in Ordinary to H.R.H. the Duke of York.

PERITYPHLITIS AND ITS VARIETIES:

THEIR PATHOLOGY, CLINICAL MANIFESTATIONS, AND TREATMENT.
(Reprinted from CLIFFORD ALLBUTT'S "SYSTEM OF MEDICINE.")
Price Half a Crown.
Macmillan & Co.

By the same Author.

PERITONITIS.

ITS CAUSES, SYMPTOMS, AND TREATMENT.
(The Lettsomian Lectures, 1894.) Price 2s. 6d.
Bale & Sons, Great Titchfield-street, W.

By the same Author.

INTESTINAL OBSTRUCTION:

ITS VARIETIES, WITH THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT.
(Jacksonian Prize Essay.) An Entirely New Edition in Preparation.
Cassell & Co., London.

Cassell & Company's Announcements.

A REVISED & ENLARGED EDITION.

Ready in a few days, price 7s. 6d.

ELEMENTS OF HISTOLOGY.

BY
E. KLEIN, M.D., F.R.S.,
LECTURER ON GENERAL ANATOMY AND PHYSIOLOGY,
AND
J. S. EDKINS, M.A., M.B.,
JOINT LECTURER AND DEMONSTRATOR OF PHYSIOLOGY IN THE MEDICAL SCHOOL OF ST. BARTHOLOMEW'S HOSPITAL, LONDON.

WITH 296 ILLUSTRATIONS.

EXTRACT FROM THE PREFACE TO THE REVISED AND ENLARGED EDITION:—

"Since the last edition of this book in 1889, considerable additions have been made to the knowledge of minute structural anatomy. The progress in the knowledge of the structure and life of the cell and nucleus, the remarkable discoveries in the structure of the central nervous system and sense organs—introduced by the method of Golgi and followed up by the brilliant work of Ramón y Cajal, Kölliker, Lenhossek, Retzius, and others—have made it necessary to revise and to make considerable additions to the chapters dealing with these organs. While care has been taken to correct and amplify other parts of the book, the chapters on the Central Nervous System have been practically rewritten.

"The task of rewriting and re-editing the chapters on the Brain and Medulla and on the Alimentary Canal has devolved upon my colleague Dr. Edkins, who is now associated with me as joint-author.

"While a large number of the Illustrations of the former edition have been retained, a considerable number has been added."

NEW AND RECENT VOLUMES.

Now Ready. Price 10s. 6d.

TROPICAL DISEASES. A Manual of the Diseases of Warm Climates. By PATRICK MANSON, M.D., LL.D. Aberd., Fellow of the Royal College of Physicians, London; Lecturer on Tropical Diseases at St. George's Hospital and Charing Cross Hospital Medical Schools; Medical Adviser to the Colonial Office and Crown Agents for the Colonies. With Two Coloured Plates and 88 Illustrations.

Now Ready. Price 7s. 6d.

RINGWORM IN THE LIGHT OF RECENT Research: Pathology, Treatment, Prophylaxis. By MALCOLM MORRIS, Surgeon to the Skin Department, St. Mary's Hospital. With 22 Micro-photographs and a Coloured Plate.

Now Ready. Price 9s.

CLINICAL METHODS: a Guide to the Practical Study of Medicine. By ROBERT HUTCHISON, M.D., M.R.C.P., and HARRY RAINY, F.R.C.P.Ed., F.R.C.S.E. With 137 Illustrations and 8 Coloured Plates.

Complete in Two Volumes. Price 48s.

A SYSTEM OF SURGERY. Edited by FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Surgery at, the London Hospital; Examiner in Surgery at the University of Cambridge. With Contributions by Eminent Authorities. Each Volume contains Two Coloured Plates and several Hundred Original Woodcut Illustrations by CHAS. BERJEAU, F.L.S., and others.

Now Ready. Price 25s.

DISEASES OF WOMEN. A Clinical Guide to their Diagnosis and Treatment. By GEORGE ERNEST HERMAN, M.B.Lond., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; Examiner in Midwifery to the Universities of London and Oxford; late President of the Obstetrical Society of London and of the Hunterian Society; and Examiner in Midwifery to the Royal College of Surgeons, &c., &c. With 252 Illustrations.

**** *A Catalogue of Cassell & Company's MEDICAL and CLINICAL MANUALS will be sent post-free on application.*

CASSELL & COMPANY, LIMITED, LUDGATE HILL, LONDON.

With 2 Portraits, 8vo, pp. xxii., 510, price 18s.

THE LIFE AND TIMES OF THOMAS WAKLEY,

By S. SQUIRE SPRIGGE, M.B.Cantab.

"The book is tersely and clearly written, and its interest never flags. It puts before us a vivid picture of a typical Englishman—a man of untiring energy, of sterling honesty, and of dauntless courage—who found certain duties lying before him to be done, and who applied himself to them with all his might."—TIMES.

"Will be read with considerable interest by the *laudatores temporis acti* who are old enough to remember the personality of the most ardent reformer, passionate and fluent orator, and powerful writer for the press of the second quarter of the current century. ..... His feats of derring-do have been appreciatively recorded in Dr. Sprigge's ably-written biography."—DAILY TELEGRAPH.

"Dr. Sprigge has shown great skill in unravelling the three-fold strand that makes up the bulk of Wakley's life. He presents a perfectly clear picture of a noteworthy man who lived in stirring times ..... and deserves to be gratefully remembered by every medical man in the United Kingdom."—MORNING POST.

"Mr. Wakley's biographer has done his work skilfully, spiritedly, and well, and his pages will be read with equal interest by the medical man, the layman, and the journalist, who in this stirring life story will find example and encouragement of the highest kind."—DAILY CHRONICLE.

"His (Thomas Wakley's) career was one of immense activity, and no small part of it was spent in the courageous championship of political and social reforms of importance. It was well, therefore, that we should have a fuller and more authoritative biography than we have yet possessed of one who was from many points of view a notable man in his time. The task of writing it could hardly have fallen into better hands than those of Dr. Squire Sprigge."—DAILY NEWS.

"His biographer has executed his task with remarkable skill and discernment. ..... Whatever our politics we can only find admiration for the pluck, perseverance, and honesty of the greatest of medical reformers."—ST. JAMES'S GAZETTE.

"A man whose impress on his own and on our age cannot easily be over-estimated."—PALL MALL GAZETTE.

"A really good book."—WESTMINSTER GAZETTE.

"A biography of unusual attractiveness both as monograph and as history."—GLOBE.

"A very curious picture of the state of the medical profession during the first sixty years of this century."—ECHO.

"No man better deserves a biographical monument than Thomas Wakley, who may be regarded as the real founder of medical journalism in this country, while his courage, original genius, and passion for reform greatly advanced many important professional and social problems, of some of which, indeed, he at once furnished the solution. Wakley is the leading figure in the medical history of this century, and this biographical record is a volume of great historical importance, while it furnishes a vivid and living picture of one of the greatest, if not the greatest, of our medical reformers. The volume is carefully prepared from authentic records and is written in a sympathetic spirit and shows great literary capacity."—BRITISH MEDICAL JOURNAL.

"The most intensely interesting medical biography of the century."—MEDICAL PRESS AND CIRCULAR.

"He (Wakley) was an energetic reformer, wholly honest, in the main sensible, in many things before his time. ..... Mr. Squire Sprigge has done his work very well."—SPECTATOR.

"An interesting life of a man who certainly deserved a full and accurate biography. ..... Dr. Sprigge has described his (Wakley's) numerous controversies with singular accuracy and moderation."—ATHENÆUM.

"We are grateful to Dr. Sprigge for his judicious and clear presentment of a man whom it is good for all of us to know; a man whose single aim in life was to right injustice and to combat tyranny."—SPEAKER.

"Thoroughly well-written, not overloaded with details or entangled in controversies, but giving a very interesting account not only of a very remarkable man, but of the Radicalism which has been such an important factor in the constitutional history of England."—GUARDIAN.

"A worthy memorial."—CHRISTIAN WORLD.

"Mr. Wakley was a very remarkable person. ..... His career deserved to be told, and Mr. Sprigge has told it very well. The volume is very interesting indeed."—ARMY AND NAVY GAZETTE.

"Well written, simple, and graphic."—ACADEMY.

"Alike as legislator, coroner, doctor, journalist, pioneer of enlightened methods, and crusader against abuses, Thomas Wakley deserved well of posterity, and this welcome biography is a worthy tribute to the memory of one who was 'ever a fighter' but whose pugnacity and whose powerful intellect were invariably exercised in the cause of honesty and justice."—WORLD.

"A most interesting biography."—TRUTH.

"An able and sympathetic ..... account of its hero's services to the world. ..... To read Mr. Sprigge's book, in short, is to see what an immense power for good may be wielded by a high-souled and able man who devotes his life to one great purpose."—MANCHESTER GUARDIAN.

"A most interesting book. ..... His (Wakley's) 'Life' should find a place in every public library in the land."—NEWCASTLE CHRONICLE.

"Dr. Sprigge has performed his congenial task with ability and good taste."—MANCHESTER CITY NEWS.

"Dr. S. Squire Sprigge is no mere panegyrist. ..... It is a pity perhaps that Wakley's biography appears more than thirty years after his death. But if it is sadly belated it is so from a creditable motive. To have written the life of Thomas Wakley much sooner would have incurred the chance of causing pain to many people. Now that it is done the work has been done thoroughly."—SCOTSMAN.

"We must congratulate Dr. Sprigge on the excellent use he has made of the materials. These records of a useful life, commenced more than a hundred years ago, cannot fail to deeply interest not only the medical faculty, but the general reader and the student of modern history."—SHEFFIELD INDEPENDENT.

"He (Thomas Wakley) was an honest, restless, fearless man, and the sworn foe of abuses medical and political. He rendered signal service in both spheres, and the oblivion which has overtaken his memory is altogether undeserved. ..... An estimate of a reformer who served his day and generation with courage and who, in spite of his foibles, was a genuine lover of his fellow men."—LEEDS MERCURY.

"His life was one which deserved to be put on record, and the full and ample exposition in this volume will do much to make known to posterity the name and work of one who did conspicuous service to his generation."—BRADFORD OBSERVER.

"Gives a very complete picture of the man and his career and a highly interesting account of the conditions of the medical profession which prompted him to the work of reform ..... The book is a document essential to the student who would make himself acquainted with the history of medical progress during the present century."—GLASGOW HERALD.

"Few men have better deserved the honour of a biography than Thomas Wakley."—WESTERN MORNING NEWS.

"A bracing chapter of biography."—LIVERPOOL POST.

"Of what an able and energetic medical politician can do for his profession, as well as for his country, there could hardly be a better illustration than the Parliamentary work of Thomas Wakley as set forth by Dr. Squire Sprigge in his admirable biography of that great reformer."—PRACTITIONER.

"Dr. Sprigge set himself a difficult task in writing the life of Thomas Wakley, but he has succeeded in bringing vividly before the mind of the reader the personality of one who contributed not a little to the progress of the Victorian Era."—REVIEW OF REVIEWS.

"The period from 1823 to 1860, during which Wakley was an active agent in the life of the profession and in public affairs, was, indeed, the formative period which created the position of the medical profession as it now exists. Everyone who ventures to give counsel on the many problems that call for consideration should attentively study the pages in which Dr. Squire Sprigge has so admirably recorded the singular struggles of Wakley a career. ..... Wakley was the greatest and most thorough as he was the first of medical reformers. ..... When more attention is given to the history of the profession a juster estimate will prevail, and the name of Wakley will then be properly honoured as the pioneer of medical journalism and the greatest medical statesman of the century."—Sir Walter Foster, M.P., in EDINBURGH MEDICAL JOURNAL.

LONGMANS, GREEN, & CO., London, New York, and Bombay.

Now Ready, 8vo, pp. xvi-418, with 18 Illustrations, 2 Coloured, price 12s. 6d. nett.

Diabetes Mellitus and its Treatment.

By R. T. WILLIAMSON, M.D. (Lond.), M.R.C.P.; Medical Registrar, Manchester Royal Infirmary, and Assistant to the Professor of Medicine, Owen's College, Manchester.

"The handsome volume which Dr. Williamson has produced contains a good account of diabetes and the various problems which are grouped around it. The book is very well written, and is evidently the outcome of honest clinical and pathological work."—BRITISH MEDICAL JOURNAL.

Young J. Pentland.
Edinburgh: 11, Teviot-place. London: 38, West Smithfield, E.C.

New Edition. Now ready. Price, cloth, 2s. 6d., by post, 2s. 10d.

Seaside Watering Places, describing

258 Holiday resorts on our Coast, the Channel Islands and the Isle of Man, enabling anyone to decide where to go for the holidays. Illustrated and with Map.

London: L. Upcott Gill, 170, Strand, W.C.

Price 6d., post free.

DIFFICULTIES under the INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

*** The series of articles on "Difficulties under the Infectious Disease (Notification) Act," which recently appeared in the columns of THE LANCET, have been reprinted in pamphlet form, it being thought that many would care to possess, in a convenient shape, an elucidation of the principal points on which doubts and difficulties have arisen, and the various decisions and official interpretations which have been given with regard to them.

THE LANCET Offices, 423, Strand, W.C., and 1 & 2, Bedford-street.

Works by Dr. HARRY CAMPBELL, Physician to the North-West London Hospital, and to the Hospital for Nervous Diseases, Welbeck-street, W.

HEADACHE. 12s. 6d.

FLUSHING AND MORBID BLUSHING. 10s. 6d.

DIFFERENCES IN THE NERVOUS ORGANISATION OF MAN AND WOMAN. 15s.

THE CAUSATION OF DISEASE. 12s. 6d.

H. K. Lewis, 136, Gower-street.

WORKS ON

DEFORMITIES.

By HEATHER BIGG.

SPINAL CURVATURE: Its Varieties and Treatment.

The DEFORMITIES of the HEAD and NECK.

In preparation. Fourth Edition.

A MANUAL of ORTHOPRAXY: Describing the Treatment of the Deformities, Debilities, and Deficiencies of the Human Body.

London: J. & A. Churchill, 7, Great Marlborough-street.

STAMMERING.

ITS NATURE AND TREATMENT.

By EMIL BEHNKE.

Price 1s., post free, of Mrs. Emil Behnke, 18, Earl's-court-square, S.W., who receives Stammerers for Treatment. REFERENCES to Doctors whose stammer Mrs. Behnke has cured, and to others.

THE JOURNAL OF TROPICAL MEDICINE.

A MONTHLY JOURNAL DEALING WITH THE DISEASES OF WARM CLIMATES.

Will be issued August 1st, 1898, 17s. annually, post free. Intending Contributors and Subscribers to communicate with THE EDITORS—JAMES CANTLIE, M.B., F.R.C.S., W. J. SIMPSON, M.D., M.R.C.P., Care of Messrs. John Bale, Sons, and Danielsson, Ltd., 85-89, Great Titchfield-street, London, W.

CONSUMPTION

AND LUNG COMPLAINTS.

By JOHN FRANCIS CHURCHILL, M.D.

One Shilling, Post Free.

* BURLEIGH (late David Stott), 370, Oxford-street.

MASSAGE AT HOME

The Matto Chain

WHOLESALE FROM MATTO LTD 32 CLERKENWELL RD E.C.

BY ROYAL LETTERS PATENT.

"GAMGEE TISSUE"

(Absorbent Gauze and Cotton Tissue).

Sole Proprietors and Manufacturers—

ROBINSON & SONS, Limited, Chesterfield.

WALL-PAPERS. Free from Arsenic.



Wm. WOOLLAMS & CO.,
ORIGINAL MAKERS,
Sole address—110, High-street (near Manchester-square, London, W. And of all Decorators.
TWENTY MEDALS.
CHICAGO EXHIBITION, HIGHEST AWARDS.

DISPENSING BOTTLES AND PHIALS.

The Islington Glass Bottle Company

(H. HARRIS & CO.), 153, Upper Thames-street, City, London, E.C., supply the very best bottles at the lowest market prices as follows:—

THE NEW SHAPE, with Rounded Edges or the Ordinary Kind.
3 and 4 oz., plain or graduated ..... 7s. 6d. per gross.
6 and 8 oz., " " ..... 8s. 6d. "

WHITE MOULDED PHIALS, Plain or Teaspoons.
½ oz. and under, 3s. 4d. per gross. | 1½ oz. ..... 4s. 3d. per gross.
1 oz. ..... 3s. 6d. " | 2 oz. ..... 5s. 0d. "
Best Quality.

BLUE POISON BOTTLES, all sizes.

PLEASE NOTE.—The Green Glass can be had, washed and papered, 6d. per gross extra. (*Strongly recommended.*)

Prompt attention to country orders. Goods delivered free within ten miles. Bankers: London and Westminster Bank.

Established upwards of 50 years.

DISPENSING BOTTLES AND PHIALS.

The North London Glass Bottle

COMPANY (I. ISAACS & CO., Proprietors), Office and Warehouse, 106, MIDLAND ROAD, ST. PANCRAS, LONDON, N.W., Stores, Midland Railway Goods Depôt, St. Pancras, supply their celebrated dispensing bottles and phials at the following very low prices.

THE NEW SHAPE FLAT BOTTLES WITH ROUNDED EDGES.
Or the ordinary kind, plain or graduated.

3 & 4 ounce...	7s. 6d.	per gross.
6 & 8 "	8s. 6d.	"
10 & 12 "	12s. 0d.	"
16 "	16s. 0d.	"

Oval, octagon, or direct square shape the same price.

WHITE MOULDED PHIALS—BEST QUALITY.

½ ounce and under	3s. 4d.	per gross.
1 "	3s. 6d.	"
1½ "	4s. 3d.	"
2 "	5s. 0d.	"

Plain or Graduated to Teaspoons.

CRYSTAL BLUE TINTED BOTTLES—SPLENDID QUALITY.

3 & 4 ounce	3s. 0d.	per gross.
6 & 8 "	9s. 0d.	"

Plain or Graduated.

The Medical Profession should see a sample of these, which is forwarded free on application.

Prompt attention to Country orders. Packages 1s. each, allowed for if returned. Goods delivered free within seven miles. Bankers—"London and Westminster Bank," Bloomsbury Branch.
Established upwards of 0 years.

FLAT.



ROUND EDGES.

DISPENSING BOTTLES.

GREEN FLINT.—ALL SHAPES.

3 oz.	4 oz.	6 oz.	8 oz.	
8/-	8/-	9/-	9/-	For Corks.
11/-	11/-	12/-	12/-	Screw Stopd.

WHITE VIALS.—Plain & Graduated

½ oz.	1 oz.	1½ oz.	2 oz.	
3/-	3/3	2/10	4/6	per gross.

FREE ON RAILS IN LONDON.

KILNER BROS.,

No. 8, G. N. GOODS STATION,
KING'S CROSS, LONDON.

FLAT.



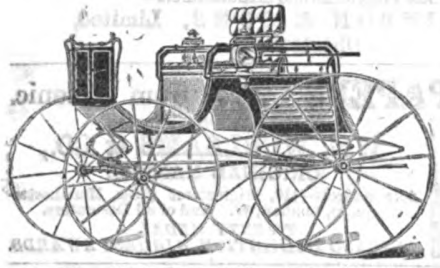
SCREW STOPPERED.

CORTLAND AMERICAN CARRIAGES.

Expressly suited for Professional Requirements.

VERY LIGHT DRAFT. BEST POSSIBLE MATERIAL. MODERATE PRICE.

Specialities:—The "EXCELSIOR" Hooded Gig.
The "HENRIETTA" Open Gig.
The "MABOBY" Professional Cart.
The "MODEL" full-lock Medical Buggy (with or without Folding Hood).



No. 255. "THE BELLAMY." Price 61 guineas.
For two or four Passengers. Easy access.
Automatic Adjustment to Seats.

Cortland Carriages are largely used by Practitioners at Home and Abroad.

AMERICAN HARNESS AND WHIPS OF THE BEST QUALITY.

Illustrated Catalogues and every information post free from the Makers:

CORTLAND WAGON CO., 31, 32, & 33, Henrietta Street,
COVENT GARDEN, LONDON, W.C.

Telegrams: "ELIGIBLE, LONDON." T. CLARKE, Manager.

READING'S IMPROVED CARRIAGES.

With Removable Couch and Seats for Four Persons



FOR REMOVING INVALIDS.

These Carriages are so constructed as to render travelling easy and agreeable to the most confirmed Invalid, being fitted with every appliance for ease and comfort, and let on moderate terms for any journey.

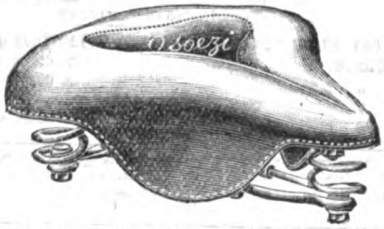
H. & J. READING,
COACH BUILDERS,
14, Riding House Street Langham Place, W

IS CYCLING INJURIOUS?

It all depends upon the Saddle. Innumerable ills result from an ill-fitting, badly-designed Saddle.

The "Osoezi" Saddle

21s. Post Free.



21s. Post Free.

IS AT ONCE HYGIENIC, ANATOMICALLY CORRECT, AND PRESSURE UPON THE PERINEUM IS AVOIDED.

No Saddle Soreness even after the hardest and most continuous riding.

SUITABLE FOR LADIES OR GENTLEMEN. EASILY ADAPTABLE TO ANY MACHINE.

"Messrs. A. W. GAMAGE, Ltd. "LENNIE, SIDMOUTH, 7/2/'98.

"DEAR SIRS,—I purchased last season through Mr. Goss of this town one of your 'OSOEZI' Saddles, which has given me every satisfaction. The Saddle does quite all you claim for it and I *shall never ride any other make.* One of the doctors here (who is not a rider) says that theoretically it is a perfect saddle from a surgical point of view, which opinion is quite confirmed in practice by

"Yours faithfully,
[Signed] "A. A. BOWDEN."

A. W. GAMAGE, LTD.,
126 to 129, Holborn, E.C.

Aldridge's, St. Martin's-lane, London,

W.C. (established 1753.)—SALES every Wednesday and Saturday. 200 Horses will be sold Bi-weekly, including Brougham and Phaeton Horses from Jobmasters, with Hacks, Hunters, Coach and Harness Horses, Cobs, Ponies, and Cart Horses from Noblemen, Gentlemen, and the Trade; also New and Secondhand Carriages, Harness, &c. Sales and Valuations in town or country. No dealing allowed on the part of anyone connected with the establishment. Telephone 35,102. Full Catalogue appears in "Morning Post" every Tuesday and Friday.—W. & S. FREEMAN, Proprietors.

"COOPER" CYCLES



From £5 10s. Competition defied. Latest design Frame; large Weldless Steel Tubes; Ball Bearings; Tangent Wheels; Brake and Mud Guards. Cushion Tyres, £5 10s.; Pneumatic, £7 10s.; Ladies', with Dress Gear Guards, from £6. Twelve Months' Warranty. Lists free. *Agents wanted.*

WM. COOPER 753, OLD KENT ROAD, LONDON, S.E.

HUMBER





1898



1812

Catalogue and name of nearest Agent on application to

32, HOLBORN VIADUCT,
LONDON, E.C.

OFFORD & SONS, LIMITED,

Make a Spécialité of JOBBING to the Medical Profession.



Light, Single BROUGHAMS, of their own very best London build, which are made very light and short in draught, and fitted with rubber tyres, steps, and bearings, and luxuriously furnished, with every modern convenience. Completed to order and kept in condition like new a low, fixed yearly rental, saving trouble and expense.

Stock of over 500 Carriages on view. Lists and prices on application.

Show Rooms: 67, George Street, Portman Square, W., and 92, Gloucester Road, South Kensington.

"Triano" Single Brougham.—W.

HASTGATE, 21, Newman-street, W., solicits all intending purchasers of Broughams to kindly inspect his newly designed carriage, which gives accommodation for a third person and more aerial space without increase of weight or draught, and adding elegance to the appearance of the ordinary Single Brougham.

JUNO CYCLES ARE THE VERY BEST.



HIGH-CLASS LIGHT ROADSTERS.

	Monthly.
Roadsters ... £10 0 0 ...	16/8.
Road Racer... 11 0 0 ...	18/4.
Lady and Gent.'s 12 12 0 ...	21/-.
Gent.'s 14 14 0 ...	24/6.

Tuition Free in JUNO Riding School. Write for New Season's List of all the JUNO Cycles and Accessories for 1898. Sent post free. JUNOS shipped abroad. Special care. Large cash discount.

METROPOLITAN MACHINISTS CO., LTD.
65, 76, Bishopsgate Without, London, E.C., and at Piccadilly Circus, W.

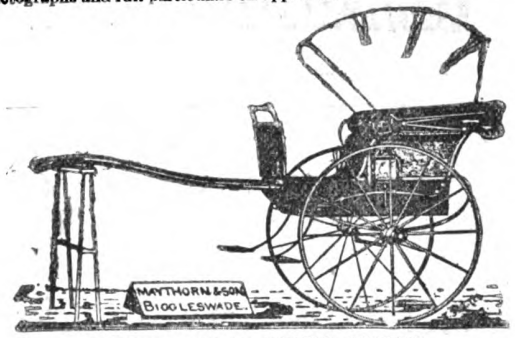
MAYTHORN & SON, BIGGLESWADE,

Builders of Carriages of every description, of HIGHEST QUALITY ONLY.
ESTABLISHED 1842.



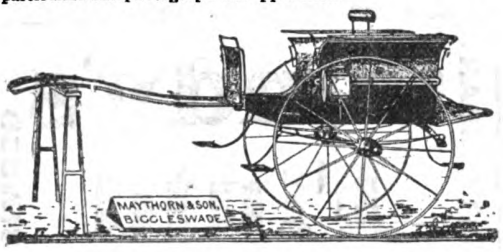
MAYTHORN'S COUNTY VICTORIA.

Price from 70 guineas cash, or three annual payments of £25 15s. each. Photographs and full particulars on application.



MAYTHORN'S RIPON BUGGY.

The best, most convenient, and stylish-headed Buggy extant. Price from 50 guineas cash, or three annual payments of £18 7s. 6d. each. Full particulars and photographs on application.



MAYTHORN'S GENTLEMAN'S BELVOIR CART.

This stylish and comfortable cart is lighter and easier of draught than others of similar style, is easy for one or four passengers, and can be perfectly balanced, however loaded. The shafts are hung in indiarubber-lined fulcrums, so that the oscillation from horse's action is entirely neutralised. It is built in three different sizes.

Price from 28 guineas cash, or three annual payments of 10 guineas each. Larger drawings and particulars on application.

Sole address—MAYTHORN & SON, BIGGLESWADE.

INSURE YOUR HORSES & CATTLE

With the IMPERIAL ACCIDENT, LIVE STOCK AND GENERAL INSURANCE COMPANY, LIMITED,
Established 1878.

Head Offices: 17, PALL MALL EAST, LONDON, S.W.

Carriage, Saddle, Farm, and Trade Horses; Hunters, Stallions and Infoal Mares Insured against Death from Accident or Disease.

CLAIMS PAID NEARLY £150,000.

Prospectuses and particulars post free.
Agents required.

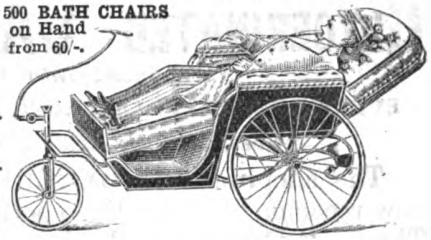
B. S. ESSEX, Manager.

EDWARD SHAW & Co.,

13, PICCADILLY, MANCHESTER,
Manufacturers of
BATH CHAIRS, SPINAL CARRIAGES, AMBULANCES, and INVALIDS' FURNITURE, CHILDREN'S CARRIAGES, &c.

ILLUSTRATED CATALOGUE post free.

500 BATH CHAIRS on Hand from 60/-.



Consulting Room Couches.

Adjustable Ilkley Couches.

Night Commodes with Porcelain Pans, from 50/-.

Carrying Chairs, from 21/-.

Bed Rests, from 7/6.

Bed Tables, from 10/6.

Reading Stands, from 21/-

BATH CHAIRS Largest Stock in the WORLD.

For Spinal Disease special care should be taken in selecting a Spinal Carriage.



THE KENTBURY PATENT MEDICAL BAG

FOR CARRYING INSTRUMENTS, &c.



A unique construction, without protruding frame or gussets. Fitted for Doctors' requirements. Contents never get displaced or damaged. Will stand open with back to patient.
Cowhide, lined jean. Lined leather.

12 in. ...	27/6	Hand	37/6
14 in. ...	32/-	Sewn	42/6
16 in. ...	38/-		48/-

Also from 18/-. Carriage paid in United Kingdom on receipt of remittance. Detailed List free.

Patentees and Sole Makers:—
H. C. SCALES & CO. 82, HATTON GARDEN, E.C.

FOR HEALTH Wear The BRITISH HYGIENIC WOOLLEN COMPANY'S

PURE WOOL

UNDERCLOTHING.

GENTLEMEN'S VESTS, PANTS, SWEATERS, &c. LADIES' VESTS, BODICES, COMBINATIONS, NIGHT-DRESSES, DIVIDED SKIRTS, &c.

WARRANTED BRITISH MAKE, much superior to Foreign goods often sold as British.

Price Lists and Patterns are sent on application to the

BRITISH HYGIENIC WOOLLEN COMPANY, LEICESTER.

Carriage pd. on all parcels value £1 & upwards.

Foreign Seam, with raw edges, almost impossible to repair.



British Hygienic Woollen Co.'s Seam, with selvaged edges, easily repaired.

PURE CALF VACCINE

(NEVER HUMANISED) can be had as usual from

DR. HIME'S CALF VACCINE INSTITUTION **BRADFORD, YORKS.**

As supplied to

THE GOVERNMENT in England,
THE GOVERNMENT in Ireland,
THE EGYPTIAN ARMY,

BOARDS OF GUARDIANS, TOWN AND COUNTY COUNCILS, ASYLUMS, PRISONS, PUBLIC VACCINATORS, &c.

PRICES: 1 Tube, 1s.; 3 do., 2s. 6d.; 1 Point, 9d.; 3 do., 2s. "Conserve," as used by Public Vaccinators in Germany (specially recommended for success, keeping, and economy), Vials, 2s. 6d., 5s., &c., according to quantity.

Reissner's Powder and other forms, as desired, on reasonable notice.

Vaccination of Calves and Collection of Vaccine under strict antiseptic precautions. Tubes, &c., sterilised before use. Testimonials and other particulars on application. Orders to be prepaid with 1d. for postage. Telegraphic Address—"HIME, BRADFORD."

The Original Dr. WARLOMONT'S
GLYCERINATED CALF VACCINE.

Introduced into England in 1882.

EVERY ANTISEPTIC PRECAUTION MOST CAREFULLY OBSERVED.

Tubes, 1s. 9d.; Half Tubes, 1s. each, post free.

The adoption of GLYCERINATED CALF VACCINE is now recommended in the report made by Sir Richard Thorne Thorne, K.C.B., to the President of the Local Government Board.



No other Genuine

SOLE AGENTS for GREAT BRITAIN, COLONIES, and UNITED STATES—

MARKT BROS. & CO., 38 and 39, Beech St., Barbican, London, E.C. [Telegraphic Address—"EXTRADOTAL"

Faulkner's & The British
CALF VACCINE INSTITUTION,

16, ENDELL STREET, BLOOMSBURY, and 1, RUSSELL VILLAS, EAST TWICKENHAM.

Established 1860.

GLYCERINATED CALF LYMPH, most Reliable and Pure. Tubes 1s. and 2s. each; 10s. per dozen. Smallest Tubes 6s. per dozen. Conserves 2s. 6d. each.

PURE HUMAN LYMPH, same price, sent on receipt of postal order.

DR. RENNER'S ESTABLISHMENT

for VACCINATION with CALF LYMPH,

186, MARYLEBONE ROAD, LONDON, N.W.

The Oldest Original Calf Vaccine Institution in this country.

Prices of Calf Lymph (GLYCERINATED):—

Tubes ... Large ... 2s. each or 3 for 5s. 0d.
Small ... 1s. each or 3 for 2s. 6d.
,, (sufficient for 1 Vaccination only) 2 for 1s. or 6 for 2s. 6d.
Squares ... 2s. 6d. each.

Registered Telegraphic Address—"Vaccine, London."

Sent on receipt of remittance addressed to the Manager of the Establishment or the appointed agents.

ASEPTIC GLYCERINATED CALF LYMPH.
JENNER INSTITUTE
CALF LYMPH

Free from ERYSIPELAS & TUBERCLE.

Tubes 1s. each, 10s. per dozen; postage 1d. extra.

Registered Telegraph Address: "SILICABON, LONDON.

Postal Orders and Cheques to be made payable to JAMES DOUGLAS

JENNER INSTITUTE FOR CALF LYMPH,
73, Church Road, Battersea, London, S.W.

WHOLESALE AGENTS—
BATTLEY & WATTS, Cripplegate, London, E.C.

REBMAN'S
PURE CALF LYMPH

Tubes 1s., Flacons 2s. 6d. each.

Offices: 11, Adam Street, Strand, London;

Telegraphic address: "SQUAMA, LONDON."

For Varicose Veins & Weakness.



SURGICAL ELASTIC STOCKINGS and KNEE-CAPS, pervious, light in texture, yielding an efficient and unvarying support without the trouble of lacing. Likewise a strong, low-priced article for Hospitals and the Working Classes.

ABDOMINAL SUPPORTING BELTS.—Those for Ladies' use before and after accouchement are admirably adapted for giving adequate support with *extreme lightness*, a point hitherto little attended to.

Instructions for measurement and prices on application, and the articles sent by post.—POPE & PLANTE, Hosiers by Appointment to the Queen, 136, Regent-street, London, W.—The Profession, Trade, and Hospitals supplied.

THE GREAT OXIDANT
Condy's Fluid
GERMICIDE.

HAS A SELECTIVE AFFINITY FOR PUTRESCENT MATTER.

FULL DIRECTIONS WITH THE BOTTLE.

Complete Hospital Furnisher

BY SPECIAL APPOINTMENT

Invalid & General Furniture Manufacturer to the British Home for Incurables.

CARTER

6A NEW CAVENDISH ST.

ONLY ADDRESS OF ORIGINAL CARTER.

Illustrated Catalogues

POST FREE.



Operating and Dressers' Tables.
Reclining Boards 25s.
Walking Machines.
Portable W.C.'s.
Electric Bells, Urinals, &c Air and Water Beds.

Literary Machine

For holding a book or writing desk in any position over an easy chair, bed or sofa, obviating fatigue and stooping. Invaluable to Invalids & Students. Prices *from* **17/6**

Bed Rests 7/6
Leg Rests 10/-
Crutches 10/6
Bed Baths 12/6
Commodes 25/-

Adjustable Couches, Beds From £1 10s



INVALID COMFORTS

Cold Medal of Honour & Diploma Antwerp, 1894.



Bed Lifts £3 10s.



Carrying Chairs from £1.



Self-Propelling Chairs from £2.



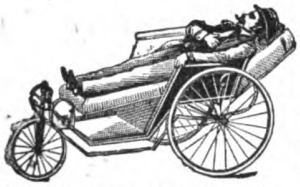
Used by H.M. Govmt.

Ambulances best in the world

Breakfast in Bed Tables from 30/-



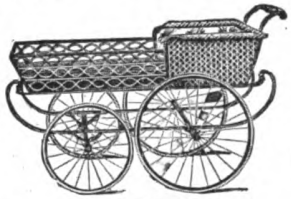
BATH CHAIRS from £1 5



Adjustable Bath Chair or Spinal Carriage.



Bath Chairs for Hand or Pony.



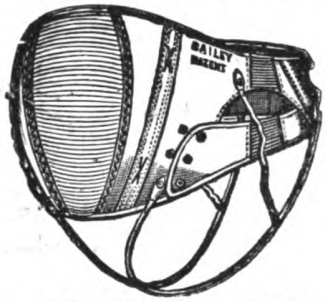
Spinal Carriages.



JOHN CARTER, 6a, New Cavendish St., Portland Place, LONDON, W.

BAILEY'S ABDOMINAL BELTS

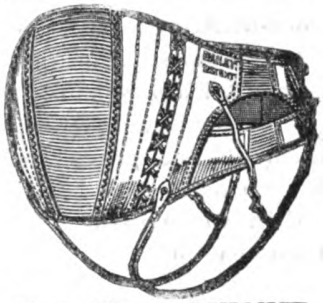
(PATENT).



FOR GENERAL SUPPORT.
"Cannot shift or ruck up."—THE LANCET.
45/-, 35/-, 25/-, 18/-.



SILK... ... ... 30/0, 35/0, 42/-.
COTTON ... ... 22/0, 25/0, 30/-.



No. 2. FOR PREGNANCY.
Capable of great expansion. Lacing front.
45/-, 35/-, 25/-, 18/-.

BAILEY'S SPECIAL CLINICAL THERMOMETERS.

REDUCED



PRICES.

Guaranteed all English made. *Special Prices by the dozen. Postage 3d.*

	s.	d.		s.	d.
No. 0. "Hospital"	2	0	No. 9. "Hospital," magnifying	3	6
No. 1. "60 Seconds"	3	0	No. 10. "60 Seconds," magnifying	4	0
No. 6. "30 Seconds"	3	6	No. 11. "30 Seconds," magnifying	6	6

Makers of all kinds of Surgeons' Instruments and Appliances, Invalids' Requisites, &c.

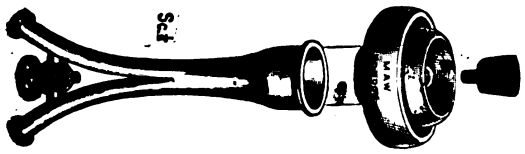
W. H. BAILEY & SON, 38, Oxford Street, London, W.

Telephone No., 2942 Gerrard. Telegrams—"BAYLEAF, LONDON."

S. MAW, SON, & THOMPSON.

THE STETHONOSCOPE.

(TESKE'S PATENT.)



A NEW INSTRUMENT for AUSCULTATION.

THE STETHONOSCOPE is an instrument constructed on the same principle as the Microphone. It is of English manufacture, and is preferable to the Phonendoscope in that it can be attached to any ordinary Binaural Stethoscope and, when not in use, can be carried in the waistcoat pocket without the slightest inconvenience.

ONE OF THE LEADING LONDON CONSULTANTS says:—"By its use the sounds are rendered much more distinct than is the case when an ordinary stethoscope is used. This is exemplified in the highest degree in regard to the lung sounds. The varieties of rales can be most easily distinguished, and areas of tubercular breathing can be mapped out with greater facility than heretofore. In regard to the heart, the relative loudness of the normal sounds—always a very important point—is most accurately determined. Murmurs can be distinguished which, under other circumstances, would pass unnoticed."

Price, in case, 21s. 6d.

MAW'S ANTISEPTIC DRESSINGS.

Prepared under Medical Supervision in accordance with the Special Formula of Lord Lister.

GUARANTEED to CONTAIN THE CORRECT PERCENTAGE of the ANTISEPTIC:
The Best Materials are used, and the greatest possible care is taken to prevent contamination during the course of preparation.
Large quantities of these Dressings are now being supplied to most of the Leading Hospitals.

SPECIAL PRICE LIST ON APPLICATION.

S. MAW, SON, & THOMPSON, 7-12, Aldersgate Street, London.

PROTARGOL.

A new Silver Preparation, highly efficacious in the treatment of Gonorrhœa, and most strongly recommended as an Antiseptic Wound Healer. PROTARGOL contains 8 per cent. of silver, and is easily soluble in cold or warm water, is non-irritating, and possesses a better penetrating effect on the tissues than any other known silver preparation. PROTARGOL is a chemical compound of silver and a protein substance. Its solution is not precipitated by albumen, chloride of sodium, or diluted hydrochloric acid.

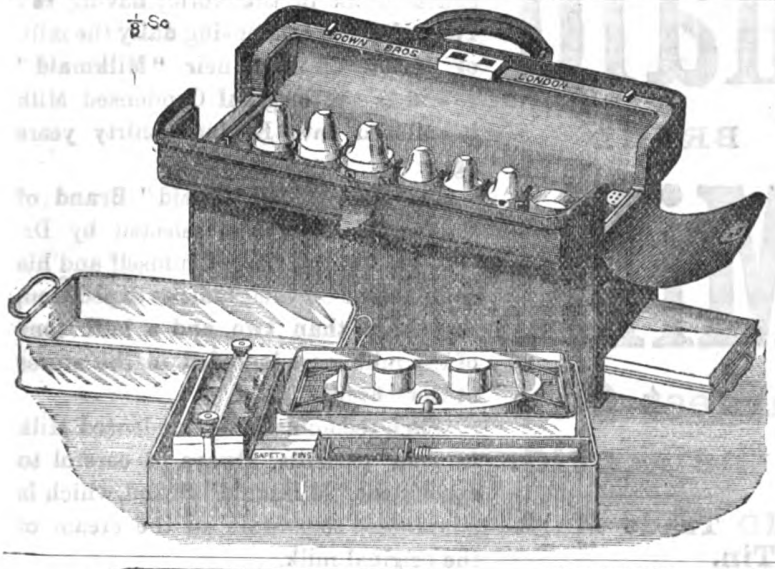
Dr. BENARIO, of Frankfort, declares that PROTARGOL possesses high bactericidal properties, and is therefore excellent for the treatment of Wounds. Professor NEISSER, of Breslau, states his opinion that PROTARGOL is the best, the safest, and the quickest remedy he has yet employed in the treatment of Gonorrhœa. An eminent surgeon, in "THE PRACTITIONER" for March, confirms, so far as his experiences go, the favourable opinion expressed by NEISSER, especially with reference to its powerful anti-bactericidal properties. The usual strength of the solution for injection is ½ to 2 per cent.

SAMPLES and LITERATURE can be had on application to the Wholesale Depôts for all Bayer's Drug Specialities—

ELBERFELD FARBEN FABRIKEN CO., Ltd., 19, St. Dunstan's Hill, London, E.C.

Depôts at MANCHESTER, GLASGOW, and BRADFORD.

DOWN BROS.' SPECIALITIES.



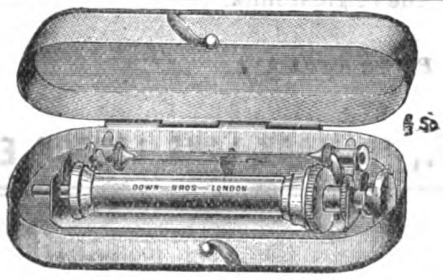
DOWN BROS.' SURGICAL BAG

(REGISTERED).

Suggested by N. HAY FORBES, F.R.C.S.

Consisting of Morocco Bag with Washable Lining and Japanned Tin Tray for Dressings in separate compartment, Portable Sterilizer, Ligature Trough Iodoform Dredger, Bottle Drainag. Tubes, Nail Brush in metal box, Metal Soap Box, 3 each 1—2 oz. Bottles in boxwood cases, and Box Safety Pins.

Price complete ... £7 5 0
The Bag only ... 3 10 0



METAL ASEPTIC HYPODERMIC SYRINGE.



This Instrument is fitted with a Spring Metal Piston Rod fitting accurately inside a Metal Barrel. The Piston rod is a permanent and efficient one, merely requiring occasional lubricating with vaseline. The whole instrument may be boiled and rendered perfectly aseptic without fear of injury or detaching the mounts. Price, in Metal Case, with 2 Steel Needles, 13/6; fitted with Platinum Iridium Needles, 1/3 per Needle extra.

IMPROVED ELECTRIC HAND LAMP FOR THROAT & EAR.

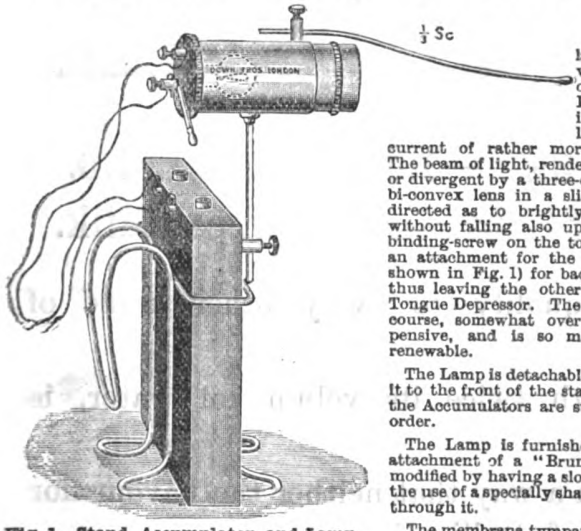


Fig. 1. Stand, Accumulator, and Lamp, with Wire for Swab attached.

A Four-volt Accumulator, carried in a light wire stand, is the source of electric power. The Lamp, a small 3½-volt incandescent one, is brilliantly lighted by a current of rather more than half an ampère. The beam of light, rendered parallel, convergent, or divergent by a three-quarter inch focal length bi-convex lens in a sliding mount, can be so directed as to brightly illuminate the fauces without falling also upon the lips or teeth. A binding-screw on the top of the lamp case forms an attachment for the end of a wire swab (as shown in Fig. 1) for bacterioscopic examination, thus leaving the other hand available for the Tongue Depressor. The Incandescent Lamp is, of course, somewhat overworked, but it is inexpensive, and is so mounted as to be easily renewable.

The Lamp is detachable from the pin which fixes it to the front of the stand. After two years' use the Accumulators are still in excellent working order.

The Lamp is furnished with a flange for the attachment of a "Brunton's" Otoscope (Fig. 2) modified by having a slot cut in it so as permit of the use of a specially shaped Myringotome (Fig. 3) through it.

The membrana tympani is very well illuminated by the Electric Lamp, and operation upon it rendered easy.

Suggested by Dr. E. O. HOPWOOD, London Fever Hospital.

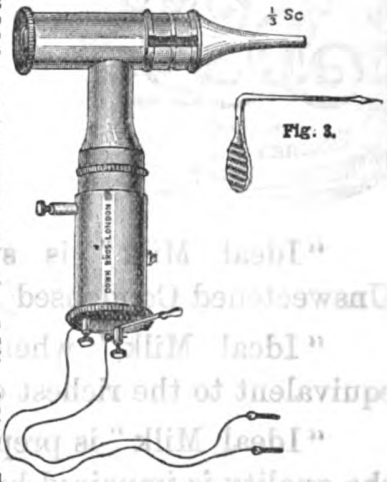


Fig. 2. Lamp with the Otoscope attached and the Myringotome.

Fig. 3.

DOWN BROS., *Surgical Instrument Manufacturers,*

21, ST. THOMAS'S STREET, LONDON, S.E. (Opposite Guy's Hospital.)

Telegraphic Address: "DOWN, LONDON." Telephone 965 HOP. Factory: KING'S HEAD YARD, BOROUGH.

Milkmaid



BRAND

Milk

Largest Sale in the World.

See that the MILKMAID Trade Mark is on every Tin.

The Anglo-Swiss Condensed Milk Co. are the **largest manufacturers** of Condensed Milk in the world, having **ten Factories** and condensing **daily** the milk of **40,000 Cows.** Their **"Milkmaid" Brand** is the **original** Condensed Milk introduced into England thirty years ago.

The **English "Milkmaid" Brand** of Condensed Milk was selected by Dr. NANSEN for the use of himself and his companions on their famous expedition, and **more than two and a half tons** of the milk were included in the stores of the "Fram."

When recommending Condensed Milk to your patients, always be careful to specify the **"Milkmaid" Brand,** which is guaranteed to contain all the cream of the original milk.

SAMPLES FREE TO THE PROFESSION.

ANGLO-SWISS CONDENSED MILK CO., 10, MARK LANE, LONDON, E.C.



Ideal Milk

Enriched 20 per cent. with Cream.

STERILIZED — NOT SWEETENED.

A Perfect Substitute for Fresh Milk.

"Ideal Milk" is superior in quality to every other brand of Unsweetened Condensed Milk.

"Ideal Milk," when diluted with twice its volume of water, is equivalent to the richest dairy milk.

"Ideal Milk" is prepared in such a way that neither the flavour nor the quality is impaired by the process of sterilization.

SAMPLES FREE to the PROFESSION.

ANGLO-SWISS CONDENSED MILK CO., 10, MARK LANE, LONDON, E.C.

The Subscription List will open on Monday, the 27th day of June, 1898, at 10 a.m., and will close on or before Wednesday, the 29th day of June, 1898, at 4 p.m.

SOUTHALL BROS. & BARCLAY, Ltd.

(INCORPORATED UNDER THE COMPANIES' ACTS, 1862 to 1893.)

Capital - - - - - £200,000.

DIVIDED INTO

70,000 Five per cent. Preference Shares of £1 each.

AND

130,000 Ordinary Shares of £1 each.

The Preference Shares are Cumulative as to Dividend and Preferential as to Capital. They are also entitled on any final distribution of Capital to share rateably with the Ordinary Shares in any surplus assets until £1 5s. in all has been paid on each Preference Share, but no further. They are restricted in voting power as stated in the Memorandum and Articles of Association.

PRESENT ISSUE.

70,000 Preference Shares of £1 each - £70,000.

Of which 23,333 will be taken by the Vendors.

Payable, 5s. on Application, 5s. on Allotment, and 10s. one month after Allotment.

80,000 Ordinary Shares of £1 each - £80,000.

None of the Ordinary Shares are offered to the public.

DIRECTORS.

* THOMAS BARCLAY, J.P., Arncliffe, Moseley, Birmingham, Chairman,
* ALFRED SOUTHALL, F.C.S., Richmond Hill, Birmingham,
} *Managing Directors.*
* WILFRED FRANCIS SOUTHALL, 11, Carpenter Road, Birmingham.
* JOHN BARCLAY, B.Sc. Lond., F.C.S., The Linthurst, near Bromsgrove.
* ALFRED WILLIAM SOUTHALL, 5, Wolseley Place, Withington, Manchester.
GILBERT SOUTHALL, Richmond Hill, Birmingham.
THOMAS BARCLAY, Jun., 7, Victoria Road, Harborne, Birmingham.

* Pharmaceutical Chemists.

BANKERS.—LLOYDS BANK LIMITED, High Street, Birmingham.

SOLICITOR.—JAMES HARGREAVE, 37, Waterloo Street, Birmingham.

AUDITORS.—HOWARD SMITH, SLOCOMBE & Co., Bank Chambers, 14, Waterloo Street, Birmingham.

SECRETARY.—WILFRED FRANCIS SOUTHALL. *REGISTERED OFFICES.*—Lower Priory, Birmingham.

PROSPECTUS.

This Company is formed to purchase as a going concern the business carried on under the names of SOUTHALL BROTHERS AND BARCLAY, and T. and W. and W. SOUTHALL, Manufacturing and Wholesale and Retail Chemists and Druggists.

The business was established seventy-eight years ago at Bull Street, Birmingham, by the late Thomas Southall, who was joined shortly afterwards by his brother, William Southall, and is now carried on in various Departments as follows:—

Wholesale Chemists and Druggists	**Lower Priory, Birmingham.**
Druggists' Sundriesmen and Druggists' Shopfitters	
Pharmaceutical and Analytical Chemists	**Bull Street, Birmingham.**
Manufacturing Chemists and Drug Grinders	**Dalton Street, Birmingham.**
Manufacturers of Surgical Dressings and Sanitary Appliances	
Manufacturers of Distilled Table Waters	
Manufacturers of and Dealers in Scientific and Chemical Apparatus	**Broad Street, Birmingham.**
Manufacturers of Cod Liver Oil	**Balstad, Norway.**

The business will be taken over by the Company as a going concern as from the 1st day of January, 1898, and the purchase will include the freehold and leasehold properties in Bull Street, Dalton Street, Lower Priory, Birmingham, and at Balstad, in Norway; the plant, machinery, fixtures, furniture, and trade appliances; the book debts (guaranteed); the stock-in-trade; the goodwill, patents and trade marks, including those of the sanitary specialities manufactured and sold by the Vendors; and the cash in hand and at Bank on December 31st, 1897.

The freehold and leasehold properties, and the plant, machinery, fixtures, furniture, and trade appliances stood in the books of the Vendors, on December 31st, 1897, at the sum of £38,089 0s. 1d. When to this sum are added the values of the book debts (guaranteed), of the stock-in-trade, and other assets, exclusive of goodwill patent rights, and trade marks, the aggregate was, on December 31st, 1897, the sum of £84,640 19s. 3d.

Since December 31st, 1897, the Vendors have contracted to purchase four acres of freehold land at Saltley, Birmingham, which will be transferred to the Company for the erection by the Company of Laboratories, Mills, Factories, and Workshops to provide for the increasing demands of the business.

The purchase money is the sum of £133,000, payable as to £23,333 in Preference Shares (the largest number the Vendors can take with a view to obtain a settlement on the Birmingham Stock Exchange), £63,000 in Ordinary Shares, and the Balance in Cash.

The Vendors will also take up and pay for a sufficient number of Ordinary Shares to provide additional capital to acquire the freehold land at Saltley, and to erect and equip the intended Laboratories, Mills, etc., thereon.

The Company will pay and discharge the liabilities of the business on the 31st day of December, 1897, amounting to £8,090 1s. 7d., and all liabilities incurred in the ordinary course of the business since that date, and will take the profits from the first day of January, 1898.

The business has been of steady growth, and the volume of business done in the year ending December 31st, 1897, was larger than that in any preceding year.

The net profits of the business have steadily increased, and after making allowances for bad debts, sinking fund on leasehold properties, and depreciation of plant and fixtures, but not for interest on capital, have for several years past been more than sufficient to pay three times the dividends on the whole of the £70,000 Preference Shares.

The Directors are the persons who constitute the Vendor firm, and the management of the business will be conducted in the same manner as heretofore.

All expenses of formation and registration of the Company up to the first allotment of shares will be paid by the Vendors.

The following agreements have been entered into—

1. Agreement dated the 22nd day of June, 1898, and made between Thomas Barclay, Alfred Southall, Wilfred Francis Southall, John Barclay, Alfred William Southall, Gilbert Southall, and Thomas Barclay the younger, of the one part and the Company of the other part being an Agreement for the sale of the business of the Company.
2. Indenture dated the 22nd day of June, 1898, and made between Alfred Southall of the 1st part, Thomas Barclay of the 2nd part, Wilfred Francis Southall of the 3rd part, John Barclay of the 4th part, Alfred William Southall of the 5th part, Gilbert Southall of the 6th part, and Thomas Barclay the younger of the 7th part.
3. Agreements all dated the 22nd day of June, 1898, and made respectively between Alfred Southall, Thomas Barclay, Wilfred Francis Southall, John Barclay, Alfred William Southall, Gilbert Southall, and Thomas Barclay the younger, of the one part and the Company of the other part being agreements relating to the engagements of the parties thereof of the first part with the Company.

There are also numerous trade and other contracts, agreements and engagements, relating to the business taken over by the Company entered into in the ordinary course of business. All applicants for shares shall be deemed to have had full notice of such contracts, agreements, and engagements, and to have waived production of any further particulars.

The Memorandum and Articles of Association and the Contracts above specified may be inspected by Applicants for shares at the office of the Solicitor to the Company.

Application for settlement and official quotation on the Birmingham Stock Exchange will be applied for in due course.

In every case where no allotment is made the deposit will be returned in full and where the number allotted is less than that applied for the surplus will be credited to the balance payable on the shares allotted.

Prospectuses and Forms of Application may be obtained from the Bankers, Solicitor, and Auditors of the Company. Applications for Shares may be lodged at Lloyds Bank, Limited, or any of its Branches.

BIRMINGHAM, 22nd JUNE 1898.

SOMATOSE

is an Albumose Food product. It is prepared from meat, and contains the albuminous elements of the latter in an easily soluble form. The salts present in SOMATOSE correspond to the nutritive salts of fresh meat, among which occur Phosphate of Potassium, so important in the formation of muscular and cellular tissue.

SOMATOSE is a Tasteless, Odourless Powder,—is easily tolerated, even by the most delicate stomachs. It is invaluable in Wasting Diseases, in Convalescence from Exhausting Diseases, and is especially indicated in cases of Children of Backward Development.

SOMATOSE is well borne when no other aliment can be administered. It is also of the greatest service in cases requiring rectal alimentation.

SOMATOSE has been found invaluable in the uncontrollable vomiting of pregnant women and in vomiting following the administration of chloroform.

SOMATOSE is indicated in all conditions where an invigorating and easily absorbed food is required. With the aid of SOMATOSE it is possible to tide the patient over critical periods, since it is capable of acting for a long time as a complete substitute for other nitrogenous foods.

ADULT DOSE: One teaspoonful three times a day, in milk, soup, coffee, cocoa, &c.

The following is the Analysis of SOMATOSE as obtained by Goldman:—

Water	9·20
Total Nitrogen	12·84
Albumoses...	77·85
Peptone	2·20
Ash	6·78

IRON-SOMATOSE

(Ferro-Somatose).—An excellent tonic, containing the albuminous substances of the meat (albumoses) organically combined with Iron in the proportion of 2 per cent. of the latter. Under the use of Iron Somatose the weight of the body is increased and the amount of hæmoglobin is augmented. Iron Somatose combines in a most suitable way the well-known and appreciated properties of Somatose with a good Iron preparation.

SPECIAL INDICATIONS: Chlorosis and Anæmia. DAILY DOSE: 75 to 150 grains.

MILK-SOMATOSE

(Lacto-Somatose).—A strength-giving food containing the albuminous matter (albumoses) of the Milk, with 5 per cent. of Tannic Acid in chemical combination. The chief indications for Milk-Somatose are the various chronic maladies of the digestive organs, and especially those disturbances of digestion which, as in Enteroptosis and Anæmia, can be referred to the atonic condition of the muscular organs of the stomach. Milk-Somatose is a good flesh-forming preparation, without irritation, and slightly astringent with patients of weak or diseased digestive organs. In the case of Typhus maladies it is of great value.

Samples and Literature can be had on application to the Wholesale Depôt for all Bayer's Drug Specialities:—

ELBERFELD FARBEN FABRIKEN CO., Ltd.,

19, ST. DUNSTAN'S HILL, LONDON, E.C.

Also at MANCHESTER, GLASGOW, and BRADFORD.

BAYER'S
PHARMACEUTICAL SPECIALITIES

TRIONAL. (*Diethylsulfonmethylethylmethan*).—A most reliable and quickly acting hypnotic of the Sulphonal group. In simple insomnia Trional will produce sleep with absolute certainty in from fifteen to thirty minutes. Has no influence on the heart, respiration, or temperature.

DOSE: From 15 to 30 grains. Best administered in a cupful of hot liquid, or in aerated water, when a considerably smaller dose suffices.

TANNIGEN. (*Acetyl of Tannin.*)—A most valuable remedy in cases of Acute and Chronic Diarrhœa, and invaluable for the Summer Diarrhœa of Children. Tasteless and Odourless. Passes through the stomach entirely unchanged, decomposition only occurring in the intestines.

DOSE FOR CHILDREN: 2 to 5 grains.
DOSE FOR ADULTS: 8 grains every three hours.

TANNOPINE. (*Hexamethylene-tetramin Tannin*).—A New Intestinal Astringent. Has an excellent effect, without secondary phenomena, in all the various kinds of Enteritis. Has given especially good results in cases of Tuberculous Inflammation of the Bowels, in cases of Non-Tuberculous Subacute and Chronic Intestinal Inflammation, and also in cases of Typhoid.

DOSE FOR CHILDREN: 3 to 10 grains.
DOSE FOR ADULTS: 16 grains, two to four times daily.

SALOPHEN. (*Acetyl-paro-amydosalol*).—The best substitute for Salicylate of Sodium, as it acts quite as promptly, but without any of the unpleasant after-effects of the latter. Its special indication is Acute Articular Rheumatism. It is invaluable for Influenza, Migraine, &c.

DOSE: 16 to 24 grains three or four times a day.

LYCETOL. (*Tartrate of Di-Methyl-Piperazine*).—Combines the Uric Acid solvent properties of Piperazine, with the diuretic properties of Tartaric Acid. Invaluable in all cases of the Uric Acid Diathesis.

DOSE: 16 to 32 grains daily. Best administered in aerated waters, such as Seltzer, &c., or in granular effervescing form. (Effervescing Lycetol: Messrs. A. Bishop & Sons, Ltd.)

IODOTHYRINE. The active principle of the Thyroid Gland. A stable product containing a definite amount of the Iodine compound which forms the active principle of the Gland. Iodothyrine acts more quickly than either the fresh or dried gland substance. It is a preparation of perfectly definite composition, stable and permanent.

ADULT DOSE: 5 grains two to eight times a day.

EUROPHEN. (*Isobutylorthocresoliodide.*)—A perfect substitute for Iodoform. Odourless and non-toxic. Has a specific gravity five times less than that of Iodoform. Non-irritating and does not produce a rash. Adheres closely to mucous surfaces. Specially indicated in Syphilitic Diseases, Gynæcology, Burns and Bedsores, Eye, Ear, Throat, and Nose Affections, &c., &c.

ARISTOL. An Iodine Derivative containing 48% of Iodine. Is an ideal Cicatrisant, forming an absolutely unirritating covering over the surfaces on which it is placed, under which the processes of granulation and cicatrization proceed with extraordinary rapidity. It is a convenient, Non-Irritating and Effective Antiseptic Dressing in General Surgery, Dentistry, Gynæcology, Diseases of Eye, Ear, and Nose. In the treatment of Burns Aristol has proved to be of the greatest value, its antiseptic and healing properties being specially marked.

PROTARGOL. A new silver preparation for the treatment of Gonorrhœa, containing 8% of silver, easily soluble in warm or cold water. Has a better penetrating effect on the tissues than any other known silver preparation. Non-irritating. Usual strength of solution, ¼ to 2%. An excellent antiseptic in the treatment of Wounds. Of the greatest possible service in Ocular Therapeutics.

PHENACETINE-BAYER, SULPHONAL-BAYER, PIPERAZINE-BAYER, SALOL-BAYER, SOMATOSE, IRON SOMATOSE, MILK SOMATOSE, ANALGEN, LOSOPHAN, TETRONAL, &c.

Samples and Literature can be had on application to the Wholesale Depôt for all Bayer's Drug Specialities:—

ELBERFELD FARBEN FABRIKEN CO., Ltd.,

19, ST. DUNSTAN'S HILL, LONDON, E.C.

Also at MANCHESTER, GLASGOW, and BRADFORD.

THE LATEST PROFESSIONAL REPORTS ON

INGLUVIN.

[COPY.]

"FOREST GATE, LONDON, Oct. 18th, 1897.

"I have for over thirty years used Warner's Ingluvin in the sickness of pregnancy and for the nausea and inability to digest food often met with in womb troubles, as well as for vomiting after gynæcological operations and chloroform, and have been very pleased with the relief which has ensued.

(Signed) "H. ERNEST T——, M.R.C.P., F.R.C.S., &c.

"Late Physician to the Glasgow Hospital for Diseases of Women."

"——, 1897.

"In writer's practice the use of 'Ingluvin' has been limited to treatment of vomiting in pregnancy. However, his first trial of it was in a case of acute indigestion. Mrs. P——, aged thirty-eight, married and mother of a large family, had been unsuccessfully treated by a colleague. Every means available to an intelligent and skilful physician of experience had been employed, but apparently to no purpose, as patient grew worse day by day. Writer was called, and for a while fought malady with same or like weapons and a like result.

"Having exhausted every other resource at hand, preparation called 'Ingluvin' (then new) was thought of, and immediately an ounce was procured from nearest druggist and its use commenced. Without knowledge of its value, surprise at result obtained can be appreciated only by one who has had similar experience.

"Every morsel of food taken had been vomited as soon as received in stomach. Not only that, but drink and medicine were promptly ejected, vomiting continuing to recur at intervals, without apparent cause. Imperfect digestion, or rather, no digestion, had been succeeded by innutrition, patient's condition bordering on inanition. Gastric pain and repletion with eructations were the burden of constant complaint. Administered in 10-grain doses, mixed in cold water, medicine was readily taken without murmur. There followed cessation of pain and fulness, and return of ability to receive and retain light nourishment. So decisive and unmistakable were effects, that word 'specific' seems better fitted than any other to describe its action.

"Such was character of writer's introduction to 'Ingluvin.' From that time to the present, a period of fifteen years, preparation has been held in high esteem. For vomiting in pregnancy and sequelæ, malnutrition and debility, it is not too much to say, preparation has justified my confidence.

"Of the many cases of this class, only one can be remembered that seemed not to be greatly benefited by it. That occurred in practice of another physician—on request, and without seeing case, adaptability of 'Ingluvin' was suggested. As this was the one break in an otherwise unbroken record, writer regrets the lack of opportunity that keeps him from observing for himself exact condition of patient. The more so because in no case over which he has been permitted to exercise personal supervision has result been other than satisfactory in character. When treating the vomiting of pregnancy physicians would do well not to wait until everything else has been tried and go to 'Ingluvin' as a last resort, but to use it from the start and persist in its use to a finish. No remedy yet in use can surpass it in my experience, as well as that of Prof. Bartholow, Dr. Bell, of Newcastle, and Dr. Solares, Barcelona, Spain. It replaces pepsin in all cases in 8 to 10 gr. doses, before or after meals, in powder to be taken in water, wine, or milk.—Very truly, ——"

Per ounce bottle, 4s., and in Tablets at same price.



TONO SUMBUL CORDIAL

(WM. R. WARNER & CO.).

An examination of the ingredients used in this combination and due consideration as to their physiological effects will satisfy the physician of the wide scope covered by this excellent tonic. The delicate stomach of the invalid rebels against the distasteful and nauseating bitter tonics. Tono Sumbul Cordial is free from this objection, having a delightful and pleasing taste in its combination with glycerine, therefore it replaces all such compounds.

Its potency is highly increased by the addition of the Iron and Cinchonia, the respective medicinal virtues of which, when properly presented, would admit of more than passing comment.

"A recent very elegant and palatable preparation of Wm. R. Warner & Co.—viz., 'TONO SUMBUL CORDIAL'—should be familiar to every practising physician. The formula is as follows:—

Sumbul	Acid Phosphate
Ferri Phosph.	Aromatics
Cinchonia	Sherry Wine.

"Sumbul, the root of Ferula Sumbul, natural order Umbelliferæ, habitat mountains of Russia in Asia, is a much used remedy of Russian physicians. Its action is similar to, but much more powerful than, Musk, Valerian, and allied drugs.

"It forms the chief ingredient of 'Tono Sumbul.'" It has marked nerve tonic and stimulant properties, and is a positive heart tonic. From a personal experience with this cordial I have found it to be a true tonic to the stomach and most pleasing to the palate taken in tablespoonful doses before meals or as an after-dinner cordial to relieve flatulence and promote digestion. It certainly promotes appetite, quiets the nerves, and gives a general sense of well-being. The ingredients combined with it are the most important for the therapeutic effects desired. "F. S. G——, M.D."

Retail price, 3/6.

WM. R. WARNER & CO., Pharmaceutical Chemists,

Depot: F. NEWBERY & SONS (Estab. 1746),

1 & 3, KING EDWARD ST., NEWGATE ST., LONDON, E.C.

Complete Catalogue, with Formulæ free to Practitioners on demand.

SAMPLES CHEERFULLY FURNISHED.

MEDICAL PREPARATIONS.

NAME.	PROPERTIES.	DOSE.
CREOLIN - -	A refined preparation of Jeyes' Fluid for medicinal purposes, forming an emulsion with water, used as a powerful non-irritating antiseptic.	In ½ to 2 per cent. solution.
JEYES' FLUID -	A coal-tar disinfectant of uniform, constant, and active composition. Used as a general disinfectant.	In 2 to 5 per cent. solutions, and in soaps, disinfectant powders, &c.
JEYES' SOLUBLE FLUID	A refined preparation of Jeyes' Fluid, forming a clear solution with water. For sterilisation of surgical instruments and as a general antiseptic.	For sterilisation purposes, in 2 to 3 per cent. solution; for irrigations, in ½ to 1 per cent. solution.
BRANALCANE -	A specially prepared and concentrated Glyceride of two non-poisonous antiseptic tar by-products, and containing Boracic Acid. A coloured syrupy liquid, strongly antiseptic in diphtheria and diseases of the mucous membrane.	Painted on the mucous membrane, undiluted. A teaspoonful in 5 oz. (a teacupful) of warm water as a gargle, spray, &c.
ANTINOSINE -	Iodoform substitute, being the sodium salt of Nosophen, a blue powder soluble in water.	As gargle and for irrigation in 0·1 to 0·25 per cent. solution, or undiluted in powder form like iodoform.
EUDOXINE - -	A reddish-brown tasteless powder, insoluble in water, combining the properties of Nosophen and Bismuth. Used as an internal antiseptic.	5 to 8 grains thrice daily; children ¾ to 3 grains thrice daily according to age; infants ⅛ to ¾ grain thrice daily. Best given in powder or pills.
NOSOPHEN -	Tetra-iodo-phenolphtalein, a greenish-yellow powder, insoluble in water, tasteless and odourless, containing 61·7 per cent. iodine. A powerful substitute for iodoform, free from poisonous and irritant properties.	Used undiluted and also diluted in the form of powder, ointments, paste, gauze, &c. Internally, in doses of 5 to 8 grains.

JEYES' SANITARY COMPOUNDS COMPANY, Ltd.

Head Office—

64, CANNON STREET, LONDON, E.C.

Eminent Medical Men,

Officers of Health, and Trained Nurses, recommend Lifebuoy Soap for use during Epidemics. Read what Dr. Karl Enoch, Chemisch Hygienisches Institut, Hamburg, says in his report of Experiments made with Lifebuoy Soap:—

"The examination of the sample of LIFEBUOY ROYAL DISINFECTANT "SOAP furnished to me by the Hamburg Agents of Messrs. Lever Brothers, "Limited, of Port Sunlight, England, gives the following results as to its "action as a disinfectant.

"Solutions of one, two, and five per cent. of LIFEBUOY ROYAL DISIN- "FECTANT SOAP in water were made. These solutions were brought to bear "on a variety of clean cultivated germs or microbes (*Bacillus*), in each case a "certain exact time being allowed for the operation; and thus the capacity of "this soap for destroying the various live and growing germs was proved. To "carry out this the following species of germs or microbes, amongst others, "were used:—

"1. Typhoid Microbe. 2. Cholera Microbe, taken from Hamburg water. "3. Diphtheria Microbe. 4. Carbuncle or Boil Microbe.

The results were as follows:—

"1. The obstinate Typhoid Microbes, with the five per cent. solution, were dead "within two hours.

"The operation of this soap on the Cholera Microbes was very remarkable, and "showed this soap to be in the highest degree a disinfectant. These were taken "from Hamburg water, and showed a result as follows:—

"With the two per cent. mixture, Cholera Microbes were dead within fifteen "minutes.

"With the five per cent. same were dead within five minutes.

"3. The Diphtheria Microbes were killed after two hours, with the five per "cent. solution.

"4. The five per cent. solution was tried on fresh Carbuncle germs, and the "result showed that the Microbe life was entirely extinct after four hours."

GUARANTEED PERFECTLY PURE, and FREE FROM ANY INJURIOUS CHEMICALS.

LIFEBUOY ROYAL DISINFECTANT **SOAP.**

Manufactured by LEVER BROTHERS, LIMITED, PORT SUNLIGHT, NEAR BIRKENHEAD.

FERRIS & COMPANY'S
PATENT
EVER-READY CADDY
AND
EVER-READY SURGICAL DRESSINGS AND PLASTERS

(The Newest and most Approved Method of Storing Surgical Dressings of all kinds)

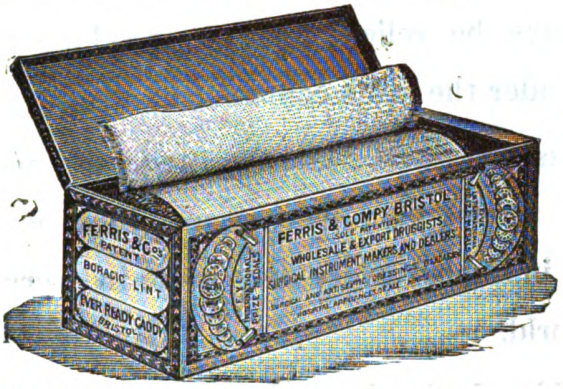
ECONOMISE MONEY, TIME, SPACE, & MATERIAL.

Lints,
Plain and Antiseptic.

Wools,
Plain and Antiseptic.

Gauzes.

Gamgee Tissue
And Similar Dressings.



Plasters,
8 inches wide.

Protectives,
Gutta Percha Tissue, &c.

Plasters
In Tapes, various widths.

Tows
And Similar Dressings.

A Caddy can be quickly and easily refilled when the contents are exhausted. The "Refills" are sent out in well-secured packages, and may be stocked without fear of deterioration.

The EVER-READY METHOD has been adopted by many of the leading Hospitals, Asylums, Colleges, &c., and a large number of the Medical Profession at home and abroad.

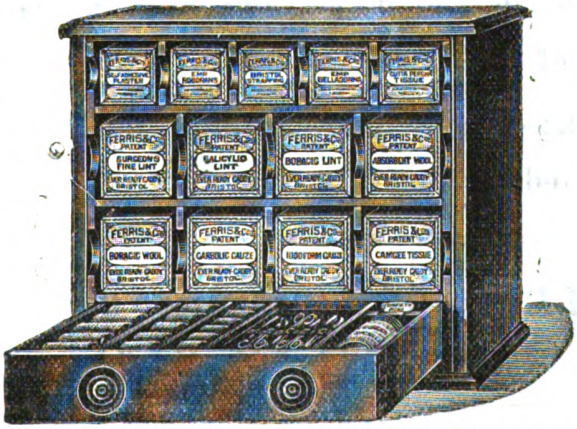
THE
EVER-READY CABINET
FOR HOLDING A SET OF
THE PATENT EVER-READY CADDIES.

In three stock sizes, each with or without Drawer.

The medium size Cabinet shown opposite holds thirteen caddies; it measures only 19 in. × 16¾ in. × 10½ in.; or without drawer, 19 in. × 13 in. × 10½ in.

The drawer is arranged to take an assortment of Bandages, Scissors, Pins, Sponges, Needles, Ligatures, Tourniquet, and a small set of Dressing Instruments.

The contents may be varied to suit the requirements of the purchaser. Special Cabinets made to order if stock sizes are not suitable.



"The Doctor is exceedingly pleased with the Cabinet and the Caddies, his remark being it was just what he wanted and what ought to be in every consulting room."

"I never experienced until now what it was to have comfort in dressing surgical cases at home.

"——, M.D., B.Sc.,
C.M. EDIN."

WRITE FOR PRICE LIST AND ILLUSTRATED DESCRIPTIVE PAMPHLET.

N.B.—A set of Caddies fitted complete, either with or without Cabinet, sent on approval, carriage paid, to any Surgeon in the United Kingdom, who has not already adopted them.

IF REQUIRED FOR USE IN HOT CLIMATES PLEASE STATE WHEN ORDERING.

FERRIS & CO., Union Street, Bristol.

Always Trustworthy.

IT has been proven by clinical tests that **BROMIDIA** is the best and safest hypnotic yet known to the Profession.

It is always of the same strength and, hence, can always be relied upon to produce the same results under the same conditions.

It is so well known and so well liked by the Profession everywhere that it can be obtained in almost every drug store in every country in the world.

Avoid substitution. The doctor should always take special care to get the genuine, which is only made by BATTLE. Substitutes not only injure the well deserved reputation of **BROMIDIA**, and the Chemical House of BATTLE, but it also affects the reputation of the doctor and is often harmful to the patient.

DOSE:—One-half to one fluid drachm, repeated as indicated.

BATTLE & CO. (Chemists Corporation),
ST. LOUIS, MO., U.S.A.

A Sample Bottle of BROMIDIA and Pamphlet will be forwarded free of charge to Medical Men on application to

ROBERTS & CO., 76, New Bond Street, London,
GENERAL DEPOT FOR GREAT BRITAIN.

PREMIER VINOLIA SOAP.

4d.



KEEPS THE COMPLEXION BEAUTIFUL AND CLEAR.

1/- per box of 3 Tablets.

VINOLIA VIOLETTE DE PARME SOAP.

4d.



No. 2.

Exquisitely Perfumed with the Scent of the Parma Violet.

1/- per Box of 3 Tablets.

VINOLIA VIOLET POWDER.

3d.



SPECIALLY PREPARED FOR TOILET AND NURSERY USE.

In 2 oz. Packet, 3d.
In ¼lb. Packet or Tin, 6d.
In ½ lb. Tins, 9d.

VINOLIA SHAVING CREAM.

9d.



FOR USING WITHOUT BRUSH & WATER.

In Collapsable Tube, 9d.

LAIT VINOLIA.

9d.

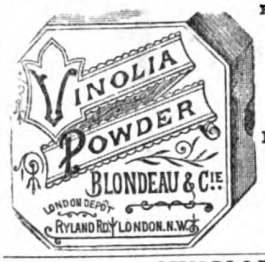


For the Complexion (Non-Medicinal).

"Nothing can be more grateful and soothing for the complexion. Keeps the skin beautifully soft, and of a velvety appearance."
—GENTLEWOMAN.

In Opal Bottle, 9d.
In elegant Porcelain Vase, 4/6

1/- VINOLIA POWDER.



FOR REDNESS, ROUGHNESS, TOILET, &c.

In White, Pink, & Cream Tints.

1/- and 1/9 per box.

PREMIER VINOLIA SHAVING STICK.

6d.



CAUSES NO BLOTCHES.

GIVES A MOST SOOTHING, ABUNDANT LATHER.

In gold-blocked cardboard Case, 6d.

BLONDEAU *INEXHAUSTIBLE* LAVENDER SMELLING SALTS.

6d.



These Smelling Salts are of exceptional strength, and most refreshing. They are agreeably scented, the odour of Lavender being very pronounced.

6d. & 9d. per bottle.

VINOLIA HAIR WASH.

1/-



DRY. MOIST.

DRY — Freshens and Cleanses the Hair, and preserves it free from any Oily, Moist appearance.

MOIST—Imparts a Natural Gloss to the Hair.

Each in 3 Odours: Portugal, Rose, and Violet.

Moist, 1/- per Bot.
Dry, 1/- per Bot.

PREMIER VINOLIA POMADE.

6d.



IMPARTS A FINE SILKINESS TO THE HAIR.

DELICATE, HOMOGENEOUS, SAFE.

In Glass Bottle, 6d.

1/1½d. VINOLIA CREAM.



FOR ITCHING, FACE SPOTS, SUNBURN, and the SKIN in Health and Disease.

1/1½ and 1/9 per box.

VINOLIA TOOTH SOAP.

6d.



An exquisite preparation for the Teeth. Delightfully Perfumed and free from any injurious ingredients.

In round metal box 6d.

PREMIER VINOLIA DENTIFRICE.

4d.



KEEPS THE TEETH IVORY WHITE, HEALTHY, AND BEAUTIFUL.

In Metal Box and Glass Bottle, 1d.

VINOLIA TOILET WATER.

1/6



This is prepared with Delicate, Refreshing Perfumes, and is a most exquisite and delightful preparation to use either clear or in water for the Toilet or in the Bath.

1/6 per bottle.

VINOLIA TOILET VINEGAR.

7½d



As a charming Toilet Vinegar for use in water for the Toilet or Bath, this preparation is guaranteed as representing the highest excellence as regards choice ingredients, desirable proportions and perfection in method of scientific manufacture.

7½d., 1/3, & 2/6 per bottle.

SPECIAL TERMS TO MEDICAL MEN.

VINOLIA COMPANY LTD., Malden Crescent, London, N.W.

PEPTONIZED MILK

(PATENT CONCENTRATED).

The remarkable value of Peptonized (*predigested*) Milk has now been completely established. Without calling for any digestive effort, it can, in the absence of all other food, supply the system for an indefinite period with the nutriment which it requires. The great drawback to the more extended use of Peptonized Milk has been the trouble, care, and even skill required to be daily expended to prepare a fairly palatable and uniformly peptonized product. These disadvantages are entirely obviated by the use of this Concentrated Preparation, as by mere dilution with water a deliciously-sweetened Peptonized Milk, of uniform composition, can be instantly prepared by the most inexperienced person.

In Tins, 2s. 6d.; in Half-Tins (Samples), 1s. 6d.

PEPTONIZED COCOA AND MILK

(PATENT CONCENTRATED).

In this preparation the Cocoa as well as the Milk is peptonized and rendered soluble, and is therefore more readily assimilable than any other preparation of Cocoa extant, and can be digested by even the most confirmed dyspeptic. Besides its extreme digestibility, its perfect palatableness renders it a most delicious as well as wholesome beverage, which can be taken alike by the invalid and by those who, although otherwise healthy and robust, frequently experience a difficulty in digesting any form of Cocoa. For general convenience in use it is unrivalled, as no addition of milk or sugar is needed, but only mixture with hot water.

Tins, 2s. 6d., to make fifteen breakfast cups of Cocoa, or ten or more breakfast cups of rich Chocolate. Also in Half-Tins (Samples), 1s. 6d. each.

N.B.—The milk used in these preparations is secured from farms under our control, and where the sanitary arrangements have been made perfect, and, in addition to this, sterilisation after the most approved modern methods is provided for, thus ensuring complete immunity from communication of the infectious diseases which are unhappily so often spread by means of milk.

OPINIONS OF THE MEDICAL PRESS.

THE LANCET, June 15th, 1889:—

"Peptonised Milk (Patent Concentrated) is an excellent article. In consistence it is like a thick cream, agreeable in flavour, and yet so well peptonised that it gives no coagulation with dilute hydrochloric acid, even after heating. It will be of great value. The Peptonised Cocoa and Milk (Patent Concentrated) is clearly founded on the above. In appearance it resembles chocolate cream, and it is delicate in flavour, and yet peptonised. It is almost needless to say of Messrs. Savory & Moore's novelties that they are well prepared."

The PRACTITIONER, July, 1889:—

"We have carefully examined and tested Savory & Moore's Peptonised Cocoa and Milk and Peptonised Milk, and have used them ourselves and for patients of fastidious appetite. We find them well peptonised, capable of keeping even when the tins are opened for a considerable time, and very palatable. The Cocoa and Milk forms a thin and inviting beverage of a pleasant nutty flavour, and is retained well even in cases of chronic neurotic vomiting. The Peptonised Milk mixes well with tea or coffee, and improves the taste of both. These properties render Messrs. Savory & Moore's latest preparations a valuable addition to the sick-room dietary, and we can recommend them to the profession."

The MEDICAL PRESS AND CIRCULAR, Sept. 4th, 1889:—

"The Peptonised Cocoa and Milk and Peptonised Milk introduced to our notice by Messrs. Savory & Moore, like everything emanating from their laboratory, are most carefully prepared and of the highest quality. There is, moreover, a delicacy in flavour and aroma with the Peptonized Cocoa which shows at once that the products of selected growths only obtain a place here. It is, therefore, one we can unhesitatingly recommend."

N.B.—THESE PREPARATIONS KEEP WELL AFTER THE TINS ARE OPENED.

SAVORY & MOORE,

Chemists to the Queen, H.R.H. the Prince of Wales, H.H. the Khedive of Egypt, &c.,

143, NEW BOND STREET, LONDON.

SAVORY & MOORE'S
BEST FOOD FOR INFANTS.

The attention of the Medical Profession is especially requested to the following characteristics of this old-established **SELF-DIGESTING** *Food, which has so thoroughly maintained its reputation for superiority during an experience of 30 years:—*

Ratio of Albuminoids to carbohydrates. The ratio of the albuminoids to the carbohydrates is the same as in human milk—viz., 1 to 6·4; the ratio in cow's milk being only 1 to 3·8.

Albuminoids easy of digestion, not predigested. The albuminoids are not predigested as in pancreatised foods, but are rendered easy of digestion, leaving (as in human milk) just sufficient work to strengthen and develop the immature digestive powers, instead of weakening and abrogating them by keeping them inactive. Sir WILLIAM ROBERTS' experiments in feeding kittens show that distinct failure of nutrition occurs when the milk is predigested (peptonised), and the same thing has been observed in feeding infants, probably owing, as THE LANCET points out, to atrophy of unemployed glands.

Healthy nature of evacuations. As a consequence of the foregoing the proper peristaltic action of the bowels is maintained, and the healthy nature of the evacuations of infants fed on this food is a satisfactory feature much and favourably commented on by Mothers and Nurses.

The curdling of cow's milk prevented. When mixed with cow's milk it prevents the troublesome curdling in the stomach which takes place when cow's milk is given alone, and assimilates its composition to that of human milk.

Complete conversion of the starch. The active Malt Diastase present provides for the rapid and complete conversion of the starch at the time of mixing into the soluble assimilable products of maltose and dextrine. The point of the gelatinisation (thickening) of the Food—viz., 140° F.—is just that at which Malt Diastase is most active, and the conversion of the starch is consequently the work of a very few minutes only.

Retention of the Phosphates and Fat. The retention of the fat and of the phosphates of the wheat and malt, which are so essential to bone formation. These exist chiefly in the outer portions of the grain, the very parts which some manufacturers pride themselves upon so successfully rejecting.

Absence of Fermentable sugar. The absence of the fermentable sugar, which in the various malt extracts and milk foods so often gives rise to Diarrhœa and Flatulence.

Verdict of Jury as to inferiority of imitations. It is the *only* Infants' Malted Food which obtained a Gold Medal at the International Health Exhibition, the Jury being comprised of such authorities as Dr. ATTFIELD, F.R.S.; G. W. WIGNER, F.I.C., the then President of the Society of Public Analysts; Dr. JAMES BELL, F.R.S., the Head of the Government Laboratories; and other distinguished Medical and English and Foreign Experts. This affords significant indication of the value to be attached to the numerous imitations, which, whilst pirating the descriptive notices of the Food, utterly fail to approach its standard of excellence.

SAVORY & MOORE,
143, NEW BOND STREET, LONDON, W.



LONDON, 1884.



ADELAIDE, 1887.



MELBOURNE, 1888.

BENGER'S FOOD.

GOLD MEDAL AWARDED
Health Exhibition, London.

FOR INFANTS, INVALIDS, AND THE AGED.

This Delicious, Highly Nutritive, and most Easily Digested Food is specially prepared for Infants, and for those Adults whose digestive powers have been weakened by illness or age.

THE FOLLOWING LETTER IS PUBLISHED BY SPECIAL PERMISSION OF THE RUSSIAN COURT:—

"BALMORAL CASTLE, SCOTLAND, 25th Sept., 1896.

"Sirs,—Please forward to Balmoral Castle one dozen 2/6 Tins of BENGER'S FOOD for H.I.M. THE EMPRESS OF RUSSIA, addressed to Miss Coster. We have received the box ordered from Peterhof.

"Yours truly, F. COSTER."

PUBLISHED BY PERMISSION OF HER ROYAL HIGHNESS PRINCESS ALEXANDRA VON HOHENLOHE:—

"SCHLOSS, LANGENBURG, WURTTEMBURG, Nov. 29th, 1897.

"Sirs,—I thought you would like to hear how the little Prince of Hohenlohe is getting on. I have fed him entirely on 'BENGER'S FOOD' since he was two and a half months old, and now he is eight months. He is the finest and strongest child I have ever had charge of. He really is a splendid boy, and always so good and happy. He has already four teeth, and has cut them without any trouble.

"I remain, Sirs, yours truly, "MARY GALLOWAY,
"(Nurse to the little Prince Gottfried v. Hohenlohe)."

"Dec. 5th.

"I shall be very pleased to have my letter printed, or any portion of it you wish. I have the permission of Her Royal Highness Princess Alexandra von Hohenlohe. H.R.H. is very delighted with your food."

The Lancet describes it as "Mr. Benger's admirable preparation."

The London Medical Record says:—"It is retained when all other foods are rejected. It is invaluable."

The British Medical Journal says:—"Benger's Food has by its excellence established a reputation of its own."

The Illustrated Medical News says:—"Infants do remarkably well on it. There is certainly a great future before it."

A Government Medical Officer writes:—"I began using your Food when my son was only a fortnight old, and now (five months) he is as fine a boy as you could wish to see."

From an Eminent Surgeon:—"After a lengthened experience of Foods, both at home and in India, I consider Benger's Food incomparably superior to any I have ever prescribed."

A Lady writes:—"Really I consider that, humanly speaking, Benger's Food entirely saved baby's life. I had tried four other well-known Foods, but he could digest nothing until we began the 'Benger.' He is now rosy and fattening rapidly."

BENGER'S FOOD may be obtained in Tins, at 1/6, 2/6, & 5/-, of leading Chemists, &c., everywhere; wholesale of all wholesale houses, or of

F. B. BENGER & CO., Limited, OTTER WORKS, MANCHESTER.

Telegraphic Address: "*BENGER'S, MANCHESTER.*"

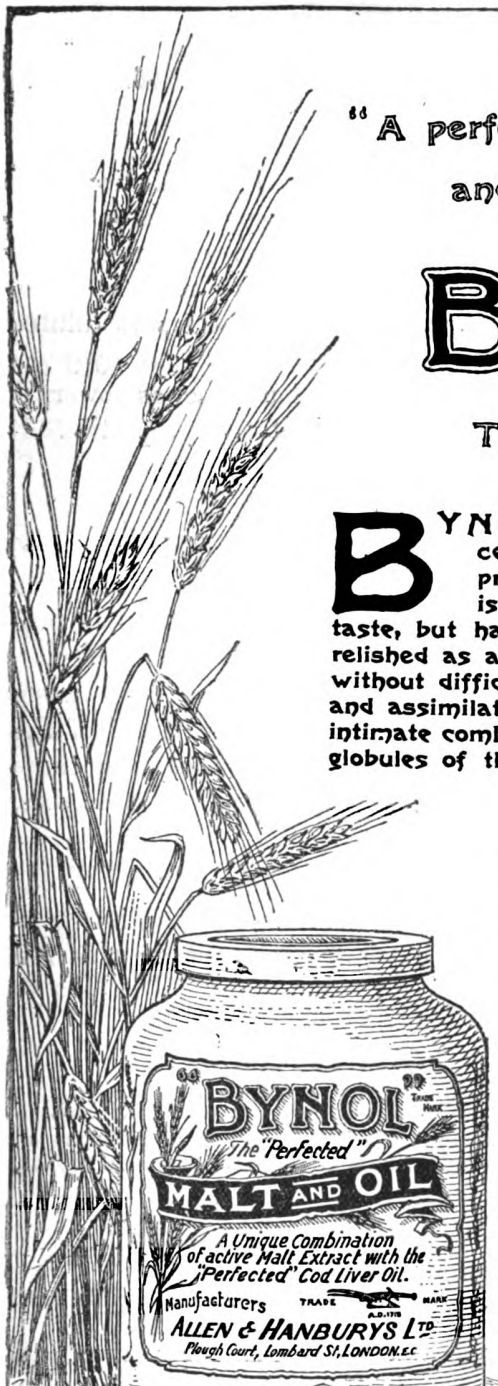
"A perfect combination of Malt Extract and Cod-liver Oil."—*British Medical Journal.*

BYNOL

The "PERFECTED" Malt and Oil.

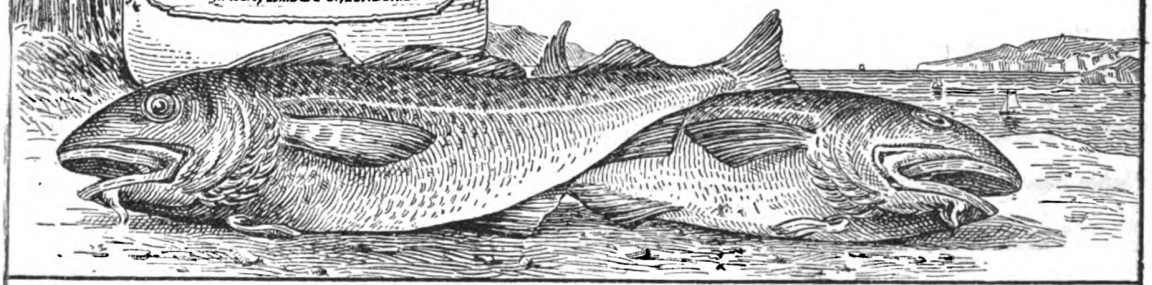
BYNOL, though containing a much larger percentage of COD-LIVER OIL than the ordinary preparations of MALT and OIL so widely sold, is, nevertheless, not only free from all unpleasant taste, but has a most agreeable nutty flavour, so that it is relished as a sweetmeat by many children. It can be taken without difficulty by delicate patients, being readily digested and assimilated. This result is due in large measure to the intimate combination of the MALT EXTRACT with the OIL, globules of the latter not being distinguishable even under a microscope.

The Malt Extract employed is exceptionally nutritious and active, while the Cod-liver Oil is of absolute purity, being made at Allen & Hanburys' own factories in Norway, from the fresh and selected livers of the Cod-fish only. *SAMPLES FREE TO MEDICAL MEN.*



The late Sir ANDREW CLARK, in a lecture at the London Hospital, remarked:—

"I have said that these fibroid cases are poor creatures, thin and white, and have what may be called nutritive debility, and the question is, What am I to do with them? You cannot do better than endeavour to make the patient walk in the way of physiological righteousness. But that sometimes will not do. Some people may be physiologically well behaved, and somehow they do not thrive on it. Can you do anything in those cases? There are two remedies which sometimes do succeed where the ordinary diet will not succeed in nourishing the patient—the one is Cod-liver Oil and Malt given with food—a preparation called **BYNOL**—*and the other is the remedy called* **BYNIN EMULSION,** *consisting of Hypophosphites, Oil, and Malt; both are prepared by Messrs. ALLEN & HANBURYS. These are two good nutritive agents in promoting nutrition."*



ALLEN & HANBURYS LTD., Plough Court, Lombard St, LONDON, E.C.

NON-POISONOUS. **MEDICAL IZAL.** NON-CORROSIVE.

A REFINED PREPARATION OF IZAL, specially prepared for Medical and Surgical use. The investigations of several eminent bacteriologists have established the high disinfecting power of MEDICAL IZAL; its superiority in practice is testified to by many leading members of the profession. Every separate make is tested bacteriologically by a well-known bacteriologist; it is not passed unless 1 part diluted with 200 parts of water destroys the *Bacillus coli* and the *Staphylococcus pyogenes aureus* in five minutes. MEDICAL IZAL is thus *proved* to be quite four times as powerful, antiseptically, as *absolute phenol* and yet free from danger and irritative properties. It is therefore

IDEAL IN OBSTETRICS.

MEDICAL IZAL is an emulsion, containing 40% pure IZAL OIL. This new coal (*not* coal-tar) product consists of oxidised hydrocarbons containing a greater proportion of hydrogen to carbon than the recorded member of the phenol series, and a less proportion than the members of the alcohol series.

EXCELLENT RESULTS have attended the use of this non-poisonous body when ADMINISTERED INTERNALLY in Typhoid, Dysentery, and other specific diseases of the Alimentary Canal. In Surgery, MEDICAL IZAL has won unqualified praise from those who use it. Proved to be exceedingly valuable in Ozœna, Erysipelas, old Abscesses, old Sinuses, and Fœtid Bronchitis.

PULMONARY TUBERCULOSIS.

When vaporised in the patient's room, IZAL quickly produces a marked improvement. The results are such as to warrant the highest hopes from its use in this fell disease. **Write for Special Pamphlet.**

IZAL PREPARATIONS.

MEDICAL IZAL (40% pure Izal Oil). In bottles, 1/6 & 2/6 each, and in Winchester quarts, 10/- each.
IZAL DISINFECTANT (40% Izal Oil), *proved* four times as strong, antiseptically, as absolute phenol. Officially adopted by H.M. Government for Use in Military Hospitals and in the Navy. In bottles, 6d., 1/-, 2/6, and 4/6 each; and in bulk.
IZAL LINT (1% Izal = 4% Carbolic), 2/4 per lb.
IZAL WOOL (1% Izal = 4% Carbolic), 2/- per lb.
IZAL GAUZE (1% Izal = 4% Carbolic), 1/- per 6-yard length.
To be had from the Makers, GIBBS, CUXSON & CO., Oldbury.
IZAL PERLES (2½ minims Izal Oil in oil), for Internal Use. Boxes of 25, 1/-; boxes of 75, 2/6; and in bulk.
IZAL LOZENGES (1-4th minim Izal in each), very valuable for the Throat. In boxes, 1/1½ each.
IZAL OINTMENT (5% Izal Oil = 50% Carbolic). For Ringworm and all Skin Diseases. In pots, 1/1½ each.
IZAL CREAM (1% Izal Oil = 10% Carbolic). Bland and Emollient. Valuable in Midwifery practice. In tubes, 1/1½ each; 4/6 per lb.
IZAL MEDICAL SOAP (4% Izal Oil = 40% Carbolic), 3 Tablets in box, 2/- per box.
PURE IZAL OIL, in glass stoppered bottles, 8 oz., 5/- each.

Verbatim Reports of Bacteriological, Pharmacological, & Surgical Experiments post free, also Samples, to the Profession.

NEWTON, CHAMBERS & COMPANY, Ltd., Thorncliffe, Sheffield.

ALLEN & HANBURYS, Ltd., Bethnal Green, London.

A PROGRESSIVE SYSTEM OF

Infant Feeding.

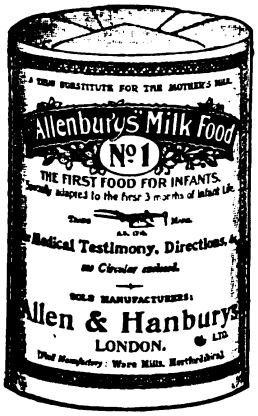
No single Food is suitable for the Infant for the whole period of the first nine months. At birth, the digestive powers are only able to assimilate human milk or its physiological equivalent; and it is not until the child is six months old that any starchy Food is admissible.

ALLEN & HANBURYS have introduced a Series of Foods to meet the increasing requirements of the infant economy.

THE

"Allenburys" Milk Food No. 1

is, as far as possible, an exact equivalent for human milk. It is prepared in the form of a dried powder, from fresh and carefully selected cow's milk, at their Factory at Ware. The proximate composition of the cow's milk having been ascertained, the excess of casein is removed and the deficiency in fat and milk-sugar made good. The mixture is then sterilised and concentrated in *vacuo*, care being taken not to overheat the mixture and thus destroy the anti-scorbutic element present. Sterilised *(boiled)* water is then added in the proportions indicated on the labels, and a perfect humanized milk is obtained. The portability, ease of mixing, and freedom from bacterial contamination render this preparation invaluable not only for general use but for delicate infants suffering from diarrhœa, and also in those cases where the milk supply is not above suspicion, or where long journeys have to be taken, whether by land or sea. This Food, as well as the **"Allenburys" No. 2,** is now being extensively used in India and tropical climates, and is found to keep perfectly in the hermetically sealed tins.



This Food should be given for the first 3 months.

THE

"Allenburys" Milk Food No. 2

is identical with No. 1, but contains in addition small quantities of maltose, dextrine, and soluble phosphates, derived from the digestion of whole meal. These are included to meet the increasing requirements of the infant economy; but it should be understood that there is **no unaltered starch** present.

This Food is designed for infants from 3 to 6 months.

THE

"Allenburys" Malted Food. No. 3.

This preparation (generally known as ALLEN AND HANBURYS' Malted Infants' Food) is a perfectly assimilable farinaceous Food. It is prepared on Baron von LIEBIG'S principle of malting, but by greatly improved methods. It differs from other forms of malted food in that the malt is present in a soluble, concentrated, and most active form.

The basis of the Food is fine wheaten flour, rich in nitrogen, with this advantage, that a large proportion, but not all of the starch is converted by the action of Malt Extract. The Food is rich in soluble phosphates and albumenoids, for the formation of firm muscle and solid bone.

It is prepared for use by the addition of cow's milk. With delicate children, however, the transition from No. 2 to No. 3 Food is too great, if cow's milk be used; it is better, therefore, to employ the **No. 1 Food** as a substitute for the cow's milk, thus ensuring the preparation being made with a true humanized milk.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

Infants' Food Manufactory: **Ware Mills, Hertfordshire.** *Laboratories and Warehouse:* **Bethnal Green, London, E.**

For special details concerning these Foods, see succeeding numbers of the *British Medical Journal* and *Lancet*

Saccharin Tablets.

½ grain in each.

Nearly 300 times as sweet as Cane Sugar.

For Dietetic Use.

These minute Tablets are put up in small vinaigrette bottles, and are particularly recommended to be used instead of sugar in diabetes, obesity, and the gouty diathesis. SACCHARIN passes through the system unchanged, and is *absolutely innocuous*.

For Culinary Purposes.

Soluble Saccharin is prepared for sweetening tarts, puddings, &c. A ready and rapid disintegration of this very insoluble drug is ensured.



Cascara Sagrada Tablets.

Sugar Coated.



CASCARA SAGRADA is a tonic aperient, which can be taken without fear of injury to, or losing its effect on, the bowel. Not only does it relieve constipation, but it restores the healthy action of the bowel, and its use is unattended with discomfort of any kind. It is best given in small repeated doses.

ALL NAUSEOUS DRUGS
CAN BE HAD SUGAR COATED.

These *rapidly dissolve*, and are *readily assimilated*.

The "Allenburys" Tablets.

Should be prescribed thus

℞. Tab. cascara sagrada A H.

Sulphonal Tablets.

Disintegrating.

These are made of the pure drug, and are as readily absorbed as the powder. The dose is presented in an accurate form, and, being put up in small vinaigrette bottles, the Tablets are very portable.

SULPHONAL is one of the most reliable and useful hypnotics now in common use. No ill effects result from a reasonable employment of this drug, nor does it give rise to headaches afterwards.

Tablets contain five grains in each.



Phenacetin Tablets.

Disintegrating.



This insoluble drug is so put up in Tablets that they readily and quickly disintegrate in the stomach. Portability is the great recommendation, as well as accuracy of dose, in the use of Tablets.

PHENACETIN is invaluable in this country for headaches, migraine, neuralgia, & influenza, while in the tropics it has been found the most reliable of all febrifuges.

In Central America the value of Phenacetin is being rapidly understood and appreciated.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

DIGESTIVE. TONIC. NUTRITIVE.

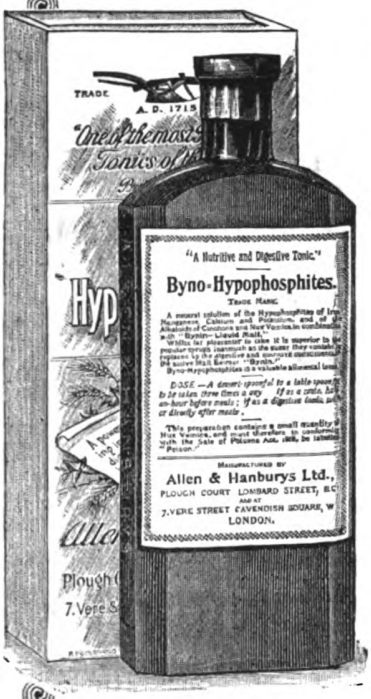
Byno-Hypophosphites.

"One of the most popular tonics of the day."

—British Medical Journal.

ADVANTAGES:

The inert sugar of the ordinary syrupy preparations is in BYNO-HYPOPHOSPHITES replaced by the active Malt Extract BYNIN. Hence BYNO-HYPOPHOSPHITES is DIGESTIVE and NUTRITIOUS, containing as it does the diastasic ferment of Carbo-hydrates and also the soluble Phosphates and Albumenoids of the finest malted barley.



BYNO-HYPOPHOSPHITES is a Tonic not only to the nervous system but also to the heart muscle and digestive apparatus.

With **BYNIN** (a very active and by far the most palatable Malt Extract on the market) as a vehicle, it contains the Hypophosphites of Iron, Manganese, Calcium, and Potassium, together with the Alkaloids of Cinchona and Nux Vomica in combination with their natural acids, in which form they are more readily assimilated. The quantity of Alkaloid is carefully standardised, there being the equivalent of 1-40th grain of Strychnine in each ounce.

☛ *The presence especially of Iron and Manganese in this preparation indicates its value as a direct hæmopoietic agent.*

The Hypophosphites, taken as a group, are invaluable restoratives in cases of brain fatigue and nervous exhaustion. It is a matter of clinical observation that PHOSPHORUS, essential in the production of the lecithin compounds of the nervous system, is FAR MORE READILY ASSIMILATED in the form of HYPOPHOSPHITES than as Phosphates, Phosphoric Acid, or even free Phosphorus.

The other allied Tonics in which BYNIN is used are:

Bynin-Amara = Easton Syrup.

Byno-Phosphates = Chemical Food.

SAMPLES FREE TO THE MEDICAL PROFESSION.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

Laboratories and Warehouse: BETHNAL GREEN, LONDON, E.

THE

Aylesbury Dairy Company's

Life Belt Brand,

PREPARATIONS OF MILK

FOR

INFANTS and INVALIDS.

SEVEN SILVER MEDALS AND OTHER HIGHEST AWARDS.

HUMANIZED MILK.

PEPTONIZED MILK.

WHEY.



STERILIZED MILK.

STERILIZED CREAM.

&c., &c., &c.

Beware of Spurious Imitations.

HUMANIZED MILK,

The only Genuine is supplied in glass bottles only, bearing the Aylesbury Dairy Company's Registered Trade Mark of a LIFE BELT and also the words

Life Belt Brand,

Can only be obtained at the Company's

Chief Office: 31, ST. PETERSBURGH PLACE, BAYSWATER, LONDON, W.

AND BRANCHES.

N.B.—The Company have no Agents, and the Public are cautioned against Imitations.

SAMPLE CASES SENT FREE OF CHARGE TO MEMBERS OF THE MEDICAL PROFESSION ONLY.

Telegraphic Address, "AYLESBURY COMPANY, LONDON."

Telephone No. "533 Paddington."

PEPSENCIA.

PEPSENCIA is an ever-ready digestive fluid, possessing remarkable peptic and rennet activity.

PEPSENCIA contains *pure pepsin*, the vitality of which is unimpaired by chemical action or manipulation, as it is obtained by direct solution from the secreting glands of the gastric mucous membrane, every care being exercised to preserve its full physiological activity.

PEPSENCIA facilitates the administration and aids the remedial action of drugs and chemicals which disturb the stomach and impair digestion. It is indispensable to the continued successful use of the mercurials, iodides, sodium salicylate, etc. It is helpful also in the toleration of morphia.

PEPSENCIA, made direct from the fresh rennet of the nursing calf, is of peculiar value as a stomachic, antiseptic, corrective and digestive. The milk-curdling ferment has a distinct physiological action in the infant's digestive economy. It renders milk curd more flocculent and digestible.

* * * * * *

WHEY, prepared with Pepsencia, contains all the soluble constituents of the milk, separated from casein and fat, and is therefore a valuable "rest" food, under conditions so favourable to fermentation that whole milk must, for the time, be avoided.

JUNKET, made with Pepsencia, a soft, jelly-like milk curd, is a delicious food for the Invalid, giving the sense of substance craved by the Convalescent, yet readily diffusible in the stomach, and very digestible. This Junket also forms an admirable, tasteless vehicle for the mercurials, iodides, chloral, sodium salicylate, etc.



Originated and Manufactured by

Fairchild Bros. & Foster,

NEW YORK.

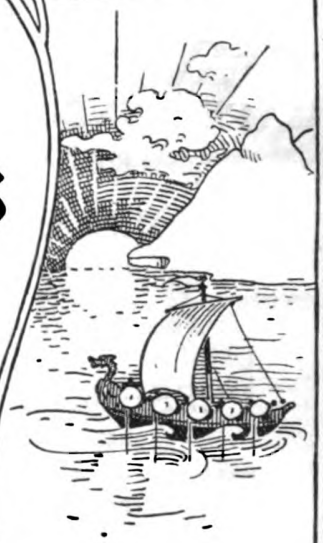
Agents for Europe, Asia, Africa, Australasia:

Burroughs, Wellcome & Co.,

LONDON and SYDNEY.



'Kepler' Malt Products



HAVE FROM THE FIRST BEEN RECOGNISED AS STANDARD PREPARATIONS OF UNDENIABLE EXCELLENCE AND RELIABILITY.

Burroughs Wellcome and Co., London and Sydney.

'Kepler' Malt Extract.

IS the "best known and largest used Extract of Malt" (*The Lancet*). It is the Malt Extract upon which the medical profession relies, and its unique reputation to-day is built upon the solid foundation of practical experience. Its perfection is not, therefore, theoretical only, but is established by actual clinical facts.

Small and large bottles, 1s. 8d. and 3s. each.

H 66

'Kepler' Solution.

IS a molecular incorporation of the finest Norwegian Cod Liver Oil in 'Kepler' Malt Extract. During the summer the intolerance of cod liver oil is conquered and its digestibility increased by its administration in solution in 'Kepler' Malt Extract. "An ideal form for the administration of fat."—*British Medical Journal.*

Small and large bottles, 1s. 8d. and 3s. each.

ASCERTAINED Maltine FACTS.

Value of "MALTINE" in Diastase.

"As to diastase-converting power, 'Maltine' is superior to the best extracts of malt I have ever seen."—Prof. STUTZER, Bonn.

"Repeated experiments show that 'Maltine' converts from 25 to 30 times its own weight of starch into sugar."—Prof. C. MÉHU, Paris.

"'Maltine' exhibits in an eminent degree the starch-dissolving power of diastase; in fact, a teaspoonful is capable of converting instantaneously a surprising amount of stiff starch paste into a thin, limpid liquid."—THE LANCET.

Albuminoids.

"Extracts of malt (i.e., malted barley) are pretty widely known, but in 'Maltine' we find the first example of a combination of the nutritious principles of these three cereals. The *greater value* of this combination is apparent, as wheat and oats are especially rich in muscle- and fat-producing elements. ..... Clinical experience enables us to recommend it as a nutritive agent in virtue of its albuminoid contents."—BRITISH MEDICAL JOURNAL.

"'Maltine' contains more flesh-forming substance than any other extract of malt."—Prof. DEPAIRE, Brussels.

Phosphates.

"Contains more bone-producing substance than any other extract of malt."—Prof. DEPAIRE, Brussels.

Carbo-hydrates.

"Maltine" contains a large proportion of the digested carbo-hydrates, dextrine and maltose. "Maltine," by reason of its diastasic superiority, renders assimilable and utilises for the organism a larger amount of farinaceous food than is the case with other extracts of malt.

As a Menstruum for Cod Liver Oil.

The BRITISH MEDICAL JOURNAL, referring to "Maltine" with Cod Liver Oil, states: "We can recommend it on the ground of its perfect admixture, the ease with which it is assimilated, the good quality of the cod liver oil, and the value in diastase of the 'Maltine.'"

"MALTINE" obtained the ONLY GOLD MEDAL for Extract of Malt at the International Health Exhibition, London.

TEN GOLD MEDALS AT INTERNATIONAL EXHIBITIONS.

SAMPLES FREE TO MEDICAL MEN.

THE MALTINE MANUFACTURING COMPANY, Limited,

24 and 25, HART STREET, BLOOMSBURY, LONDON, W.C.



'LANOLINE' PREPARATIONS.

'LANOLINE'
1 lb. and 7 lb. tins, 2/8 per lb.

'LANOLINE' (Anhydrous)
1 lb. tins, 3/4 per lb.

. . . .

TOILET 'LANOLINE'
in small and large collapsable tubes, 4/6 and 9/- per doz.

. . . .

'LANOLINE' TOILET SOAP
in boxes containing three tablets, 4/6 per dozen tablets.

'Lanoline' Preparations

'LANOLINE' is a preparation of the purified fat of lamb's wool, and is similar to the natural fat of the human skin.

TOILET 'LANOLINE.'

The most natural and therefore the best emollient for the skin. The 'British Medical Journal' says:—"Useful for chapped lips and hands, abrasions and eruptions of many kinds. In a thin layer over a wound it is an effective protective. . . . Such a layer forms an impassable barrier to disease germs."

'LANOLINE' TOILET SOAP.

A pure neutral soap carefully superfatted with 'Lanoline'. It thoroughly cleanses the skin and renders it beautifully supple without causing the slightest irritation even to the most delicate and irritable integument. "An excellent and valuable preparation."—'The Lancet.'

Sole Licensees—

Burroughs Wellcome and Co.,

LONDON and SYDNEY.

TRADE MARK 'SOLOID' BRAND



CARBOLIC ACID, gr. 20 (1.296 gm.).

IS a distinct achievement in pharmacy. It provides the surgeon with this important antiseptic in a safely portable form and enables him to promptly prepare solutions of any strength. Each represents twenty grains of crystallized Carbolic Acid. One in five ounces of water gives approximately a one per cent. solution. One in a pint of water makes a mild disinfectant solution or antiseptic spray.

In tubes containing 12, 6d. per tube.

BURROUGHS WELLCOME AND CO., LONDON AND SYDNEY.

H 67

TRADE MARK 'TABLOID' BRAND

OPHTHALMIC DRUGS.

LIST.

A	Atropine Sulphate	gr. 1/200
B	Atropine Sulphate	gr. 1/200
	Cocaine Hydrochloride ..	gr. 1/200
C	Cocaine Hydrochloride ..	gr. 1/20
Q	Duboisine Sulphate	gr. 1/250
F	Eserine Salicylate	gr. 1/600
G	Eserine Salicylate	gr. 1/500
	Tropacocaine Hydrochloride	gr. 1/100
D	Fluorescein	gr. 1/2000
N	Homatropine Hydrochloride	gr. 1/600
H	.. ..	gr. 1/400
E	.. ..	gr. 1/40
O	Homatropine Hydrochloride	gr. 1/240
	Cocaine Hydrochloride ..	gr. 1/24
W	Homatropine Hydrochloride	gr. 1/50
	Cocaine Hydrochloride ..	gr. 1/50
U	Hyoscine (Scopolamine) Hydrobromide	gr. 1/600
K	Pilocarpine Nitrate	gr. 1/400
M	Pilocarpine Nitrate	gr. 1/500
	Cocaine Hydrochloride ..	gr. 1/200
L	Tropacocaine Hydrochloride	gr. 1/30
R	Zinc Sulphate	gr. 1/250

THE convenience and rapid action of 'Tabloid' Ophthalmic Drugs have rendered them invaluable. A further reduction in size and increased solubility make them the most perfect means of applying medicaments to the eye. They are instantly soluble on the conjunctiva, rapid in action, and their dosage is perfectly reliable.

In tubes of 25, or in some cases 12, 6d. per tube.

BURROUGHS WELLCOME AND CO., LONDON AND SYDNEY.

H 68

SCHACHT'S
DIGESTIVE FLUIDS
Are the Most Efficient and Reliable.

SCHACHT'S PEPSINA LIQUIDA
(Registered Title.)

Fluid pepsine of extraordinary activity—tasteless, odourless, attractive to patients, and reasonable in price. Every teaspoonful, when tested by the official B.P. process is *guaranteed* to effect the solution of **1000 grains** AND MORE of albumen, a weight equal to that of two hard-boiled eggs. Peptic power is the only test of value. Most of the fœtid and repulsive dry Pepsines have proved worthless. Dose: ½ to 1 drachm. In 4-oz.; ½-lb.; 1-lb.; and 2-lb. bottles.

SCHACHT'S PEPSINA LIQ. c. BISMUTHO

Each dose contains in a concentrated form, besides the fluid pepsine, a full dose of Schacht's Liquor Bismuthi. An elegant and successful combination. Invaluable in irritative dyspepsia, gastritis, &c. Dose: One drachm.
N.B.—Peps. Liq. c. Bismutho Co. contains, in addition, one gr. of soluble Euonymin in each drachm.

SCHACHT'S PEPSINA LIQ. c. EUONYMIN

Each drachm contains, dissolved in fluid pepsine, one grain of soluble Euonymin, and is a highly active and reliable digestive and hepatic stimulant. Dose: One drachm. For dispensing, ½-lb. and 1-lb. bottles. If desired, this preparation can be had combined with tasteless Cascara.

SCHACHT'S LIQUOR BISMUTHI

Absolutely pure. The original preparation, invented and introduced to medicine by Mr. Schacht in 1855. Its distinct superiority is universally admitted. Dose: One drachm diluted; equivalent to a full dose of the Trisnitrate. When prescribing or ordering, please to specify "SCHACHT'S." In ½-lb.; 1-lb.; 2-lb.; and 5-lb. bottles.

SCHACHT'S LIQUOR BISMUTHI SEDATIVUS

Contains pure Bismuth and *Pepsina Liquida* in combination with sedatives; viz., in each drachm gr. 1-24 Morphiæ; min. ij. Acid. Hydrocyan., B.P.; and min. v. Tinct. Nucis Vom. A formula most serviceable in the treatment of gastric pain, nausea, and vomiting. Dose: ½ to 1 drachm, diluted.

SCHACHT'S BI-DIGESTIVE (PEPSINE AND DIASTASE).

A bland liquid of very agreeable flavour, presenting both ferments in fullest activity. Although such a combination, capable of converting both albuminoid and starchy foods, is often needed by physicians as a dietetic aid in disease or in convalescence, nothing of real value has hitherto been available. A most active, palatable, and reliable preparation is now offered to the profession. Dose: From a dessertspoonful to a tablespoonful with each meal. In 8-oz. and 16-oz. bottles.

The Profession is respectfully warned against substitutors and imitators. Articles are being offered that, except in name, bear no resemblance to those whose reputation rests upon a successful experience of more than forty years. The safeguard is to insist on having "SCHACHT'S."

GILES, SCHACHT, & CO., CLIFTON, BRISTOL.

A PERFECT MALT EXTRACT.

"D.C.L." MALT EXTRACT

THE DISTILLERS COMPANY, LIMITED, having exceptional experience of malting, and commanding the services of highly-trained Analytical Chemists, together with the choice of the finest grain procurable, consider that they occupy an unusually favourable position for the manufacture of a PERFECT MALT EXTRACT, which they claim "D. C. L." to be. It is, of course, concentrated *in vacuo*, and the temperatures at which the malted barley grist is mashed and the wort subsequently concentrated are carefully regulated, so as to ensure the production of a Pure Extract of Malted Barley of unusually high Diastasic strength and nutritive value.

"D.C.L." MALT EXTRACT has been submitted for analysis to a high scientific authority, who reports as follows:—

"REPORT ON THE 'D.C.L.' MALT EXTRACT.

"Composition in 100 parts:—

"Maltose	56·50
Dextrin	12·18
Albuminoid Matter	7·71
Ash (chiefly Phosphates)	1·92
Moisture, &c. (including Diastase)	21·69

"RELATIVE STARCH-CONVERTING POWER.—The diastasic or starch-converting power gives Malt Extract its chief value as an adjunct of food. A smaller quantity of this brand is required for such a purpose than of any brand known to me. Hitherto the four best brands in the market are required in the following proportions for the purpose just mentioned: Brand A, 100 parts; B, 95½; C, 91½; D, 56½. I find that only 54 parts of THE DISTILLERS CO.'S Brand are required to do the same starch-converting work. The samples of three different batches I have examined varied very slightly from this average of 54, the exact figures being 52, 54½, 55½. Each was of good flavour and was well prepared."

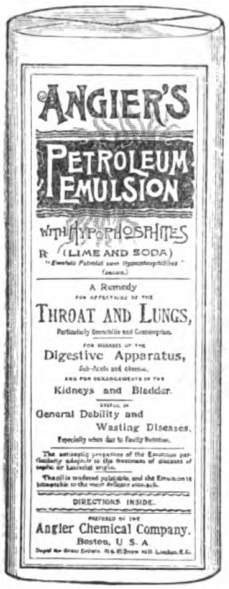
SAMPLES SENT FREE TO MEDICAL MEN ON APPLICATION.

"D.C.L." MALT EXTRACT is put up in Bottles and specially prepared lever lid Tins.

Sole Manufacturers: THE DISTILLERS COMPANY, LTD., EDINBURGH.

Angier's Petroleum Emulsion

WITH HYPOPHOSPHITES LIME AND SODA



IS INDICATED IN THE TREATMENT OF

PHTHISIS

IN ALL ITS STAGES.

It relieves the Cough and Fever, and is of undoubted efficacy in checking the Diarrhœa and Night Sweats; while it has great power to improve Digestion, Assimilation, and Nutrition. Bland, soothing, creamy, it is unobjectionable to the most fastidious patient and agrees with the most sensitive stomach.

PRESCRIBED BY EMINENT LUNG SPECIALISTS.

In two Sizes (6 and 15 oz.), of all Chemists.

FREE SAMPLES TO THE MEDICAL PROFESSION.

THE ANGIER CHEMICAL CO., Ltd., 31 & 32, Snow Hill, London, E.C.

ICHTHYOL.

SOLE MANUFACTURERS & PROPRIETORS—

THE ICHTHYOL COMPANY—CORDES HERMANNI & CO., HAMBURG.

IS EMPLOYED WITH ADVANTAGE IN

Diseases of Women. **Gonorrhœa.**
Diseases of the Eye.
Pulmonary Tuberculosis.
Deranged Conditions of the Digestive and Circulatory Organs.

Diseases of the Throat. **Influenza.**
Erysipelas. **Skin Affections.**
Inflammatory and Rheumatic Affections of all kinds.

ICHTHYOL

Is warmly recommended by medical men, both connected with hospitals and in private practice, and is in regular use in University and Public Hospitals.

Its extensive employment is indicated by the **Reducing, Sedative,** and **Antiparasitic Properties** revealed by experimental and clinical observations, as well as by its **Stimulating** and **Regulating** effects upon the system.

ICHTHALBIN An Odourless and Tasteless Ichthyol-Albumen Powder.
SPECIALLY PREPARED FOR INTERNAL ADMINISTRATION.

At all Chemists, price 2s. per box, containing 1 oz. *Dose: ½ to 1 teaspoonful, twice daily.*

Appetite-promoting; Nutrition-increasing; Stool-regulating effect; Disinfects the Intestine

LITERATURE AND SAMPLES FREE TO MEMBERS OF THE MEDICAL PROFESSION ON APPLICATION TO

GUSTAV HERMANNI, Jun., 20, High Holborn, London, W.C.

COX'S TASTELESS PILLS

Our Mr. Cox invented PEARL COATING to render Pills TASTELESS more than fifty years ago.

THE PATENT WAS DATED AND SEALED APRIL 13th, 1854.

Of course success like this has produced the inevitable copyist; our prices, however, will be found to compare most favourably with any makers where best drugs and chemicals are used, and we pay all carriage and postage.

In order to secure our goods, and to avoid the possibility of others being substituted, please see that all packages bear our name and trade mark.

Our JULY, 1898, Catalogue, containing over 800 formulæ, including the most approved new remedies suitable for pilular form, post free (with samples if required) upon application.

N.B.—We make and sell nothing but Pills.

ARTHUR H. COX & CO., BRIGHTON.

Made its Mark.

Lactopeptine (Richards).

Its digestive power

"we have proved."—THE LANCET.

Formula

"a desideratum."—MEDICAL PRESS & CIRCULAR.

Ingredients

"the best."—BRAITHWAITE'S RETROSPECT.

In practice:

"one of the certainties in medicine."—Prof. YANDELL.



Lactopeptine (Richards). INDICATIONS.—Indigestion, Cholera Infantum, Intestinal and Wasting Diseases, Gastric Disorders, and the Morning Sickness of Pregnancy.

In Powder and Tablets (5 gr.). Prices for Dispensing and to the Medical Profession only: 1 oz., 3/3; 4 oz., 10/6; 8 oz., 20/6.

JOHN MORGAN RICHARDS, 46, Holborn Viaduct, LONDON, E.C.

NEURALGIA.

THE one great characteristic of all varieties of neuralgia is debility of the nervous system, and whatever tends to produce structural or functional enfeeblements of the nerves induces neuralgia, hence all the causes inducing loss of nerve power may be cited as causes of neuralgia. This affection, when not directly the result of some physical cause interfering with the integrity of the nerve system in which the pain is situated, is invariably due to loss of nerve power. Its very existence is evidence of deficient energy. The remote factor may be malaria, syphilis, rheumatism, gout, or any other cause capable of devitalizing the organism, and as a consequence that of the nerves also. Our remedial measures should therefore be directed principally to improving the nutrition of the nervous system generally, and to the removal of any constitutional taint that may be present. The first indication is filled by CELERINA and a generous diet. In facial neuralgia and brow ache it should be administered in connection with quinine, or other tonic remedy, and if malarial influence be suspected, full doses of some reliable anti-malarial remedy should be given. The CELERINA treatment is also applicable to sciatic and spinal neuralgias. Neuralgia in men is frequently an expression of loss of nerve power, and the direct consequence of dissipation and excesses of various kinds, but over-work and intense intellectual exertion will also produce it. Where the pain is located is of little moment, the treatment should be general. In these cases CELERINA seldom fails to give relief. Women suffer more frequently and more intensely from neuralgia than men. They are liable to be affected by all the causes which induces it in men, besides the derangements in health associated with menstruation—menorrhea especially. Hyperfecundation (rapid child-bearing), frequent miscarriage, hemorrhage, prolonged lactation and changes occurring at the climacteric period of life, all tend to induce a neuralgic condition of the nerves. The general treatment should be directed to the removal of the cause whenever this is possible. In these cases CELERINA, combined with ALETRIS CORDIAL will be found to exercise a magical influence.

RIO CHEMICAL CO., St. Louis, Mo., U. S. A.

THE ABOVE PREPARATION IS PREPARED EXCLUSIVELY FOR THE PRESCRIPTIONS OF MEDICAL MEN. A SAMPLE WILL BE SENT FREE TO ANY MEDICAL MAN WHO DESIRES TO TEST IT, ON APPLICATION TO

RIO CHEMICAL CO., 36, Basinghall Street, E.C.

THE NATURAL MINERAL WATERS OF

State **VICHY** ***Springs.***

CELESTINS.—For Diseases of the Kidneys, Gravel, Gout, Rheumatism, Diabetes, &c.

GRANDE-GRILLE.—For Diseases of the Liver and Biliary Organs, &c.

HÔPITAL.—For Stomach Complaints. **VICHY TABLETS AND SALTS.**

Samples and Pamphlets free to Members of the Medical Profession on application.

CAUTION.—Each Bottle from the **STATE SPRINGS** bears a neck label with the "**VICHY—ÉTAT**" and the names of the **Sole Agents:—**

INGRAM & ROYLE, Ltd., East Paul's Wharf, 26, Upper Thames Street, London, E.C., 19, South John Street, Liverpool, and 80, Redcliff Street, Bristol.

The Tasteless and Best Natural Aperient.

ÆSCULAP

"Contains the Sulphates of Magnesium and Sodium in unusually large quantities. It is an admirable aperient water."—THE LANCET.

"ÆSCULAP is the clearest and purest of all the Hungarian Aperient Waters."—THE HOSPITAL.

"Of uniform strength and free from organic impurity."—EDINBURGH MEDICAL JOURNAL.

"A valuable remedial agent in stomach and intestinal affections."—GLASGOW MEDICAL JOURNAL.

"It is an efficient aperient."—DUBLIN JOURNAL OF MEDICAL SCIENCE.

"It possesses the decided advantage of being less unpleasant to take than many other bitter waters, as well as being free from any organic impurity."—THE MEDICAL PRESS.

Analysis of Professor JOHANN MOLNAR

Government Analyst, BUDAPEST.

SULPHATE OF POTASSIUM	0·104
SULPHATE OF AMMONIA...	0·061
SULPHATE OF SODIUM	139·063
SULPHATE OF MAGNESIUM	172·805
SULPHATE OF CALCIUM	20·788
CHLORIDE OF SODIUM	29·047
CARBONATE OF SODIUM	9·989
CARBONATE OF IRON	0·097
CARBONATE OF MANGANESE	0·429
ALUMINA	0·349
SILICIC ACID	0·092
TOTAL	372·824

ÆSCULAP

May be obtained from all Chemists, Druggists, Shippers, and Mineral Water Dealers.

The Bottling and Management of the Æsculap Springs, Budapest, are carried on directly under English supervision.

The ÆSCULAP BITTER WATER CO, Limited, London & Budapest.

HARVEY'S
SUGAR-FREE PALE ALE

(Protected by Her Majesty's Royal Letters Patent).

The only **ALE** which may be drunk with impunity by persons with whom, from various causes, ordinary Beer does not agree.

ABSOLUTELY FREE FROM SUGAR.

Mr. T. FAIRLEY, Leeds City and County Analyst, F.R.S.Edin., F.C.S., F.I.C., certifies, June 3rd, 1896, that this Pale Ale is

"ABSOLUTELY FREE FROM FERMENTABLE SUGAR."

For further analyses see THE LANCET, May 22nd, 1897, and the BRITISH MEDICAL JOURNAL, April 24th, 1897.

An article in THE LANCET says: "For years I have been unable to take beer as a beverage on account of the lethargy, indigestion, pain, and stiffness which invariably followed such indulgence; but for three months continuously I have taken one glass of this Sugar-free Pale Ale at luncheon without the slightest 'rheumatic' effects."
—THE LANCET, August 14th, 1897.

SPECIAL TERMS allowed to the Medical Profession, to whom a SAMPLE BOTTLE will be sent FREE on application.

The Sugar-free Pale Ale is supplied, upon receipt of cheque or postal order, in Imperial Half-pints, price **3s. 9d.** per dozen; Reputed Pints, **5s. 0d.** per dozen.

THROUGH GROCERS, WINE AND SPIRIT MERCHANTS;
BURGOYNE, BURBIDGES, & CO., 12 & 16, COLEMAN STREET, E.C.;
And HARVEY & CO., PELLON BREWERY, HALIFAX.

MOUNTJOY BREWERY, LTD.

(Late FINDLATER & CO.),

RUSSELL STREET, DUBLIN.

NOURISHING STOUT.

THE attention of Medical Men is respectfully called to the value of this finest of Malt drinks as a valuable Tonic Restorative. Numerous Unsolicited Testimonials have been received by our Bottlers all over England.

SAMPLES will be sent direct from the BREWERY, Carriage Paid, with name of nearest Bottlers, on application.

ANALYTICAL RECORD FROM "THE LANCET."

"CROWN STOUT.—MOUNTJOY BREWERY, RUSSELL STREET, DUBLIN.

"The nourishing qualities of Stout are due mainly to a comparatively high proportion of Malt extractions, which, consisting principally of maltose and dextrine, offer little task to the digestive organs. The sample before us is marked by an excellent proportion of these extractions, while, at the same time, the alcoholic strength is by no means excessive.

"The results of analysis were as follows: Malt extractions, 9·0 per cent.; mineral matter, 1·38 per cent.; alcohol—by weight 4·62 per cent., by volume 5·78 per cent.; equal to proof spirit 10·13 per cent. The mineral matters consisted almost entirely of soluble potassium phosphate. The Stout was in good condition, ripe, yet free from undue acidity, and possessed a characteristic malty flavour."

SIR CHARLES CAMERON'S ANALYSIS.

"DUBLIN.

"I have analysed a specimen of **Nourishing Dublin Stout**, submitted to me for that purpose by **The Mountjoy Brewery, Dublin.** I have never examined a specimen of Porter in which the solid or nutritive constituents were so abundant as in the case of this Stout. It contains **Ten Per Cent.** of its weight of solid matter, or nearly the amount of solids contained in milk. Its flavour is good, and it is **Remarkably Free from Acidity.**

"CHARLES A. CAMERON,

"*Professor of Chemistry, College of Surgeons, Dublin.*"

PROFESSOR TICHBORNE'S ANALYSIS.

"DUBLIN.

"I have examined and analysed for several years the Stouts brewed by **The Mountjoy Brewery**—viz, **Single, Extra,** and their speciality known as **Nourishing** or **Crown** Stout. The gravities of all these Stouts are very high, as proved by my analysis. **The Crown** or **Nourishing** Stout gave me one of the highest gravities I have ever seen in Stout. They are all of first-class quality. **The Nourishing** Stout being exceptionally fine, and owing to its **strength** and **purity,** is a most valuable food for **Invalids.** They are all brewed from **Malt** and **Hops only,** the water used being the best brewing water the City of Dublin affords. "CHARLES R. C. TICHBORNE,

"*Professor of Chemistry, Dublin.*"

Hunyadi János

A VERY INTERESTING and important contribution on Natural Mineral Waters of the purgative saline type was published in the report of a Special Analytical Commission in THE LANCET of December 5th, 1896. This report is made all the more interesting and reliable from the fact that a LANCET Commissioner personally visited the Saxlehner Springs, near Buda Pesth, and obtained samples on the spot, which were subsequently analysed in THE LANCET Laboratory, and the results obtained compared with samples purchased at a number of shops in London. The results showed that **HUNYADI JÁNOS, the Prototype of all Bitter Waters,** was, wherever it might be obtained, a water showing a **perfect uniformity of composition,** and one that could be **relied upon absolutely as at all times being identical** with that drawn from the Spring and fountain head. The numerous analyses in THE LANCET Report give very striking evidence not only of the **honesty of the water,** but bear out also the **remarkable uniformity of composition** that has characterised **HUNYADI JÁNOS** for **a third of a century.** Thus, the results recently obtained in THE LANCET Laboratory accord exactly with those obtained in Liebig's Laboratory over thirty years ago. **Nothing could be more satisfactory than this from the therapeutic point of view. Practitioners can thus depend** upon the water they prescribe, and may be assured that when **HUNYADI JÁNOS** is administered the **medicinal effects will always be the same,** and **with the same good results.** As is pointed out in the Report, an important feature in **HUNYADI JANOS** Water is the constancy of ratio of the active saline constituents to each other. The sodium and magnesium sulphates are together in almost exactly equal proportions, so **that what therapeutic property is lacking in the one is balanced by the other.** Neither the sodium sulphate nor the magnesium salt are in excess of each other. **In this way the purgative effect is not drastic,** but **mildly yet decidedly effective.** Again, besides these chief medicinal salts there are present in important quantity also in **HUNYADI JÁNOS** Water, Sodium Chloride, **Sodium Carbonate,** and **Lithium Chloride.** It cannot be doubted that each of these constituents contributes towards the **favourable action of the water,** which has for so long been a **distinctive and satisfactory feature attending its administration.** Last, but by no means least, the report of THE LANCET Commission shows that **HUNYADI JÁNOS** Water is bottled under **admirable sanitary precautions.** In the details of the analyses given there was not the slightest indication that **HUNYADI JÁNOS** Water contained any objectionable organic matter from whatever source. While therefore the medicinal properties of **HUNYADI JÁNOS** as a natural aperient are **sure and reliable,** it is **safe** also from the very important fact of its **extreme organic purity.**

Hunyadi János

PROPRIETOR

ANDREAS SAXLEHNER, BUDAPEST.

NERVES and FOOD.

One of the greatest living authorities on dietetics, writing under the heading "Why Vegetarian?" in the current issue of the NINETEENTH CENTURY, gives some very pertinent advice on the necessity of altered dietary suited to the enormous demands made on a man's activity, especially that of the brain, in these days of intense nervous energy and high pressure.

Food, he says, "must not be bulky. Much of it may be, advantageously, soluble in form, so as to be rapidly and easily assimilated, even pre-digested sometimes; and when solid, not requiring much mastication. I have found nothing which fulfils these conditions so completely as the various concentrated extracts of meat which are now so extensively used. A teaspoonful of sound beef extract in a breakfast-cup of hot water, when the brain is fatigued and the stomach unfit for work, is often the best antidote possible—reinvigorates the system, and prepares it for a light meal or for a little more work, as the case may be."

Science has shown by the most searching chemical analysis that **VIMBOS** contains less water and more actual nourishment, besides being purer, than any meat extract yet produced. It is therefore an ideal Food for Young and Old, for the Sportsman and the Athlete, the Brain Worker and the City Man, for those who have health and strength, and for those who seek to regain them.

OF ALL CHEMISTS, GROCERS, &c.

Offices and Warehouse—130, QUEEN VICTORIA STREET, LONDON, E.C. Manufactory—EDINBURGH.

NESTLÉ'S CONDENSED SWISS MILK

THE RICHEST IN CREAM.

PERCENTAGE OF BUTTER FAT.

Six Samples of NESTLÉ'S MILK bought at random at six different Shops, and analyzed by Mr. OTTO HEHNER, late President of the Society of Public Analysts, contained AN AVERAGE OF

13·13 PER CENT. OF BUTTER FAT.

Sample Tin sent free to the Medical Profession on application to HENRI NESTLÉ, 48, Cannon Street, London, E.C.

DOCTORS SHOULD ADVISE

CADBURY'S COCOA

Because

It is Absolutely Pure.
It is free from Drugs and Chemicals.
It is a Perfect Food.

CADBURY'S Cocoa is very easily digested; it imparts new life and vigour to those of delicate constitution, and can be safely and beneficially taken at all times and all seasons.

The **LANCET** *says—"CADBURY'S Cocoa represents the Standard of Highest Purity."*



WONDERFUL FOOD DISCOVERY.



A PURE VEGETABLE EXTRACT.

INVIGORATING! STIMULATING! STRENGTHENING.

"A powerful nutrient."—THE LANCET.

CHEAPER THAN MEAT EXTRACTS.

Prices of FLUID VEJOS per bottle:
No. 0, 2½d.; No. 1, 4½d.; No. 2, 8d.; No. 4, 1/3; No. 8, 2/4; No. 16, 3/10.

MAKES DELICIOUS SOUPS, GRAVIES, &c.

INVALUABLE TO SUFFERERS FROM INDIGESTION.
Is NOT a Medicine.
LARGELY RECOMMENDED BY THE MEDICAL PROFESSION.
APPLICATIONS FOR FREE SAMPLES INVITED.

Obtainable at all STORES, GROCERS, CHEMISTS, &c., throughout the Kingdom.

VEJOS LTD., Factory & Offices, 143, WEST HAM LANE, LONDON, E.

BLAKE, SANDFORD, & BLAKE.

PURE GUAIACUM

Specially prepared for administration in **CAPSULES.**

5 grains in each. Dose: 3 or more daily.

For the stimulant action of Guaiacum upon the Liver and Kidneys and its beneficial effect in chronic Gout, Rheumatism and muscular pain, see THE LANCET, Jan. 15th, 1898, and MED. AND CHIR. TRANS., Vol. 79.

47, PICCADILLY, LONDON.

BARFF BORO-GLYCERIDE.

FOR MEDICAL AND SURGICAL PURPOSES.

BY ROYAL LETTERS PATENT.

From THE LANCET:—"Nothing can be better than the action of this compound."

From BRITISH MEDICAL JOURNAL:—"The simplicity of arrangement, the freedom from cumbersome apparatus render it particularly well adapted for military surgery and for practice in rural districts."

"In Cystitis ..... this compound acts as a charm."—RICHARD BARWELL, Esq., F.R.C.S., Senior Surgeon of Charing-cross Hospital.

At the suggestion of several leading Surgeons, for convenience in carrying and for use in operations, BARFF BORO-GLYCERIDE is put up in Collapsible Tubes, each containing one ounce.

KREOCHYLE (BARFF & WIRE) LIQUID MEAT—Food and Stimulant for Invalids and Infants.

For full particulars and Samples apply to

THE KREOCHYLE CO., VIADUCT HOUSE, FARRINGDON STREET, LONDON, E.C.

Prices—5s. pound Bottles, 2s. 6d. half-pound Bottles, 1s. Bottles, and Tubes 6d.

TAMAR INDIEN GRILLON.

A laxative, refreshing, and medicated Fruit Lozenge, very agreeable to take, and never causing irritation. Its physiological action assures the immediate relief and effectual cure of

CONSTIPATION.

HÆMORRHOIDS, BILE,
CEREBRAL CONGESTION, HEADACHE,
LOSS OF APPETITE,
INTESTINAL OBSTRUCTIONS, &c.

By augmenting the peristaltic movement of the intestine without producing undue secretion of the liquids. Unlike pills and the usual purgatives, it does not predispose to intestinal sluggishness; and the same dose always produces the same effect—that is to say, never needs increasing.

It is recommended by the most eminent physicians of Paris, notably Drs. BELIN and TARDIEU, who prescribe it constantly for the above complaints, and with most marked success.

Wholesale—London: E. GRILLON, 47, Southwark Street, London, S.E.
Sold by all Chemists and Druggists, 2s. 6d. a box, stamp included.



"LIQ. SANTAL FLAV. c. BUCHU ET CUBEBÆ"

(HEWLETT'S).

THE ORIGINAL PREPARATION.

Report of "THE PRACTITIONER":—

"Experience has shown this preparation to possess *the same efficacy as Santal Oil itself.* It mixes perfectly with water, and has a taste by no means disagreeable, in which particular it contrasts very favourably with the ordinary mixture it is intended to replace."

To ensure obtaining this preparation, please write: "Liq. Santal Flav. c. Buchu et Cubebæ (Hewlett's)."

Price 10s. 6d. per lb. packed, for dispensing only, in 10, 22, 40, and 90-oz. Bottles.

INTRODUCED AND PREPARED ONLY BY

C. J. HEWLETT & SON, Wholesale & Export Druggists,

40, 41, & 42, CHARLOTTE STREET, LONDON E.C.

Allen & Hanburys' CASTOR OIL.

Odourless. Tasteless. Samples Free.

TRADE MARK.

BRIN'S  OXYGEN.

Addresses—
BRIN'S OXYGEN COMPANY, Limited, 34, Victoria Street, WESTMINSTER, S.W.
Telephone 3111. Works—69, Horseferry Road, Westminster, S.W.
MANCHESTER OXYGEN COMPANY, Limited, Great Marlborough Street, MANCHESTER.
Telephone 2538.
BIRMINGHAM OXYGEN COMPANY, Limited, Saltley Works, BIRMINGHAM.
Telephone 2587.

Maltopepsyn The Best Digestive.

Will you write us for a Sample? BURGOYNE, BURBIDGES & CO., 12 & 16, Coleman St., London, E.C.

BULLOCK'S PEPSINA PORCI.

DOSE—2 to 4 GRAINS.

ACID GLYCERINE OF PEPSINE

DOSE—1 to 2 DRMS. (BULLOCK).

In this preparation advantage has been taken of the solubility of Pepsine in Glycerine to produce a convenient and desirable *liquid form* of this valuable medicine; whilst the preservative qualities of the menstruum confer upon the Acid Glycerine of Pepsine the property of keeping for any length of time.

May be prescribed with most substances compatible with Acids.

In 4-oz., 8-oz., and 16-oz. Bottles, and in Bulk.

The published experiments of G. F. DOWDESWELL, Esq., M.A.Cantab., F.C.S., F.L.S., &c., Dr. PAVY, Professor TUSON, the late Professor GARROD, Dr. ARNOLD LEES, and others, conclusively demonstrate the excellence, high digestive power, and medicinal value of the above preparations.

J. L. BULLOCK & CO., 3, Hanover St., Hanover Sq., London, W.

A MODEL DIET FOR THE WEAK AND CONVALESCENT.

SCHERING'S

SANOSE.

Containing 80 per cent. Casein and 20 per cent. Albumose.

This is a Concentrated Milk Preparation of very considerable dietetic value. By this means a large amount of nourishment can be given to the invalid in the smallest compass.

It has been recommended in cases of Anæmia, Dyspeptic Troubles, Phthisis, Typhus, and in convalescents from lengthy illness.

Price 1s. per oz., or 3s. 6d. per 4 oz.

APPLY TO ALL CHEMISTS AND DRUGGISTS, OR TO

A. & M. ZIMMERMANN, 9 & 10, ST. MARY-AT-HILL, LONDON, E.C.



SLINGER'S NUTRIENT SUPPOSITORIES,

Consisting of nearly pure Peptone and Extractive from the Artificial Digestion of Meat. Five Suppositories contain the Extractive of 20 ounces of Meat, in addition to the Peptone. R. H. BOUCHIER NICHOLSON, Esq., Hull Infirmary, in a case of Gastrostomy, says:—"The beef suppositories (made by SLINGER & SON, York) were of much benefit, the man saying he felt great comfort from their use. The man was saved the pangs of starvation, from which he was fast sinking, when I first saw him." Manufactured only by SLINGER & SON, Wholesale Druggists, York. Wholesale Agents: Messrs. NEWBERY & SON, 1, King Edward-street, Newgate-street, London, E.C.

J. ROBBINS & Co. 189 WARDOUR ST. OXFORD ST. W.

METHYLENE.
Obtained by the action of Metallic Zinc on Chloroform and Alcohol.
Discovered to be a general Anæsthetic by Sir BENJAMIN W. RICHARDSON in 1867.
In 1-lb. Bottles, 12/-; 8-oz., 6/6; 4-oz., 3/6; 2-oz., 2/-.

COMPOUND ANÆSTHETIC ETHER
For producing Local Anæsthesia.
In 4-oz., 10-oz., and 20-oz. Stoppered Bottles, 2/-, 4/-, and 7/-.

OZONIC ETHER.
In 2-oz., 4-oz., 8-oz., and 16-oz. Stoppered Bottles, 2/-, 3/6, 7/-, and 12/-.

PEROXIDE OF HYDROGEN.
First introduced as a Medicine by Sir BENJAMIN W. RICHARDSON.

ETHYLATE OF SODIUM
(Sir BENJAMIN W. RICHARDSON'S Formula), for removing Nævi, &c.
In ½-oz. and 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2/6 and 4/-.

STYPTIC COLLOID,
For promoting the Healing of Wounds by the first intention.
In 2-oz. and 4-oz. Bottles, with Brush, 2/6 and 4/6; 16-oz., 12/-.

CHARCOAL CAPSULES.
Containing Pure Vegetable Ivory Charcoal. In Boxes, 2/6 each.

J. ROBBINS & Co. 189 WARDOUR ST. OXFORD ST. W.

LIQUOR BISMUTHI ET PEPSIN

(GALE'S).

This preparation affords a convenient and efficacious method of administering the combination of Bismuth with Pepsin. It is clear and colourless, and is readily taken by Young Children, &c.

DOSE—Half to one teaspoonful diluted with a little water.

Price 3/8 per lb.

ELIXIR MANNÆ

(GALE'S).

A mild and agreeable Laxative, highly recommended for Children and Ladies. Prepared from carefully selected Manna of the finest quality, and combined with Aromatics.

Dose—One to two teaspoonfuls in water.

Price 2/8 per lb.

Messrs. GALE & COMPANY beg to inform the Medical Profession that they will supply all the New and Altered Preparations of the New Pharmacopœia as soon as it becomes authorised.

PRICE LIST & PILL CATALOGUE ON APPLICATION.

GALE & COMPANY, Wholesale Chemists & Druggists (Estbd. 1786).

15, BOUVERIE ST., FLEET ST., LONDON, E.C.

Telegraphic Address: "DREADNOUGHT, LONDON."

58

M. HOFF, MALT EXTRACT MAKER, HAMBURG.

"THE FATHER OF ALL MALT EXTRACTS IS JOHANN HOFF'S MALT EXTRACT."—*The Lancet.*

Unsurpassed as TONIC, NUTRIENT.

A PLEASANT, NOT EXCITING BEVERAGE, For the Weak, Dyspeptics, and Consumptives.



The late Dr. MILNER FOTHERGILL wrote, in the MED. GAZ.:—"Herr Hoff, with his Malt Extract, has been the pioneer in this matter of soluble carbohydrates for Delicate Children, for Invalids, and, as we now see, for persons acutely sick and especially with a high temperature."

29, NEW BRIDGE ST., LONDON, E.C.

Proprietor of the firm M. HOFF.

NOVELTY! **LIQUID MALT EXTRACT WITH MANGANESE OF IRON.** *NOVELTY!*

It has a higher percentage of the Finest and Specially Prepared Extract of Malt, in direct combination with a Neutral Solution of Manganese of Iron, and has been found exceedingly useful in cases of Anæmia and Chlorosis. SAMPLE ON APPLICATION.



DINNEFORD'S FLUID MAGNESIA.

The most efficacious Antacid and Mild Aperient for delicate constitutions, Ladies, Children, and Infants.

ALL WHOLESALE DRUGGISTS.

Dr. ZED's

Syrup and Paste of

Codein, Tolu, etc.

(Each tea spoonful contains: 10 milligrams of pure codein.)

For BRONCHITIS, INFLAMMATION of the LUNGS, HOOPING COUGH, COLDS, etc.

Dr. Zed

Paris, 22, 20, rue Drouot.

and from all good Chemists.

CIMOLITE (Gr. κιμολια).

Terra Cimolia (popularly known as "WHITE FULLER'S EARTH"). A fine and very scarce natural variety of Steatite, composed principally of Silicate of Magnesium, and reduced by the most careful trituration and sifting to the FINEST POSSIBLE POWDER.

Highly recommended by the most eminent Dermatologists. As a Dusting Powder in Eczema it is simply invaluable, and is infinitely superior to Oxide of Zinc, Prepared Calamine, Carbonate of Bismuth, Powdered Starch, or any other Amylaceous Compound; also in all cases of Infantile Chafing, for most Irritations of the Skin, and all Excoriations. For the Profession *only*, in Tins, free per post, send 18 penny stamps. For the general public, post free, send 13 or 36 penny stamps.

Introduced into medical practice and prepared by JOHN TAYLOR, Chemist (many years with Squire, Oxford-street), 13, Baker-street, Portman-square, London, W.

LIQ. SECALIS CORNUTI (BATTLEY'S).

Please specify BATTLEY'S.

This Liquor contains the equivalent of a dram of powdered Ergot to each fluid dram. It is a preparation which can safely be relied on for purity and strength, and this is what is required of Ergotic Preparations, among which Battley's Liquor is pre-eminent. Perhaps there is no drug of which so many useless preparations exist. Many things may account for this. The official preparations of the British Pharmacopœia, the ammoniated liquid extracts, the stale powder, and the tincture being often almost inert, we therefore again bring to your notice this reliable Liquor, which has stood and does stand out before all others in efficiency, and which is now used in all parts of the inhabited world.

DIABETES & OBESITY.

G. VAN ABBOTT & SONS, —Manufacturers of all Foods for the above.

6, Duke Street Mansions, Grosvenor Square, London, W.

DENAEYER'S PEPTONES OF BEEF.

THE MOST NUTRITIVE, PLEASANT, AND PURE, FOR INVALIDS AND CHILDREN.

GENERAL AGENTS FOR THE UNITED KINGDOM:

MESSRS. BUTLER & CRISPE, 82, CLERKENWELL RD., E.C.

ANTI-DIABETIC WHISKY.

Specially Selected by JOHN DEWAR & SONS, Ltd.,

DISTILLERS, PERTH (N.B.), LONDON, MANCHESTER, AND BRISTOL.

BY ROYAL WARRANT TO HER MAJESTY THE QUEEN

50 GOLD AND PRIZE MEDALS AWARDED.

THE LANCET, of Sept. 18th, 1897, says of their Anti-Diabetic Whisky: "In the present state of our knowledge in regard to diabetes it is held essential that the patient, if he drink whisky at all, should only drink that which is of the purest kind and free from extractives and acidity. The spirit under analysis complies with these requirements."

FULLER'S SUBSTITUTE.

A purely Vegetable Caramel, enriched with bone- and brain-aiding Hypophosphites. Rich in emulsified fat (33½ %), flesh-formers (20 %), and malt.

Invaluable for Children requiring fat, flesh-formers, and phosphites, in a pleasing and highly assimilable form; for consumptives and others, and for those requiring the digestive aid of malt.

2/6 PER BOX.

To be had of FULLER'S, LTD., 206, Regent Street, and all their Branches; also from all Chemists and Stores.

PUREST CHLOROFORM AND ABSOLUTE ÆTHER PURISS.

As exclusively used by the most eminent Anæsthetists in the United Kingdom.

SALAMON & CO., Ld., Chemical Manufacturers, Rainham, Essex.

"G. B." DIABETES WHISKY.

48/- PER DOZEN, CARRIAGE PAID.

THE LANCET Analysis post free.

GEORGE BACK & CO., Devonshire Square. BISHOPSGATE. LONDON. Telegrams—"Diabetes, London."

"RISO" FLOUR

3º 6º & 1/- PACKETS. THE BEST FOR CAKES AND PASTRY.

From THE LANCET:—

"It is a flour of excellent quality, and is free from alum."

"RISO" SELF-RAISING FLOUR CO., Steam Roller Flour Mills, Mold, N. Wales.

DIASTASED FARINA FOOD.

Is a New Food. Easily Prepared.

TRADE

DIASTASED FARINA FOOD.



MARK.

Is More Easily Digested And More Nourishing Than Any Other Food.

DIASTASED FARINA FOOD.

Is Recommended by the Faculty For Infants and Adult Invalids.

TRY IT.

In Tins, 1s. 6d. each, from all Chemists.

MANUFACTURERS—

E. BEANES & CO. Falcon Works, Hackney Wick, London.

WIESBADEN GOUTWATER.

Specially recommended by the leading medical authorities against Uric Acid Concretions, Gout, Diabetes, Acidity, Renal and Liver Complaints, Epilepsy.

It contains the **largest** percentage of Sodium Bicarbonate, Lithia, and other beneficial Salts, and the **smallest** quantity of Lime Salts.

In Cases of 1 dozen bottles ... ... 12/6 per doz.
" 3 " " ... ... 12/- "
} Ex Warehouse London, packages included; not returnable.

Obtainable from any Chemist or Mineral Water Dealer, or from

WIESBADEN BRUNNEN-COMPTOIR,

London Agency — L. R. VOIGT & CO., 25, Great Tower Street, E.C.

C.A.M.W.A.L.

CHEMISTS' ERATED MINERAL WATERS ASSOCIATION LIMITED.



PURITY.
QUALITY.
CHEAPNESS.
CONVENIENCE.
RELIABILITY.
VARIETY.

The Medical Profession are requested to specify **"C.A.M.W.A.L." WATERS.** By so doing they directly benefit both Chemists and their Patients. Every label distinctly states the quantity of active ingredient in each half-pint of the waters. Hundreds of leading Medical Men have sent written testimony in favour of C.A.M.W.A.L. Waters.

Samples Free to the Profession, and lists of nearest Agents on receipt of post-card to the Secretary, 45, GIFFORD STREET, LONDON, N.

C.A.M.W.A.L. supplies Chemists and Hospitals **only**; over 4000 Chemists have joined hands in this business, and this number is steadily increasing.

LONDON, MANCHESTER, BIRMINGHAM, BRISTOL, HARROGATE, & MITCHAM.

CONTREXEVILLE

Be Careful to specify:

SOURCE DU **PAVILLON**

(Diuretic, Tonic, Digestible)

GOUT, GRAVEL, DIABETES, ARTHRITISM

The Contrexéville Mineral Water (Pavillon SPRING) is a diuretic and laxative, a tonic, a stimulant, and aid to digestion. — It acts upon the secret mechanism of nutrition, as is proved by its influence in checking the production of uric acid and glucose: it favourably modifies those morbid processus of biological chemistry which result in the accumulation of uric acid in the blood, inducing the phenomena of gout. — It facilitates the elimination of urinary deposits, by contracting the ducts containing them and increasing the quantity of liquid by which these vessels are flushed. — It assists the cicatrization of the inflamed mucus of the urinary organs, and helps to restore the normal acidity of the urine; facilitates the flow of the bile, by causing contraction of the biliary ducts and the expulsion of calculi; and is invaluable in the treatment of congestion of the liver.

Samples free to Members of the Medical Profession on application to INGRAM & ROYLE, *East Paul's Wharf, 26, Up. Thames St., E.C.*

VALS

(Springs)

PRÉCIEUSE Liver, Calculi, Gravel, Gout. Complaints of the Kidneys.

Saint-Jean Impératrice Disorders of the stomach. The best *natural* table waters ever known.

DEPOT AT ALL MINERAL WATERS DEALERS

PAMPHLET, in Paris, 4, Rue de Grenelle, 4.

SAINT-RAPHAEL

Tonic, Strengthening, digestive wine. Ordered for weak and fatigued stomachs, in chlorosis, anæmia and to convalescent people. Unrivalled adjuvant in consumption. ***Excellent flavour.***



Beware of worthless imitations. See that you get on each bottle the Trade Mark here opposite and the Warranty Stamp of the Manufacturers Union.

ST RAPHAEL WINE COMPANY, VALENCE (DRÔME, FRANCE)
J. GALLAIS, 90, Piccadilly, W. LONDON.

"FRANZ JOSEF"

Aperient Water has for twenty years past been the most popular of the natural aperient waters, it being the only palatable water of its kind. *SOLD EVERYWHERE.* *HEAD OFFICE, BUDAPEST.*

MESSRS. COOPER & CO.,

PHARMACEUTICAL CHEMISTS, AND MANUFACTURERS OF "OXYCARBONATED" MINERAL WATERS.

By Her Majesty's Royal Letters Patent.

80, GLOUCESTER ROAD, SOUTH KENSINGTON, S.W.

Mineral Water Manufactory & Steam Laboratories: **8 & 9, STATION BLDGS., CLO'STER RD.**

C. & Co.'s "OXYCARBONATED" MINERAL WATERS are a combination of *Oxygen* in suitable proportion with *Carbonic Acid Gas.*

Report by Sir E. FRANKLAND, K.C.B., D.C.L., F.R.S., upon Messrs. Cooper & Co.'s Distilled Water, as used in the manufacture of their Aërated Waters:—"WATER ANALYSIS LABORATORY, THE YEWS, REIGATE, May 17th, 1898.—I have submitted to complete analysis and bacterioscopic examination the sample of Distilled Water from Messrs. Cooper & Co.'s Mineral Water Factory. I enclose results of chemical analysis, and have to report as follows: The sample contains no trace of organic matter, and is quite free from microbes or their spores. It is admirably adapted for the manufacture of Aërated Waters.—(Signed) E. FRANKLAND."

C. & CO. have erected SPECIAL DISTILLATORY APPARATUS for the production of DISTILLED WATER.

The following are prepared with "Oxycarbonated" Distilled Water, in Patent Porcelain-lined Syphons, thus ensuring absolute freedom from metallic contamination—viz.: LITHIA, LYSIDINE, LYCETOL, PHENOCOLL, PIPERAZINE, SODA, SELTZER, POTASH, LEMONADE, &c. C. & Co. prepare Aërated Medicinal Waters in any strength or combination as desired by the Medical Profession.

The above Waters were exhibited at the Medical, Surgical, and Hygienic Exhibition held at the Queen's Hall, Langham-place, London, W., from May 31st to June 3rd, 1898.

Telephone, 340 Kensington. ESTABLISHED 1863. **Telegrams: "Sinapine, London."**

A RIGHT ROYAL REFRESHER.

As supplied to the House of Commons and the Leading Clubs.

Bright.
Sharp.
Clear.

St. Ronan's

THE SCOTTISH NATURAL MINERAL **TABLE WATER.**

A purely BRITISH product—Superior to and Cheaper than any of the FOREIGN Mineral Waters. In Splits, Pints, & Quarts.

Sample Free on application.

Proprs.: THE "ST. RONAN'S WELLS" & MINERAL WATER CO., Ld., Innerleithen, N.B. London: 66, Finsbury Pavement, E.C. Newcastle: 66A, Newgate St. Belfast: 79, Donegall St. Manchester: 5, Newton St. Leeds: 23, Kirkgate. Edinburgh: 20, George St.

"IN THE FRONT RANK."

TIBBLES' Vi-Cocoa

Is a Combination of the African Kola Nut, Extract of Malt, Hops, and the best Caracas Cocoa.

REFRESHING, AGREEABLE, and STIMULATIVE.

TAKES THE PLACE OF TEA AND COFFEE AS A MORNING AND EVENING BEVERAGE.

☞ THE LANCET says:—"Vi-Cocoa must be assigned a place in the front rank of really valuable foods, since it is the embodiment of the numerous principles contained in malt, hops, kola, and cocoa. ..... Of distinct value as a restorative and stimulative food."

THE BRITISH MEDICAL JOURNAL says:—"Vi-Cocoa is a very palatable beverage of great stimulating and sustaining properties.

THE MEDICAL MAGAZINE says:—"Medical practitioners will find a valuable weapon in Tibbles' Vi-Cocoa in combating the various conditions of nervous exhaustion and enfeebled digestion. The ingredients of which it is composed are carefully selected and of undoubted purity and strength."

SAMPLE TINS SENT FREE ON APPLICATION.

Address: TIBBLES' VI-COCOA LIMITED, 60, 61 & 62, BUNHILL ROW, LONDON, E.C.

DIABETES

BLATCHLEY'S Celebrated Breads and Biscuits supplied to nearly all the London and County Hospitals & Infirmaries. Blatchley's Gluten and Bran Biscuits, a speciality in treatment of Obesity, made from a receipt of Dr. Yorke-Davies. Price Lists free.
E. BLATCHLEY, 167, Oxford St., London.

OBESITY

HAUSEN'S OATMEAL COCOA

Is a happy combination of two of Nature's most nourishing products. On account of its high percentage of digestible albumen, and its low percentage of fatty matter, it is most suitable for Children, Invalids, and Convalescents, and in all cases of Disorders of the Stomach and Bowels.

Manufactured under the control of Professor DIETRICH of the Royal Laboratory at Marburg, it is highly recommended by Professor KUSSMAUL (Heidelberg), Professor GURLT (Berlin), Professor VON STRUMPELL (Erlangen), Professor Dr. VON ESMARCH (Kiel), and many other medical authorities.

A SAMPLE BOX WILL BE SENT FREE ON APPLICATION TO

THE SERVUS COMPANY. 65 & 66, Basinghall Street, London.

SOLE AGENTS FOR THE UNITED KINGDOM.

DIPSOMANIA.

DURING the last six months we have invited the Medical Profession to test "HALL'S WINE" as a probable antidote to Dipsomania. We are receiving some opinions from those who have tried the experiment.

The following have been recently received, and confirm those already published :—

Dr. J. H. R., L.R.C.P., &c.:—"About January 16th last you forwarded at my request a sample of 'Hall's Wine.' I had a case just then of Delirium Tremens, or rather Convalescence from it. I had it administered twice a day, morning with luncheon and after supper at bedtime. The result was distinctly good, no other stimulant was given. He now takes it regularly three times a day, and wants no other stimulant. His nerves are much stronger, and he sleeps well. I can strongly recommend 'Hall's Wine' in similar cases."

Dr. E. F. N., M.D., L.R.C.P. & S.Ed., &c.:—"I beg to mention that I can already testify to the value of 'Hall's Wine.' I have prescribed it in the treatment of Dipsomania with marked good results. I have two patients at the present who are taking it with excellent effects."

We desire to impress upon Medical Men the important fact that "HALL'S WINE" has no addition of Cocaine, and that it is carefully prepared by macerating the best Bolivian Leaves in partially detannated Port Wine, the proportion being one drachm of leaves to the wineglassful.

A 3/6 Bottle sent free on receipt of Professional Card by

STEPHEN SMITH & CO., Ltd., Bow, London, E.

62

DAINTINESS.

A woman of dainty habits, a dainty home, daintily clean linen, and daintily prepared food arranged in a daintily appetising manner are charms to life appreciated alike by Peer and Peasant; and equally esteemed in the mansion, villa, or cottage. Daintiness is a virtue, for it bespeaks cleanliness, which we have ample authority to hold "next to godliness." When an article therefore is daintily bright and transparent to the eye, when we know it is mainly produced by ingenious apparatus, that reduces hand labour to a minimum and ensures a maximum of cleanliness, we are attracted thereto at once. And when we are told that the apparatus employed in manufacture is silver electro-plated, just as the forks and spoons of our every day life are silver plated with the same object in view, viz., cleanliness and non-contamination, our sympathies are still further enlisted. Now let us take the best possible materials and be certain of their absolute purity; to these we will ally an unique delicacy of flavour, a bright and attractive appearance, and the daintiness of manufacture referred to above, and behold now we have the finished product, to wit, Chivers' Gold Medal Table Jellies. These Jellies are easily and quickly prepared by even inexperienced persons—by an intelligent child, in fact. They are brilliantly transparent and daintily appetising. Need we say that children love Chivers' Jellies? Of course they do. And withal the Jellies are nutritious, wholesome, and digestive. Another great advantage in their favour is that they are flavoured, not with some secret chemical concoction, but with rich, ripe, pure fruit juices—Raspberry, Strawberry, Orange, and Lemon. Chivers' Gold Medal Table Jellies are made, not in the tainted air of a London slum, but in the sweet country air of a Cambridgeshire village. Hence their delicacy and daintiness. Messrs. Chivers gained the first prize at the Royal Show, Windsor, for Jams, made from fruit of their own growing.

Chivers' Jellies are sold by Grocers and Stores in packets. Half-pints, 2½d; Pints, 4½d.; Quarts, 8d. A Free sample will be sent on receipt of post-card. Address, S. Chivers & Sons, Histon, Cambridge.

Ask your Grocer and Wine Merchant for the Famous



Proprietors— *SOLD EVERYWHERE.*

PEASE, SON, & CO., LEITH and DARLINGTON.

BELLIS'S
REAL TURTLE JELLY

Invaluable to INVALIDS, TOURISTS, SPORTSMEN, &c.

FOR INVALIDS

There is no Food so Nourishing, Sustaining, and Easily Digested as TURTLE JELLY. It should be at hand in all serious illnesses. A few spoonfuls taken between meals is a valuable Tonic.



THE *ILLUSTRATED LONDON NEWS*, MAY 21st, 1898:—"TURTLE JELLY is another Spécialité of T. K. BELLIS, and much recommended for Invalids. It is put up in glass bottles, and the recipe from which it is prepared is that of a famous modern chef."

Obtainable at Chemists, Stores, Grocers, &c., or direct, post free 2s., *from*

T. K. BELLIS, 6, Jeffrey's Sq., St. Mary Axe,
LONDON, E.C.

CALLARD'S DIABETIC FOODS

ARE SUPPLIED TO Guy's, The London, St. Bartholomew's, AND OTHER LEADING HOSPITALS.

Please write for Catalogue and Samples—

CALLARD, STEWART & WATT, Ltd.
Invalid Food Specialists
TO HER MAJESTY,
65, REGENT STREET, LONDON, W.

FOR DIABETES,

SEND FOR

BONTHRON & CO.'S

LIST OF

GLUTEN BREAD

AND

BISCUITS.

See PAVY on Diabetes, p. 245, THE LANCET, June 9th, 1877, Report, and recommended by all leading authorities on the subject.

50 and 52, GLASSHOUSE STREET, and 106, REGENT STREET, LONDON.

Allsopp's Pale or Bitter Ale.— Messrs. SAMUEL ALLSOPP & SONS, Limited, beg to inform the TRADE that they are now Registering Orders for the SEASON-BREWED PALE ALE, in Casks of Nine Gallons and upwards, at the Brewery, BURTON-ON-TRENT, and at the undermentioned Branch Establishment:—
61, KING WILLIAM STREET, LONDON, E.C.

STOWER'S LIME JUICE CORDIAL.

NO MUSTY FLAVOUR.

As supplied to Her Majesty and both Houses of Parliament, the Orient Line, P. & O. Line, Pacific Steamship Co., &c., &c.

ABSOLUTELY PURE AND NON-ALCOHOLIC.

SAMPLE POST FREE on application to the Sole Proprietor, A. RIDDLE & CO., 36 & 38, Commercial St., London.

BEST HAVANA CIGARS AT IMPORT PRICES.

The greatest connoisseurs, the keenest buyers, and best judges of value now purchase their cigars at

BENSON'S, 61, St. Paul's Churchyard, London.

Good Foreign Cigars, 12s., 16s., 20s., 22s., 100. Samples five for 1s., post free. Cigars to suit the most delicate palates.

POWNCEBY'S

PURE WINES, OLD BRANDIES

And Thoroughly Matured WHISKIES.

Are especially adapted for Medicinal and Family purposes.

QUOTATIONS ON APPLICATION.

POWNCEBY & CO., 183, OXFORD ST., LONDON, W.

Free Delivery. | No Agents. | Terms Cash.

ROSS'S Belfast.

AERATED TABLE

Belfast. WATERS.

AËRATED LYSIDINE WATER.

A NEW URIC ACID SOLVENT OF STRONGLY ALKALINE REACTION.

Prepared by R. HOGG & SON,

1, SOUTHWICK STREET, HYDE PARK, W.

DIRECT FROM SCOTLAND.

BUY your Whisky DIRECT from the BLENDER at Wholesale Prices, and get it guaranteed PURE, OLD, and MELLOW.

KEITH'S

"CADZOW"

(10 YEAR OLD)

WHISKY.

NOTE.—This is our Special Blend of the finest selected Scotch Stills, guaranteed not less than 10 years; some of the Whiskies comprising it are 11 and 12 years old. It is possibly the oldest Whisky in the world offered at the price.

Specially packed, 43/- per Dozen Case.

SAMPLE BOTTLE 4/-. Carriage paid.

Cash with Order or Reference.

JAS. KEITH, HAMILTON, N.B.

ONOMOSTO.

GENUINE SPARKLING WINE.

2/- per Bottle; 1/2 per ½-Bottle.

(BY LONDON AGENTS.)

See THE LANCET, Dec. 4th, 1897:—"As the title of this sparkling beverage would imply, it is made solely from pure grape juice. This is fully confirmed by our analysis, which is not different from the results obtained with many high-class champagnes. ..... It is evidently prepared with the greatest care, or otherwise the delicate fruity and pleasantly acid flavour of the juice of the grape would not have been so successfully retained. ..... It compares favourably in regard to its pleasing qualities with similar sparkling but much more expensive wines."

T. GRANT & SONS, Maidstone

(MORELLA CHERRY BRANDY MAKERS).

NATURAL MINERAL WATERS.

PURE AERATED WATERS.

RICHARD DAVIS, 20, Maddox St., Regent St.,

IMPORTER AND MANUFACTURER

Send for copy of THE LANCET Report.

"THE CREAM OF OLD IRISH WHISKIES."

"It is peculiarly well adapted for medicinal purposes."—THE LANCET, *March 28th, 1896.*

"Is evidently of high quality." — BRITISH MEDICAL JOURNAL, *May 30th, 1896.*

THE FINEST SCOTCH WHISKY SOLD.

KINAHAN'S LL & GLENISLE WHISKIES

GUILDFORD STREET, YORK ROAD, LAMBETH, S.E.

BRASS NAME PLATES

SPECIALLY ADAPTED

FOR THE PROFESSION.

Manufactured in Stout Metal, Deeply Engraved Mounted on Polished Mahogany Blocks, with Fastenings ready for fixing, from 10/6 each.

J. W. COOKE & CO.,

Brass Plate Engravers, General Sign Writers, and Letter Manufacturers,

38, FINSBURY PAVEMENT, LONDON, E.C.

SEND FOR OUR ILLUSTRATED CATALOGUE.

Telephone, 12098

REAL GERMAN HOLLOW GROUND.

KROPP RAZOR

ALWAYS READY FOR USE.



Black Handle... 5/6 | Pair, Ivory Handles, in Ivory Handle... 7/6 | Rus. Leather Case, 21/- | Kropp's Duplex Strop, 7/6 | Kropp's Strop Paste, 6d.

WHOLESALE: OSBORNE, GARRETT & CO., LONDON, W.

NATURE'S OWN DISINFECTANT.

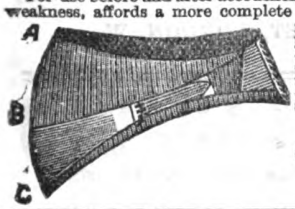
DISINFECT WITH "SANITAS" FLUID SOAP POWDER

"HOW TO DISINFECT," Book, 3rd Edition, Illustrated with Micro-photographs of Disease Germs, free on application.

THE SANITAS CO., LIM., BETHNAL GREEN, E., DISINFECTANT & EMBROCATION MANUFACTURERS.

SALMON'S ABDOMINAL BELT

For use before and after accouchement, and for all cases of abdominal weakness, affords a more complete lifting support than any hitherto made, as it effectually raises the lower part of the abdomen. Air-pads are fitted to it for cases of hernia and prolapsus when required. Prices from 25s. to 50s. Ladies can address to Mrs. SALMON.



HENRY R. SALMON,
42, Beaumont-street, Upper Wimpole-street, London, W.
(ESTABLISHED 1861.)

SALMON'S OBSTETRIC BINDER

For immediate use after accouchement (6s. 6d., 10s. 6d., and 13s. 6d.) is invaluable for preserving the figure, and entirely dispenses with the ordinary pinning. Exhibited before the Obstetrical Society, and recommended by the leading Physician-Accoucheurs. Measurement required, ordinary size of the waist. Each one stamped with name and address; others are imitations.

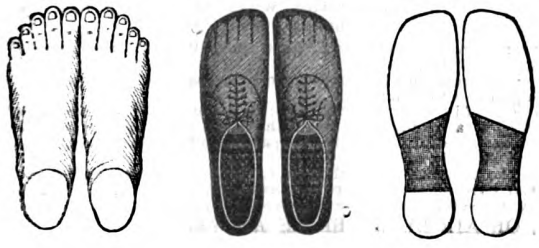


HENRY R. SALMON,
42, Beaumont-street, Upper Wimpole-street, London, W.
(ESTABLISHED 1861.)

DOWIE & MARSHALL,

THE EARLIEST HYGIENIC BOOTMAKERS,

455, WEST STRAND, CHARING CROSS, LONDON. [ESTABLISHED 1824.]



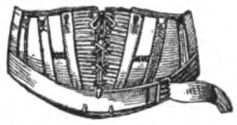
The instructions of the Profession intelligently carried out. Illustrated Catalogue gratis.

In addition to the Departments for **Ladies** and **Gentlemen**, special attention is given to provide properly shaped shoes for **Children**, and if outlines of the feet are sent, these can be forwarded to any part of the country.

DOWIE & MARSHALL,
455, West Strand, Charing Cross, London.

"DOMEN" (TRADE MARK) BELTS.

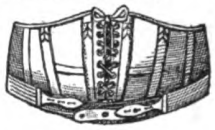
PRICE LIST FREE.



PREGNANCY, 15/- to 21/-



ACCOUCHEMENT & GENERAL SUPPORT, 15/- to 21/-

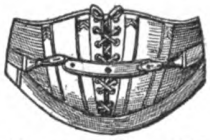


HYPOGASTRIC, 21/- to 25/-

A SMALL EXTRA CHARGE

ON BELTS OVER 40 INCHES





PADS TO SUIT ALL CASES.

(LADY ATTENDANT.)





UMBILICAL HERNIA 21/- to 27/6

FLOATING KIDNEY 19/- to 26/-

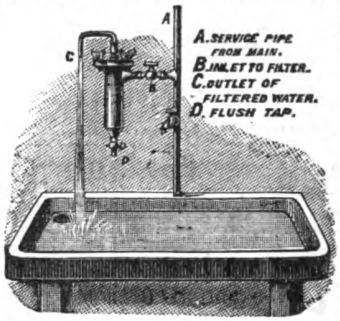
"DOMEN" BELTS Co

456, STRAND, CHARING CROSS, W.C.
& 30, SLOANE ST S.W.

THE BERKEFELD FILTER.

"The only Filter affording complete protection against waterborne disease, which gives a quick and large supply sufficient for all household requirements."—(See Special Report to the BRITISH MEDICAL JOURNAL, Jan. 22nd, 1898, by Drs. SIMS WOODHEAD and CARTWRIGHT WOOD.)

Adopted by H.M.'s, the Indian,



the Egyptian, and many Foreign Governments.

HOUSE FILTER (H), as Sketch, **42/-**; smaller size, **30/-**.

GLASS TABLE FILTERS, from **8/9.**

ASEPTIC IRRIGATORS.

Can be Easily and Cheaply Fixed to any House having ordinary Pressure.

Very Simple in Construction.

In Use in all the Principal Hospitals.

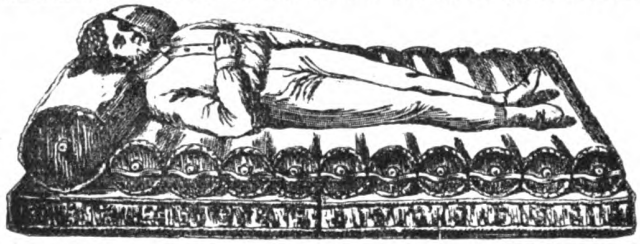
Full Illustrated Price Lists, Testimonials, and Trade Terms on application. Correspondence and Visit to Showroom invited.

THE BERKEFELD FILTER CO., Ld., 121, OXFORD STREET, LONDON, W.,
CONTRACTORS TO HER MAJESTY'S GOVERNMENT.

UNIVERSAL TUBULAR WATER AND AIR BED

Prize Medals Sanitary Congress, 1878. Industrial Exhibition York, 1879. Certificate of Honour, Sanitary Congress, 1879.

Brighton, 1881. International, 1881. Kensington, 1882.



POCOCK BROTHERS,
Patentees and Sole Manufacturers,
235, SOUTHWARK BRIDGE ROAD, LONDON.

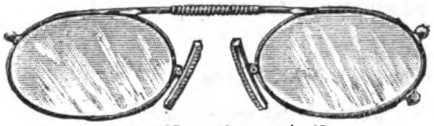
Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.

1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
3. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bedpan.
8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.
9. It is free from noise and surging, so disagreeable to the invalid on changing his position on a water bed.
10. In case of injury to the tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed, if injured in any part (from being in one compartment), is rendered useless.
11. In the treatment of invalids, especially the insane, who are paralysed and have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.

ITS ADVANTAGES OVER ORDINARY WATER OR AIR BEDS ARE AS ABOVE.

ROSS'
SPIRAL CLIP

Is the best Horizontal Pince-nez in the Market.



Registered Nos. 248,322 and 268,501.

ITS ADVANTAGES ARE AS FOLLOWS:—

Neatest in appearance.

Bridge does not work loose in wear.

Collets cannot slip off.

Steel, **12/-**; Aluminium, **25/-**; Gold, from **50/-**

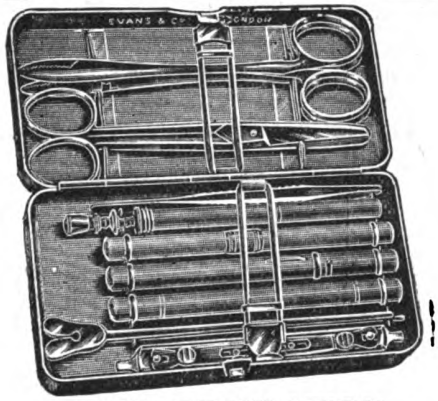
EYEGLASSES & SPECTACLES

for Reading, Music, Walking, Shooting, Riding, Cycling, &c.

ROSS, Ltd. *Manufacturing Opticians,*

111 New Bond Street, LONDON, W.

And 31, Cockspur Street, Charing Cross, S.W.



ARMY REGULATION

ASEPTIC POCKET CASE OF INSTRUMENTS, containing:—

SYMES' ABSCESS KNIFE and single edge **SCALPEL**, in metal handle, **SCISSORS**, straight. [with detachable blades.
DIRECTOR, silver.
FORCEPS, SPRING, DRESSING, plated.
ARTERY, detachable blades, plated—pairs 2.
PROBE, silver.
THERMOMETER, CLINICAL, Magnified Index, plated, bayonet catch Case.
NEEDLE CASE, plated, containing—6 Half-curved Needles, Suture Wire, and Silk.
HYPODERMIC SYRINGE, silver, with spare Needle in handle.
CASE, plated, containing 2 Tubes of HYPODERMIC TABLETS.

Complete in Plated Metal Aseptic Case ... ... Price £4.

EVANS & WORMULL,

SURGICAL INSTRUMENT MAKERS to the Honourable Council of India and Her Majesty's Army and Navy,

31, STAMFORD STREET, LONDON, S.E.

S. FISHER & SONS,
TAILORS,

215, 217, & 219, REGENT STREET, W.;
AND
173, FENCHURCH STREET, E.C.

SPRING ANNOUNCEMENT.

IN submitting a few of our leading charges for NEW SPRING GOODS, we wish sincerely to thank the members of the Medical Profession for the remarkable response they have made to our former announcements. We can assure them that our best efforts will still be maintained to give every satisfaction.

S. FISHER & SONS.

FROCK COAT and VEST
(as Sketch), **£3 15s., £4 4s., £4 10s.**

MORNING COAT & VEST,
55/-, 63/-, 70/-.

SUIT ALIKE,
In Cheviots, Tweeds, Serges, and Cashmeres,
63/-, 70/-, 84/-.

TROUSERS,
In
Scotch Angola, Tweed, Cheviot, & Cashmere,
16/-, 18/6, 21/-.

SPRING OVERCOAT,
45/-, 50/-, 55/-.

DRESS SUIT
(Lined throughout with Silk),
£5 5s., £6 6s., £7 7s.

PATTERNS AND SELF-MEASUREMENT FORM FORWARDED POST FREE to ANY PART of the WORLD.

Gentlemen living in the country can rely on obtaining well-fitting Garments without a personal interview.



LADIES' DEPARTMENT
FOR "GENUINE" TAILOR-MADE GARMENTS.
215 & 217, Regent St., W.



SECONDHAND SURGICAL INSTRUMENTS, MICROSCOPES, and OSTEOLOGY.

MONTHLY PRICE LIST POST FREE.

MILLIKIN & LAWLEY, 165, STRAND, LONDON. (Established 1815.)

HUXLEY'S ABDOMINAL BELTS,



for Pregnancy, Obesity, Umbilical Hernia, and general Abdominal Weakness,

(THE INVENTION OF VALLAISE,)

are made expressly in all cases, the material being selected with due regard to the requirements of each case. Made of cotton and silk, each of *best* quality only.

MEASUREMENT REQUIRED.—Circumference at *a*, *b*, and *c*, depth from *a* to *c*, stating sex and any other particulars that can be given.

EDWARD HUXLEY, 13, Old Cavendish-st., Oxford-st., W.

Post Office Orders payable at Vere-street. Professional discount 20 per cent. where not marked "net." Medical Men, being charged the lowest price, are requested to send their orders direct, as there is no margin left as a profit for Agents. Cheques crossed London and County Bank.

ILLUSTRATED CATALOGUE ON APPLICATION.

MILNE'S LIGATURES

In straight lengths.

These Ligatures are 12 inches long, and supplied in 6-inch Tubes, having a metal screw cap. Each Tube contains 100 threads on a patent frame.

No waste of Ligature.
No handling of Ligature.
No getting out of order.
No corkscrew curl as from a reel.

Always reliable. Each bandage is in a separate air-proof canister and ready for immediate use.





For plugging Wounds and Cavities in Surgical Operations. It is supplied either medicated or plain.

LISTER'S DOUBLE CYANIDE GAUZE.

"The most satisfactory antiseptic dressing."

Special air-tight boxes and canisters for export, and special air-tight glass jars for storing gauze.

ANTISEPTIC DRESSINGS

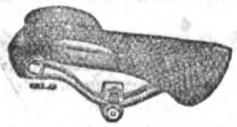
OF EVERY DESCRIPTION

Made according to the personal instructions of

LORD LISTER.

Please apply for Illustrated Price List to **JOHN MILNE, THE GALEN MANUFACTURING CO., Ltd.,**
ANTISEPTIC DRESSINGS FACTORY LADYWELL, S.E.

WOODS' PATENT.



AN IDEAL SADDLE FOR LADY OR GENTLEMAN.

WIRE CYCLE SADDLE

No More Chafing.

ONE MONTH'S TRIAL ALLOWED.

Fitted with Felt or Leather Cover.



SADDLE SORENESS ENTIRELY PREVENTED.



THE MATTRESS RETURNS TO ITS ORIGINAL POSITION



WOODS' PATENT GALVANISED SPRING STEEL WIRE MATTRESSES.

FIVE YEARS' GUARANTEE

(Wool and Hair Mattresses.)

Exhibited, carrying ONE TON, at the Liverpool and Manchester Exhibitions; also at the Meetings of the Medical Association at Dublin, Glasgow, Leeds, and other Exhibitions.

For Domestic and Hospital Use apply for Catalogue to the

LONGFORD WIRE IRON & STEEL CO.

(Limited), WARRINGTON,

WHICH WILL BE SENT FREE ON APPLICATION.

London Office ... ... 61, ST. MARY AXE





AND BEDRIDDEN PATIENTS.



IMPROVED INSTEP ARCH SOCK (HOLLAND'S PATENT.)

"MOST VALUABLE FOR FLAT-FOOT."

BRITISH MEDICAL JOURNAL, November 10th, 1893:—"The INSTEP ARCH SOCK has been long and widely used, and the new form appears to embody a distinct improvement."

The Sock is worn inside the Boot. A tracing of the foot is the best guide for size.

Price 4s. Single. 6s. 6d. per Pair.

HOLLAND, 46, SOUTH AUDLEY STREET, LONDON, W.

SYKES, JOSEPHINE, & CO.,

OBESITY CORSETS.

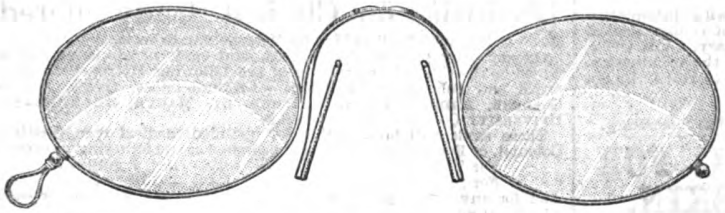
ANATOMICAL CORSETIÈRES.

CORSET and BELT SPECIALISTS.

ILLUSTRATED PRICE LISTS & SELF-MEASUREMENT FORMS ON APPLICATION TO THE ORIGINAL AND ONLY ADDRESS—

280, REGENT ST., OXFORD CIRCUS, LONDON.

COMPRESSION CORSETS.



CURRY & PAXTON

(Late PICKARD & CURRY),

OPHTHALMIC OPTICIANS,

195, GREAT PORTLAND STREET, LONDON, W.,
8, Hardman Street, LIVERPOOL, and
61, Park Street, BRISTOL.

Inventors and Patentees of the only Pince-nez suitable for astigmatism. CURRY & PAXTON are the only Opticians who devote themselves ENTIRELY to the Medical Profession.

A JEWEL OF A PEN.

3/-

Gold Mounted and Chased, **5/-**



In choosing a Pen everyone wants the Best—that is, they want the "CALTON" Stylographic Pen. It is the simplest and cheapest of its kind on the market, and is praised by all who use it. We send it complete in Box, with Filler and Directions, post paid for 3/. All kinds repaired.

"JEWEL" FOUNTAIN PEN, fitted with 16-ct. Gold Nib, Iridium Tipped. 5/-; Mounted and Chased, 7/6.

Dept. T. L., JEWEL PEN COMPANY,
58, FENCHURCH STREET, LONDON, E.C.

THE PATENT "LATTICE" ELASTIC STOCKING, &c.,

For Sprains, Strains, and Varicose Veins. Made of specially prepared Red Rubber. Easily washed and very durable. Gives permanent relief, support, and comfort to the wearer.



Anklet, 5/-.
Legging, 5/-.
Knee-Cap, 5/-.
Thigh-Piece, 5/-.
Stocking, 7/6.

BELTS, TRUSSES, and all kinds of Surgical Appliances.

The "LATTICE" ELASTIC STOCKING CO., 70, Fenchurch-st., E.C.



HERE'S A POINT

worth remembering. It is the "business" end of one of our **5/-**

'BRITISH' STYLOGRAPHIC PENS

which are acknowledged on all hands to be the most useful pens made. A perfect luxury to write with, they glide over the paper like a superfine lead pencil, and hold enough ink for a day's incessant writing.

Made in 3 qualities,
5/-, 7/- & 12/6,
post free. Money returned in full if pen is not liked.

Good for every class of work except shorthand, for *that* nothing can surpass our Neptune Fountain Pens, **2/6** to **10/6** each. Send for free illustrated catalogue.

BURGE, WARREN & RIDGLEY,
91 & 92, Great Saffron Hill,
LONDON, E.C.



Instrument Case

in Polished Oak, 20 ins. high, 12½ ins. broad, 10½ ins. deep. Lined with felt. Six drawers. Lock and key. Price 21/-. Purchaser pays carriage.

LARGER CABINET in Polished Oak, 44½ ins. high, 12½ ins. broad, 10½ ins. deep. Price 42/-. Purchaser pays carriage.





Carriage Foot Warmer in Polished Copper. Will keep warm several hours Price 21/-. Purchaser pays carriage.

Bed Rest, Ash and Cane. Very light in weight. Can be easily washed and disinfected. Price 12/6. Carriage paid.

Hot Water Foot-stool for Invalids and sufferers from cold feet. Handsome in appearance, with Plush top. Price 7/6. Carriage paid.

Blue Cloth Waterproof Cape, for master or man. Very lasting and warm. Will resist heavy rain. Price 21/-. Carriage paid. Cloth Sample on request.

White India Rubber Driving Cape, with sleeves and two side pockets. Price 30/-. Carriage paid. With large Pearl Buttons and velvet collar, 35/-. Sizes are 42, 44, 46, and 48 inches in length.



Weighing Machine, for Surgery use. Weighs up to 24 stone. Size of platform 10½ × 13½ ins. Very useful article in a consulting room. Price 21/-. Purchaser pays carriage.

The Spander Boot & Shoe Tree. Especially useful for Shoes and in travelling. Price 7/6 per pair. Carriage paid. Send size of Shoes as 2, 3, 4, 5, 6, 7, 8, &c.

TEFF & CO., 12, Bridge Street, **BRISTOL.**

Royal College of Physicians of LONDON.

The next PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Tuesday, July 19th.

Candidates are required to give fourteen days' notice in writing to the Registrar of the College, with whom all certificates and testimonials required by the By-laws are to be left at the same time.

Pall Mall East, S.W. EDWARD LIVEING, Registrar.

ARMY MEDICAL STAFF.

An Examination of Candidates for

Thirty-nine COMMISSIONS in the Army Medical Staff will be held at the Examination Hall, Victoria Embankment, W.C., on the 5th August next and following days.

Applications for admission to the Competition should be made in writing, without delay, to the Director-General, Army Medical Department, 18, Victoria-street, London, S.W.

The list will be closed on the 27th July.

(Signed) J. JAMESON, Director-General.

War Office, London, May 23rd, 1898.

INDIAN MEDICAL SERVICE.

INDIA OFFICE, June 17th, 1898.

An Examination for 16 Appoint-

MENTS to Her Majesty's Indian Medical Service will be held in London on August 5th, 1898, and following days.

Copies of Regulations for the Examination, with information regarding the Pay and Retiring Allowances, &c., of Indian Medical Officers, may be obtained from the Military Secretary, India Office, London, S.W., to whom applications for admission to the examination, with the necessary certificates, should be sent so as to reach him not later than the 26th July, 1898.

O. R. NEWMARCH,
Major-General, Military Secretary.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN,

LEICESTER SQUARE, W.C.

The OUT-PATIENT PRACTICE is open free to the Medical Profession at the following times on presentation of their cards to the Medical Officer in attendance. Every day from 2 to 4 P.M., and on Thursday mornings from 10.30 to noon.

CLINICAL DEMONSTRATIONS and LECTURES are given regularly.

The In-patient Department, Arlington House, Uxbridge-road, W., is now open with 50 beds. The majority are for free patients, but there is also accommodation for paying cases.

J. DUNLOP COUTTIE, Superintendent

THE ROYAL INSTITUTE OF PUBLIC HEALTH.

President: Prof. Wm. R. Smith, M.D., D.Sc., D.P.H.

ON the Invitation of the Rt. Hon. the Lord Mayor and Corporation of Dublin the ANNUAL HYGIENIC CONGRESS will be held in Dublin. The Buildings of Trinity College, Dublin, will be placed at the disposal of the Congress during the third and fourth weeks of August, 1898; and in connexion therewith a UNIVERSAL HEALTH EXHIBITION will be opened with ceremony in the magnificent Buildings and Grounds of the Royal University granted by the Senate from 18th to 27th August, 1898. During the period of this important Congress and Exhibition the GREAT ANNUAL DUBLIN HORSE SHOW will be open, ensuring a very special success to the Exhibition as Dublin will then be crowded with visitors from all parts of the world.

DUBLIN HYGIENIC CONGRESS AND HEALTH EXHIBITION, 1898.

Patron: HIS EXCELLENCY THE LORD LIEUTENANT OF IRELAND, K.G.
Honorary President: RIGHT HON. THE LORD MAYOR OF DUBLIN.
President of the Congress: SIR CHARLES A. CAMERON, M.D., F.R.C.S.I.
Chairman of Reception Committee: RIGHT HON. J. M. MEADE, P.C., LL.D.
Honorary Treasurer: EDMUND W. EYRE, Esq., the City Treasurer.
Chairman, Health Exhibition Committee: WM. R. MAGUIRE, J.P., Assoc. Inst. C.E.I.

Prospectus of the Exhibition Arrangements and Forms of Application for Space should be at once written for to GEORGE M. ROSS, M.A., B.E., Hon. Secretary of Health Exhibition Committee, 61 Dawson-street, Dublin.

Spaces will be allocated by the Committee in rotation as received.

Exhibits will be received from 8th to 15th August in following Sections: — Science—Public Hygiene—Domestic Hygiene—Personal Hygiene—Water-supply—Sewage Treatment—Drainage and Plumbing—Heating, Lighting, and Ventilating—Electric Installations—Disinfection—Locomotion, Bicycles, &c.—Miscellaneous, Models, Games, &c.

Catalogues and Daily Programmes will be published officially.

GEORGE M. ROSS, M.A., Hon. Sec., 61, Dawson-street, Dublin.

Royal Westminster Ophthalmic

HOSPITAL, King William-street, Strand.

Patients are seen daily from 1 P.M., and Clinical Instruction is given.

For particulars of the various Classes and Lectures apply either at the Hospital or to Mr. ADAMS FROST, 30, Cavendish-square, W.

Fees, not exceeding six months, £3 3s. Perpetual, £5 5s.

OPEN THROUGHOUT SUMMER MONTHS.

COOKE'S SCHOOL.—ANATOMY, PHYSIOLOGY, SURGERY (Operative) taught rapidly and practically.

Morning and afternoon classes. Dissecting-room open from 9 to 5, Recognised (see prospectus) by the Conjoint and other examining boards. Special "advanced" work for the 1st Fellowship and Cambridge M.B.—Apply to Mr. Thomas Cooke, F.R.C.S., Surgeon (Out-patients), Westminster Hospital, 40, Brunswick-square, W.C. *Resident students have the advantage of private evening classes free of charge.*

Final Subjects taken privately and outside School arrangements by the Lecturer on Physiology.

Mr. COOKE'S TABLETS OF ANATOMY, 11th Edition, thoroughly brought up to date, and with over 700 illustrations from all the best sources, now ready in three Parts sold separately: Bones, 7s. 6d.; Limbs, Abdomen, Pelvis, 10s. 6d.; Thorax, Head and Neck, Brain, 10s. 6d. net. "Contain in the fewest words and plainest language the matter which is found in the most accredited standard works."—THE LANCET.

Facilities for Clinical Study offered

to Qualified Medical Men by Metropolitan Schools.

On and after the 1st of May, 1898, joint cards of admission will be issued to the Clinical Instruction of the following Metropolitan Hospitals and Schools of Medicine: — CHARING-CROSS, GUY'S, KING'S COLLEGE, MIDDLESEX, ST. GEORGE'S, ST. MARY'S, ST. THOMAS'S, UNIVERSITY COLLEGE, WESTMINSTER.

These cards will be available for qualified medical men (British, Colonial, or Foreign) only, and will be issued at the following rates:—

For Three Months ... ... 7 guinea.
For Six Months ... ... 10 ,,

And for any longer period at the further rate of 5 guineas for each additional six months.

The cards and further particulars may be obtained on application to the Honorary Secretary, West Wing, Examination Hall, Victoria Embankment, London, W.C.

Evidence of qualification must be furnished with application for cards.

New Veterinary College, Edinburgh.

Affiliated by Royal Sign Manual to the R.C.V.S.,

and under the patronage of the Highland and Agricultural Society of Scotland, the Duke of Buccleuch, the Earl of Haddington, the Earl of Rosebery, the Earl of Hopetoun, &c., &c.

W. WILLIAMS, F.R.C.V.S., F.R.S.E., Principal.

NEXT SESSION Commences on 5th October.

Prospectus and Particulars from W. Owen Williams.

CLINICAL INVESTIGATION.

THE WEST-END PATHOLOGICAL LABORATORY,

Telegrams—"Phagocyte, London." 55, WEYMOUTH ST., LONDON, W

SPUTA, URINE, FÆCES, BLOOD, TUMOURS, &c.: Drawings and Photomicrography. DIPHTHERIA CASES, by telegram.
BACTERIOLOGY: Slides, Researches, Culture Media, and Tuition.
D.P.H.: Course of Instruction by an M.A., M.D., D.P.H. (Cantab.)
X RAYS: 10-inch Spark (Apps), Special Focus Tubes and Screen.
HYGIENE: Analysis of Water, Air, Milk, &c.; Tuition.
Laboratory Accommodation for Medical Men engaged in Original Research.

Full particulars on application to the Secretary:—
CHRISTIAN E. B. GROTH, B.A. Cantab.

ST. JOHN AMBULANCE ASSOCIATION.

INVALID TRANSPORT SERVICE

(under the patronage of many leading physicians and surgeons), for the conveyance of sick and injured patients (infectious cases excepted) to and from all parts. The Association has a fully-trained Staff and all necessary appliances.—For particulars apply to the Transport Manager, St. John's Gate, Clerkenwell, E.C. Telegrams: First-aid, London. Telephone 861, Holborn.

Pocklington School, Yorkshire.

FOUNDED A.D. 1514.

Public Boarding School of 130 Boys. Healthy situation at foot of Yorkshire Wolds. Rich foundation. Very moderate fees. Strong staff of University Men in High Honours. Over twenty open scholarships to the University gained in the last seven years. Owing to the increase the Governors are spending over £6000 in enlarging the buildings. Science laboratories, workshops, gymnasium, covered fives court, large playing fields. Special advantages for sons of Clergy, Medical Men, and Officers in the Army and Navy (out of private fund at disposal of Headmaster).

Entrance House Scholarship Examination commences on Tuesday July 12th.

Apply to Headmaster for further particulars.

Advice as to Choice of Schools.—

The SCHOLASTIC, CLERICAL, and MEDICAL ASSOCIATION gives ADVICE and ASSISTANCE, without charge, to Parents and Guardians in the Selection of Schools (for Boys or Girls), and Tutors for all Examinations at Home or Abroad.—A statement of requirements should be sent to the Manager, 8, Lancaster-place, Strand.

Entrance Exhibitions for Sons of

Medical Men.—Two of £30 offered in Preparatory School to boys under eleven.—G. S. MESSITER, M.A., Willington House, near Burton-on-Trent.

PELICAN HOUSE SCHOOL,

FOR THE DAUGHTERS OF MEDICAL MEN.

For Prospectus and particulars apply to the Secretary, Major L. W. PEAD, 14, Victoria-road, Upper Norwood, S.E.

Two Scholarships vacant for Girls above 16.

Triple Qualification, Edinburgh.—

Special Preparation, in Class, Privately, and by Correspondence, for these Examinations. Also for Fellowship Examinations of Royal College of Surgeons, Edinburgh, and M.D. Brussels. Resident Pupils received.—Address, Class Rooms, 7, Chambers-street, Edinburgh.

UNIVERSITY EXAMINATION POSTAL INSTITUTION.

Offices—27, SOUTHAMPTON STREET, STRAND, LONDON, W.C.

Manager—MR. E. S. WEYMOUTH, M.A. (Lond.).

eparation, through the Post or Orally, for all Medical Examinations, especially for the

M.D. London or Durham. } **D.P.H.** Cambridge, London, &c. }

Among recent successes, 1892-97, ten U. E. P. I. candidates passed the M.D. or M.S. (London), one taking the Medal. Of the seven candidates who passed the April, 1897, M.D. (Durham) Examination for practitioners of fifteen years' standing, three were prepared by this Institution. Three D.P.H. (Cantab.) successes, Oct., 1897. Resident Pupils received for the Preliminary Arts and Science Examinations.

EXAMINATIONS.

Classes are held for the various Conjoint and Hall Examinations. Also for the M.R.C.P. Lond., M.D. Brux., and M.D. Durham. Fifteen years standing (candidates have been sent up for the last twenty-five exams.). Clinical museum and microscopic demonstrations.—Address, M.D., 23, Wimpole-street, W.

ALL PROFESSIONAL EXAMINATIONS.

M.B., B.Sc. Lond., University Scholar, First-class Honourman and Gold Medallist, prepares for all Medical Examinations privately, in small classes, or by correspondence. Clinical and practical work if desired. Special classes for the Services, Primary Fellowship, Cambridge M.B. (Parts II. and III.), and University of London Exams. (Pass and Honours). Tuition for M.D. Durham (15 years' standing) and M.D. Brux.—Address, Tutor, THE LANCET Office, 423, Strand, W.C.

London Matriculation and Prelim.

Scientific and Inter. Science Classes. New term just begun. Medical Preliminaries. Oxford and Cambridge 1st M.B. Practical Physics, Chemistry, and Biology Classes. Matric. Revision Classes May 23rd. Legal and Medical Preliminaries. Conjoint Examinations. Hospital and University Scholarships. Durham Examinations. Private Tuition. Science Laboratories. Large Staff. Prospectus and List of Lecturers on application to R. C. B. KERIN, B.A. (London), First in First-class Classical Honours, Editor of "Phaedo" and "Pro Plancio," CARLYON COLLEGE, 55 and 56, Chancery-lane, W.C.

SUCCESSES:—Science Scholarships, Guy's, 1892, Westminster, 1894 and 1896. Med. Prelim., 60; London Matric., 50; Inter. Arts., Sc., and Prel. Sci., 53, 6 in Hons.; B.A. and B.Sc., 26; 1st M.B., 3. Many Successes, Oxford and Cambridge Exams.

ARMY AND INDIAN MEDICAL SERVICES.

The Classes for the August Competitions begin on Monday, May 23rd, at 11 A.M.

46, Great Ormond-street, W.C. H. R. JENNINGS, Sec.

DEFECTS OF SPEECH.

MR. WILLIAM VAN PRAAGH'S System for the Cure of all Defects of Speech, both ACQUIRED and CONGENITAL.

For information apply to Mr. William Van Praagh, 11, Fitzroy-square, London, W. Consultations by appointment.

Prudential Assurance Company,

LIMITED, HOLBORN BARS, LONDON.

Founded 1848.

Invested funds, £30,000,000.

Union Assurance Society.

A.D. 1714.

Chief Office: 81, Cornhill, London, E.C.

West-end Branches: 55, Charing-cross, S.W.; 70, Baker-street, Portman-square.

FIRE AND LIFE.

Accumulated Funds	£2,900,000.
Annual Income	£850,000.

Reversions and Life Interests in

Landed or Funded Property or other Securities and Annuities PURCHASED or Loans granted thereon by the EQUITABLE REVERSIONARY INTEREST SOCIETY (Limited), 10, Lancaster-place, Waterloo-bridge, Strand. Established 1835. Capital £500,000.

BIRKBECK BANK.

(ESTAB. 1851.) SOUTHAMPTON BUILDINGS, CHANCERY LANE. TWO and a HALF per CENT. INTEREST allowed on DEPOSITS, repayable on demand. TWO per CENT. on CURRENT ACCOUNTS, calculated on the minimum monthly balances when not drawn below £100. THE BIRKBECK ALMANACK, with full particulars, can be obtained, post free, on application to FRANCIS RAVENSCROFT, Manager.

ILFRACOMBE.

ILFRACOMBE HOTEL.

Famous for its high-class cuisine and general comfort. The PRINCIPAL and ONLY HOTEL on the SEASHORE. An ideal position. 250 rooms. Grounds, five acres. Tennis. Croquet. Splendid Swimming Bath. Elegant Lounge Hall.

Moderate tariff. Terms "en pension."

H. R. GROVER, Manager.

Sea Voyages for Health or Pleasure

by the ROYAL MAIL STEAM PACKET COMPANY'S Steamers to Brazil and River Plate in the cool season. Fares, £42 to £52 10s. Short Trips to Peninsular ports. Return Tickets West Indies £40.—Apply, 18, Moorgate-street, E.C.; or 29, Cockspur-street, S.W.

New Zealand, Australia, Cape

TOWN, MADEIRA, by the NEW ZEALAND SHIPPING COMPANY'S Royal Mail Steamers. Monthly Sailings from London (Plymouth two days later).

Duke of Devonshire | 3257 tons | Capt. D. C. Long | July 21st.

Low fares, single and return. Superior accommodation. Liberal cuisine, and every comfort for a long voyage. Special terms for Families, and Round the World Health and Pleasure Tours.

Apply to Gray, Dawes & Co., Craven House, Northumberland-avenue, or to J. B. Westray & Co., 138, Leadenhall-street, E.C.

12 Guinea Norway Cruises from

NEWCASTLE-ON-TYNE—FORTNIGHTLY.

"MIDNIGHT SUN," 3178 Tons, 3500 H.P.

Finest YACHTING STEAMER afloat. NO UPPER BERTHS.

Sailings:—June 25th; July 9th, 23rd; and August 6th, 20th.

Special Cruises, September 3rd and 17th.

Fares from 12 Guineas, including first-class table.

For itinerary, &c., apply to the Passenger Agent, Albion S.S. Co., Ltd., Mercantile-chambers, Newcastle-on-Tyne.

ORIENT COMPANY'S PLEASURE CRUISES

BY THEIR

Steamship "LUSITANIA," 3912 tons register,

For COPENHAGEN, WISBY, STOCKHOLM, ST. PETERSBURG, BALTIC CANAL, &c.,

leaving London 17th August, returning 14th September.

For SICILY, CONSTANTINOPLE, the CRIMEA, GREECE, MALTA, ALGIERS, &c.,

leaving London 20th September, returning 8th November.

String band, electric light, high-class cuisine.

Managers { F. GREEN & Co., ANDERSON, ANDERSON & Co., } Head Offices, Fenchurch-avenue.

For passage apply to the latter firm, at 5, Fenchurch-avenue, London, E.C., or to the West-end Branch Office, 16, Cockspur-street, S.W.

MR. WILSON'S

INSTITUTION FOR SUPPLYING THE MEDICAL PROFESSION AND THE PUBLIC WITH

HOSPITAL-TRAINED NURSES, ALSO TRAINED MALE ATTENDANTS,

FOR ALL CASES.

ESTABLISHED 1867, since which **99,000** Families have been provided with Nurses. Guarantees of Efficiency and Respectability.

Terms 2 guineas per week or part of week for all cases.

Travelling expenses and laundry extra, which are lower than many institutions and nurses charge.

APPLY PERSONALLY, OR BY LETTER OR TELEGRAM, TO

Mr. WILSON or LADY SUPERINTENDENT,

21a, HENRIETTA STREET,

CAVENDISH SQUARE, LONDON, W.

Removed from 96, 97, 98, WIMPOLE STREET, W.

MALE & FEMALE NURSES

MUTUAL BENEFIT ASSOCIATION,
69, WIGMORE ST.,
CAVENDISH SQ., W.

TELEGRAPHIC ADDRESS—"DESIDERATUM, LONDON."

HOSPITAL TRAINED Male and Female Nurses, for Medical, Surgical, Mental, Dipsomania, Maternity, Fever, and Travelling Cases. Also skilled Masseurs. THE GREATEST CARE IS TAKEN TO ONLY HAVE REFINED AND TEMPERATE NURSES ON THE STAFF. Obtainable Day or Night. Terms from 1½ guineas per week.—Apply W. H. LANGTON, or Lady Superintendent.

MALE NURSES (ABSTAINERS) CO-OPERATIVE ASSOCIATION,
17, ALBANY STREET, REGENT'S PARK.
(UNDER DISTINGUISHED MEDICAL PATRONAGE.)

Fully-trained Hospital MALE NURSES and ATTENDANTS for MEDICAL, SURGICAL, MENTAL, DIPSOMANIA, FEVER, TRAVELLING, and other cases. All our Nurses are TOTAL ABSTAINERS. Also, skilled MASSEURS supplied. Term from 1½ guineas and upwards per week.
Telegraphic Address: "CELERIDAD, LONDON." A Home provided for Invalid Gentleman or Boy. L. MINAHAN, Sec.

THE BAKER STREET ASSOCIATION OF TRAINED NURSES,
15, BAKER STREET, W. [REGD.

ON THE CO-OPERATION SYSTEM.

Experienced Nurses can be obtained for Medical, Surgical, Monthly, Mental, and Fever Cases, also Male Nurses, at the shortest notice There is a Home in connexion, where patients can be received for treatment. [*Telegrams:* "WOMANLY, LONDON."

MALE NURSES' (TEMPERANCE) CO-OPERATION,

ONLY ADDRESS—10, THAYER STREET, MANCHESTER SQUARE, LONDON, W.
Superior Trained MALE NURSES for Medical, Surgical, Mental, Dipsomania, Fever, and Travelling Cases supplied at a moment's notice, Day or Night. All nurses supplied by this Association are TOTAL ABSTAINERS. SKILLED MASSEURS supplied. *The only Temperance* Association of Male Nurses in the Kingdom. Terms: 1 guinea and a half or 2 guineas and upwards per week. Nurses to receive their own fees.
F. ROUSE, Secretary.
Telegraphic Address: "Assuaged, London." *Telephone No.: 538 Paddington.*

THE TEMPERANCE
MALE & FEMALE NURSES' CO-OPERATION

ONLY ADDRESS:
45, BEAUMONT STREET,
PORTLAND PLACE, LONDON, W.
(Late of 8, GREAT MARYLEBONE STREET.)
Telegraphic Address: "ABSTAIN, LONDON."

Hospital-Trained Male and Female Nurses for Mental, Medical, Surgical, Dipsomania, Fever and Travelling Cases. ONLY THOSE WITH PSYCHOLOGICAL AND HOSPITAL CERTIFICATES. ALL NURSES ARE STRICTLY TOTAL ABSTAINERS. Also skilled Masseurs. Male Nurses reside on the premises. Terms from one guinea and a half and upwards per week.—Apply to G. GORDON, or Lady Superintendent.

TRAINED MALE NURSES.
THE HAMILTON ASSOCIATION,
57, PARK STREET, GROSVENOR SQUARE, LONDON, W.

TELEGRAPHIC ADDRESS: "ALUMNUS, LONDON."] [UNDER DISTINGUISHED MEDICAL PATRONAGE.

Supply HOSPITAL-TRAINED MALE NURSES for Medical, Surgical, Mental, and Dipsomania Cases (in Town or Country), at the shortest notice, day or night. Terms from TWO to FOUR GUINEAS a week. Certificated Masseurs sent out by the hour or week. Travelling Attendants for Invalids.

The Middlesex Hospital Trained

NURSES' INSTITUTE.—Thoroughly experienced NURSES can be immediately obtained for Medical and Surgical Cases from the Sister in charge, 17, Cleveland-street, W. Telegraphic address: "Skilful, London."

Trained Nurses for Sick Children

can be had on application to the Matron at the HOSPITAL for SICK CHILDREN, Great Ormond-street, W.C.
Telegraphic address: "Great London." Telephone No. 351, Holborn.

WIGMORE NURSES' COÖPERATION.

(Late MISS CARTY'S). Established 1875.
59, WEYMOUTH STREET, W.

Three years Hospital trained Nurses supplied at shortest notice day or night. All cases, including medical, surgical, mental, monthly, massage, and fevers. Private patients received.
FLORENCE BURRELL, Lady Superintendent.
Telegrams: "TRAINED, LONDON." Telephone No. 562 (Paddington.)

St. John's House. — Trained and

Experienced Medical, Surgical, Monthly NURSES and MASSEUSES can be obtained by application, personally or by letter, to the Sister Superior, 8, Norfolk-street, Strand. Telephone No. 2577. Telegraphic Address: "Private Nurses, London."

Clapham, Brixton, and Surrey

INSTITUTION OF TRAINED NURSES.
210, CLAPHAM ROAD, LONDON, S.W. (ESTABLISHED 1873).
Provides thoroughly Hospital-trained Nurses for Medical, Surgical, Monthly, Mental, and Fever Cases on the shortest notice; day or night.
For particulars apply, Mrs. Chapman. Telegraphic Address: "Sincerity, London." Telephone: Clapham, 12.

LEEDS TRAINED NURSES' INSTITUTION

FOR TRAINED NURSES, MEDICAL, SURGICAL, MONTHLY, AND MASSEUSES.

Apply to the Superintendent, 21, Hyde-terrace, Leeds.
Telegraphic Address—"Expert, Leeds." Telephone, 177.

General Lying-in Hospital, York-road, Lambeth.

—Respectable WET NURSES and Certificated MONTHLY NURSES, also Certificated MIDWIVES, supplied on application. Female Pupils are trained in Midwifery and Monthly Nursing.—Address, A. Atkinson, Matron.

Queen Charlotte's Lying-in Hospital

and MIDWIFERY TRAINING SCHOOL, Marylebone, N.W.—MEDICAL PUPILS admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing obstetrical complications and operative midwifery, upwards of three-fourths of the total admissions being primiparous cases.

CERTIFICATES AWARDED as required by the various Examining Bodies.

PUPILS RECEIVED and SPECIALLY TRAINED for MIDWIVES and MONTHLY NURSES. On completion of the period of Training, each pupil, on being found competent, is awarded a Certificate of efficiency.

For rules, fees, &c., apply ARTHUR WATTS, Secretary.

THE SOCIETY OF TRAINED MASSEUSES, TRAINED NURSES CLUB,

12, BUCKINGHAM STREET, STRAND, W.C.,

supplies Qualified and Competent MASSEUSES holding Society's Certificate, for either town or country.—Apply, Secretary.

Telegrams, "Fregare," London.

THE LONDON ASSOCIATION OF NURSES.

CHIEF OFFICE—123, NEW BOND STREET, W.
(Between Brook-street and Grosvenor-street.)
BRANCH OFFICE—86, KENNINGTON PARK ROAD, S.E.

Superior Hospital-trained Nurses for Medical, Surgical, Mental, Monthly, Fever, and all Infectious Cases; also, Male Nurses and Medical Rubbers can be obtained immediately on application to the Superintendent. Great care is taken in the selection of Monthly Nurses, who reside in a separate home, and never come in contact with those who attend infectious cases.

There are homes in connexion with the Association, where Invalids can be received under the care of their own physicians or surgeons. Each patient is provided with a separate room and a trained Nurse.

M. FIRTH, Superintendent.

Teleg. Address: "Firth's Association, London." Telephone: 1855 Gerrard.

THE NURSES' COÖPERATION,

8, NEW CAVENDISH STREET, PORTLAND PLACE, W.
Founded 1891. Incorporated 1894.
Established to secure to Nurses the full remuneration for their work.

FULLY TRAINED HOSPITAL NURSES
Medical, Surgical, Mental, Maternity, Fever, Children's, Massage

Supplied any time, day or night. Telegraphic address: "Aprons, London." Telephone, 2724. AMY HUGHES, Lady Supt.

GENERAL NURSING INSTITUTE.

5, Mandeville Place, Manchester Square, W.

ESTABLISHED 1862 at Henrietta-street, Covent-garden.
Thoroughly experienced Hospital-trained NURSES supplied at a moment's notice, being resident in the Home.
Also, specially-trained NURSES for Mental and Nerve Cases.
Terms fixed and moderate. Particulars forwarded.

Apply to the SUPERINTENDENT.

Telegrams: "Nutrix, London." Telephone, Paddington 55.

URIAGE LES BAINS,

ISERE (FRANCE).
Season from 15th May till 15th October.
Saline, Purgative, and Sulphurous Waters, Treatment of Diseases of the Skin, Lymphatism, Rheumatism, Syphilis, &c.
Baths, Douches, Pulverisations, Hydro-therapeutics, and Health Resort.
Apply to the Director of the Établissement at Uriage.

HYDROPATHY.

SMEDLEY'S—MATLOCK.
Railway Station—MATLOCK BRIDGE.
W. C. SHARPE, M.B.,
and a House Physician.
TURKISH, RUSSIAN, and ELECTRIC BATHS. WEIR-MITCHELL and NAUHEIM TREATMENT. MASSAGE. AIX DOUCHE.
Staff of upwards of Fifty Skilled Attendants.
PROSPECTUS ON APPLICATION.

KREUZNACH BATHS.

Iodine, Bromine, and Lithion Mineral Springs, free from gypsum, for internal and external use. Dispatch of the Kreuznach mother-lye from the Municipal Salines, the Karls- and Theodorshalle and the Elisabeth Well through the Städtische Salinen- and the Kurverwaltung. New Hot-Air and Steam Bath. Inhalation Saloons.

SOUTHERN BADENIAN BLACK FOREST.

TODTMOOS.

The Valley Plains of the Todtmoos High Valleys, well known for their incomparable natural beauty, rise in protected location 840 to 1050 metres above the level of the sea. The HOTEL and KURHOUSE, TODTMOOS, in the midst of the most magnificent forest of high trees, disposes of the following Media of Cure under the management of Dr. Med. G. Hülsemann.

1. **Cure Bath** and **Hydropathic Establishment** "Louisenbad." Builder: Engineer Thiergartner, Baden-Baden. Highest situated Cure-Bath in Germany. **Hydropathic Establishment** (Ladies' and Gentlemen's division), with appointments of the latest system. **Warm Water** Full Bath, Natural Bath, Roman-Irish Bath, Vapour Bath, Mud Bath, Saline Bath, Electric Bath, Massage, Rubbing and Wrapping Rooms, Lying Rooms, &c., all of these with upper-light and central-heating. 2. **Medico-mechanical Zander Institute.** Machines from Dr. G. Zander, Stockholm. 3. **Laboratory for Scientific Massage** executed by Physician. 4. **Nourishing Treatments,** Inhaling, Withdrawal Cures, Systematic Exercises, &c. Prospectus and information of the Kur-Physician, Dr. Hülsemann, and the Proprietor, J. Wirthle.

BATH PETERSTHAL,

in the Badenian Black Forest. Railway Station, Oppenau. Celebrated Ferruginous Springs of great sanative power, besides the strongest Lithia Carbonated waters (Sophien Spring) in Germany. Drinking and Bathing Cures very successful in Nervous Complaints, Want of Blood and Chlorosis, Female Complaints (Sterility and cases of Weakness), Diseases of the Stomach, Liver, Kidneys, and Bladder. Baths of every description. Fango treatment. Own Kur-Orchestra. Electric light. Moderate terms. For prospectus, apply to Bath Physician, Dr. G. KIMMIG, Die Badeverwaltung.

RAGATZ-PFÄFERS,

Canton St. Gall, **Switzerland.** 521 metres above sea. **Thermal Springs,** 28° R. or 35° C. Renowned Health Resort, **with the incomparable Pfäfers Ravine. Season** lasts from **May 15th to October 15th.** Model Establishments: 4 Bath Establishments with **Thermal Baths,** Institute for **Swedish** Calisthenics and **Electrotherapy,** Establishment for **Hydrotherapy,** Scientific **Massage,** Drinking Hall for mineral waters of all important springs, milk and whey cures. Good hotels and private residences for all classes. **Kursaal** with concert, reading and playing rooms, excellent Kurorchestra, Fishing, charming walks and excursions, splendid Lawn Tennis. Exquisite climate, magnificent situation. **Starting-point** for the **Grison Health Resorts** (Engadin). Electric light. Specially recommended as **after-cure station for Tarasp, Carlsbad, Marienbad.** — For particulars apply to the **Kur-Badeverwaltung** or to the **Kur- und Verkehrsverein.**

SOUTHPORT PRIVATE CONVALESCENT HOME FOR LADIES.

Invalids Nursed. Chronic Cases taken. Bright Home for Convalescents. Massage under Medical Supervision. Weir-Mitchell Treatment.
Misses MARRIOTT & BROWNE (Trained Nurses), Knypersley House, 44, Park-road.

DORCHESTER ASYLUM.

PRIVATE PATIENTS.

The Special and Separate Departments for Private Patients contain large Dining-and Drawing-rooms of Fireproof Construction and lighted by Electricity. Situation elevated and healthy, with extensive recreation gardens. Every kind of amusement, including Golf Course. Charge from £1 1s. per week.

Letters: HERRISON, DORCHESTER. Telegraphic Address: HERRISON, CHARMINSTER. (About three-and-a-half hours from London.) Full particulars on application to Dr. MacDonald.

INTEMPERANCE.

ASTON HALL, SUTTON COLDFIELD, WARWICKSHIRE (late Old Park Hall, Walsall).

Sixty-four acres of Grounds for Recreation, nine-hole Golf Course, Lakes of twelve acres.

For terms, forms (if required), &c., apply, The Secretary, ASTON HALL, SUTTON COLDFIELD.

Telegrams: "REST, ALDRIDGE."

Exeter Asylum.—Private Patients

are admitted into this Asylum at a uniform rate of 25s. a week. This sum includes everything except clothing. For further information, printed forms of certificates, &c., apply, R. L. Rutherford, M.D., Medical Superintendent.

"The wards are in excellent order, bright and cheerful, and those occupied by the patients of the private class should attract many whose means are limited from all parts of England."—Extract from the Forty-eighth Report of the Commissioners in Lunacy.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES.

President: The Right Hon. the Earl MANVERS.

This Institution is exclusively for the reception of a limited number of PRIVATE PATIENTS of both sexes, of the UPPER and MIDDLE CLASSES, at moderate rates of payment. It is beautifully situated in its own grounds, on an eminence a short distance from Nottingham, and commands an extensive view of the surrounding country; and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted.

For terms, &c., apply to Dr. TATE, Medical Superintendent.

Private Home for the Treatment of

INSANE LADIES,
ASHBROOK HALL, HOLLINGTON,

within half an hour's walk of St. Leonards-on-Sea, conducted by the Widow of the late Samuel Hitch, M.D., formerly of Sandywell-park, near Cheltenham, for many years Physician to the General Lunatic Asylum for the County of Gloucester.

Station: Warrior-square, St. Leonards. Telegraph Office: Hollington.

For particulars and terms apply to
Mrs. LETITIA HITCH or Miss ADAMS, Co-Licensee.

Stretton House, Church Stretton,

Salop. A Private Institution for Insane Gentlemen. Estab. 1853. Church Stretton lies among the hills 600 ft. above sea level; climate very healthy and bracing. Excellent facilities for recreation and employment. A few voluntary cases received. Express train service from London (4½ hours) and other parts. For further information see Medical Directory, p 1943, or apply for prospectus to Resident Medical Officer.

Telegrams: Campbell-Hyslop, Church Stretton.

THE MOAT HOUSE,

TAMWORTH, STAFFORDSHIRE.

A HOME for NERVOUS and MENTAL CASES. Stations, L. & N. West. and Mid. Railways.

The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from Nervous and Mental Disorders, who enjoy the comforts, privacy, and occupations of home life. Voluntary patients are received without certificates.

Medical Attendants—J. HOLMES JOY, M.A., M.D., and H. H. RUBRA, L.R.C.P. Lond. For terms, &c., apply to the Resident Proprietor, E. HOLLINS, M.A. Camb., J.P.

Barnwood House Hospital for

MENTAL DISEASES, Barnwood, near Gloucester. Exclusively for Private Patients of the Upper and Middle Classes. This Institution is devoted to the Care and Treatment of persons of both sexes at moderate rates of payment. The terms vary according to the requirements of the patients, who can have private rooms and special attendants, or be accommodated in Detached Villas and in the Branch Convalescent Establishment on the hills. Under special circumstances the rates of payment may be greatly reduced by the Committee.—For further information apply to J. G. Soutar, M.B., the Med. Supt.

St. Luke's Hospital, London, E.C.

Established 1751.

This Hospital was established for the Treatment of Mental Diseases of the Middle Classes. Preference is given to acute cases, and these are admitted either gratuitously or on payment of a weekly sum varying from 14s. to 30s., according to the circumstances of each. Patients are eligible for admission from any part of the United Kingdom.

The Convalescent Establishment in connexion with the Hospital is at St. Lawrence, Ramsgate.

Forms of application may be had from, and inquiries addressed to, the Secretary, at the Hospital, Old-street, London, E.C.

Aug. 31st, 1898. W. H. BAIRD, Secretary.

SPRINGFIELD HOUSE PRIVATE ASYLUM, BEDFORD.

For forms of admission, &c., address DAVID BOWER, M.D., as above. (Dr. B. attends at 5, Duchess-street, Portland-place, W., on Tuesdays, from 3 to 4.)

Terms 2½ guineas per week.

There is a vacancy for one Gentleman. Vacancies for Ladies will be announced as they arise.

THE HUGUENOTS,

EAST HILL, WANDSWORTH.

A HOME FOR THE TREATMENT OF LADIES OF UNSOUND MIND.

TWELVE LADIES are received either under certificates or as Voluntary Boarders. The house has large grounds and is healthily situated near several commons. A Mental Specialist visits.

Resident Licensee, Mrs. LEECH.

Grove House, All Stretton, Church

STRETTON, SHROPSHIRE.

A PRIVATE HOME for the Care and Treatment of a limited number of Ladies mentally afflicted. Climate healthy and bracing.

Apply to Mrs. McLintock (widow of the late Dr. McLintock), the Resident Proprietress, or to the Medical Superintendent.

Wye House Asylum, Buxton, Derbyshire,

for the middle and upper classes of BOTH SEXES is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.



INEBRIETY, THE MORPHIA HABIT, AND THE ABUSE OF DRUGS.

A PRIVATE HOME, ESTABLISHED 1884,

for the Treatment and Cure of Ladies of the Upper and Higher Middle Classes suffering from the above. Highly successful results. Medical Attendant: Dr. J. St. T. CLARKE, Leicester.—For terms, &c., apply, Mrs. THEOBALD, Tower House, Leicester.

Telegraphic Address: "Theobald, Leicester."

St. Andrew's Hospital for Mental DISEASES.

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President—The Right Honble. the EARL SPENCER, K.G.

The Institution is pleasantly situated in a healthy locality, one mile from the London and North-Western or Midland lines, and one and a half hour only from London.

It is surrounded by more than 100 acres of pleasure grounds.

Great care is exercised in the classification of the Patients according to their habits and different degrees of mental aberration, so that those who are quiet or convalescent may not associate with those whose minds are more affected.

Ample means of occupation and amusement are provided, including Cricket, Croquet, Lawn Tennis, and Archery. There are also Billiard Rooms, and a large Recreation Hall and Theatre.

The terms vary from 25s. to £4 4s. week, according to the requirements of the case.

Patients paying higher rates can have Special Attendants, Horses, and Carriages; and Private Rooms in the hospital; or in detached villas in the grounds of the hospital; or at Moulton Park, a branch establishment, two miles from the hospital.

There is also a Seaside House, to which Patients may be sent.

For further information apply to the Medical Superintendent.

Warneford Asylum, Oxford.—This

Asylum, for the care and treatment of the Insane of both sexes of the Middle and Upper Classes, is pleasantly situated on Headlington-hill, near Oxford, and has been recently enlarged. The grounds are extensive, and cricket, tennis, billiards, dances, and other amusements are amply provided. There are now vacancies for patients at moderate charges. Voluntary patients can also be received.—For particulars apply to the Medical Superintendent, Dr. NEIL.

NERVOUS & MENTAL AFFECTIONS

The Grove, Catton, near Norwich.—

A quiet HOME for the Special Treatment of a limited number of Ladies suffering from Nervous and Mental Affections. The house stands in beautiful grounds of about ten acres in extent, is situated a mile and a half from the City of Norwich, and contains the most modern requirements and comforts.

Carriage drives and amusements of all kinds are provided for patients. Boarders are also received without certificates.

For further particulars apply to the Resident Physician, CECIL A. F. OSBURNE (formerly Medical Attendant, Grove House Asylum and The Oaks Sanatorium, Hythe); or to the Misses McLintock.

INEBRIETY.

MELBOURNE HOUSE, LEICESTER.

PRIVATE HOME FOR LADIES.

Medical Attendant: CHAS. J. BOND, F.R.C.S.Eng., L.R.C.P.Lond.
Principal: H. M. RILEY, Assoc. Soc. Study of Inebriety.
Thirty Years' Experience. Excellent Medical References.
For terms and particulars apply Miss RILEY, or PRINCIPAL.

"PERITEAU."—A Private Asylum for five mentally afflicted Ladies conducted on the system of a private family, with an utter absence of anything that could remind the invalids that they are under care. A special feature of this establishment is the employment of ladies only as attendants, and numerically being one in excess of the patients. Medical Superintendent, E. W. SKINNER, M.D.—Address, Proprietress (Mrs. SKINNER, Senr.), "Periteau," Winchelsea, Sussex. Personal interview from 2 to 3.30 second Wednesday in every month.—33, Wimpole Street, Cavendish Square, W.

WEST MALLING PLACE, KENT, for MENTAL and NERVOUS DISORDERS. An easy distance from LONDON, between SEVENOAKS and MAIDSTONE. A commodious country residence, beautifully situated in a retired position, on its own ample grounds, in one of the healthiest localities in England. It is old-established, reconstructed. Most modern nursing and other requirements; HOME-LIKE. Dr. ADAM, Resident Physician, formerly Physician-Superintendent Crichton Royal and Metropolitan Public Institutions. London address, 64, Welbeck-st., Cavendish-sq., W. (Wednesday mornings). Voluntary boarders received. Teleg. ad.: "Adam, West Malling."

HAYDOCK LODGE, NEWTON-LE-WILLOWS, LANCASHIRE,

Is charmingly situated in a healthy and retired neighbourhood, midway between Liverpool and Manchester, about two miles from Newton-le-Willows Station on the London and North-Western Railway. It is a comfortably-furnished country mansion, especially adapted for the care and treatment of persons of unsound mind. Besides the use of the general sitting-rooms, &c., patients of both sexes can have private apartments and special attendants at moderate rates of payment. *Information as to terms, &c., may be obtained on application to the Resident Medical Superintendent*—CHARLES T. STREET, L.R.C.P.Lond., M.R.C.S.Eng., who attends at 51A. Rodney-street, Liverpool, every Thursday, from 2 to 4.
Telegrams: Street, Ashton-in-Makerfield. Telephone (National) No. 3, Ashton-in-Makerfield.
Visiting Physician: ALEXANDER DAVIDSON, M.D., F.R.C.P., Physician to the Liverpool Royal Infirmary.

PATIENTS RECEIVED IN RESIDENCE. **NAUHEIM TREATMENT IN LONDON.** PATIENTS RECEIVED IN RESIDENCE

MRS. A. M. CAMPBELL'S PRIVATE ESTABLISHMENT FOR ACTIVE AND PASSIVE GYMNASTICS, MASSAGE, ELECTRICITY, AND MINERAL BATHS.

NAUHEIM, 58, Leinster Square Kensington Gardens, W. Telegrams—"NAUHEIM, LONDON."

TREATMENT OF INEBRIETY.

KINGSWOOD PARK, near BRISTOL.

"LICENSED UNDER THE INEBRIATES ACTS."

Resident Medical Superintendent—C. E. MACNAMARA, D.P.H., L.R.C.P., and L.R.C.S.I.

A Home for the reception of Gentlemen suffering from the abuse of Alcohol, Opium, or other Drugs, under the Acts or privately. The house is situated nearly 400 ft. above sea-level, between Clifton and Bath.

For particulars apply to **T. WALTER BRIMACOMBE (Licensee).**

WOODHALL SPA BATHS.

BROMO-IODINE SPRINGS.

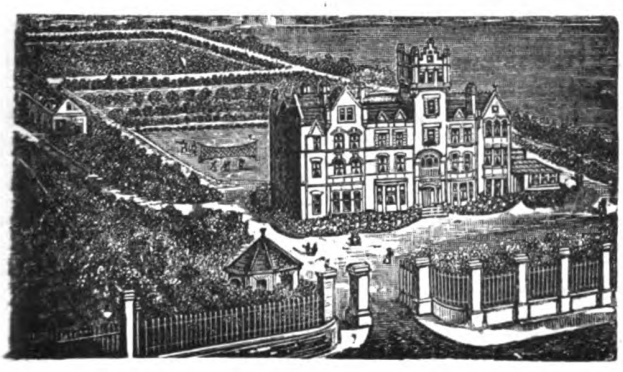
IN UTERINE AND SKIN DISEASES, GOUT, RHEUMATISM, &c.

The BATHS comprise MINERAL, VAPOUR, and PINE BATHS, DOUCHES, and ROOMS for INHALATION.

For particulars apply to Mr. C. J. WILLIAMS, Medical Superintendent, Brookside, or Mr. W. G. WILLSON, Manager, WOODHALL SPA, LINCOLN.

The VICTORIA HOTEL, situated within the grounds and NEAR to the BATHS, is replete with every comfort, and is THE ONLY HOUSE IN WOODHALL where BATHS of the BROMO-IODINE WATER can be obtained. Golf, tennis, &c.

Apply, Manager, VICTORIA HOTEL, WOODHALL SPA, LINCOLN.



INEBRIETY.

TOWER HOUSE RETREAT & SANATORIUM (Ld.), Westgate-on-Sea, Kent.

Principal and Licensee—ALFRED F. STREET, M.A., M.D., B.C.Cantab

Licensed under the Inebriates' Acts, 1879-88. The only establishment in the United Kingdom specially erected for the reception and treatment of Ladies and Gentlemen desirous of overcoming habits of Intemperance or of the abuse of Narcotic Drugs.

The house stands in its own grounds of nearly three acres, and is replete with every convenience, containing a large Billiard-room, spacious Drawing-rooms, moking-rooms, Bath-rooms, &c.

Patients can be received under the Act or privately.

For prospectus, forms (when required) for signature under the Act, and further particulars, address Principal, Tower House, Westgate-on-Sea.

BUXTON DERBYSHIRE

HIGHEST TOWN IN ENGLAND.
On the Mountain Limestone.
1000 feet above sea level.
Centre of the Peak District. Pure Air.
Charming Scenery.

MINERAL WATERS

NATURAL TEMPERATURE 82° FAHRENHEIT.
Baths Heated to any degree prescribed.

FOR

GOUT, RHEUMATISM, RHEUMATOID ARTHRITIS, NEURALGIA, SCIATICA, LUMBAGO, &c. Average Number of Bathers, **62,867** per annum.

Medical Men, on personal application at the Duke of Devonshire's Offices, Buxton, will receive an order to view and make use of the Baths and Pump Room free of all charge.

Finest Public Gardens at any Health Resort in Europe, with Pavilion, Theatre, Concert Hall, Tennis, Bowls, &c. Golf Links (18 holes).

For ILLUSTRATED GUIDE, with Tariffs of the leading Hotels, Hydropathics, Boarding and Lodging Houses, Description of the Baths and Pump Room, and Analysis of the Waters, send postage stamp to

THE CLERK, TOWN HALL, BUXTON, DERBYSHIRE.

ST. BEATENBERG,

4000 feet above the sea. Near INTERLAKEN, LAKE of THOUNE.

GRAND HOTEL VICTORIA,

THE MOST SUCCESSFUL ALPINE HEALTH RESORT.

especially **frequented by English families, is the only First-class Hotel** with every modern comfort, built **in stone,** with latest sanitary and heating arrangements, and in the centre—the best situation—of St. Beatenberg. Bath-rooms, shady terraces, pine-woods, nice tennis-ground, &c., with exquisite lake, forest, and mountain scenery; magnificent panoramic views on the Lake of Thoune, Bernese Oberland, &c. **A charming Residence for Change and Rest.** Purest air. The Hotel has **its own spring, furnishing excellent water.** Numerous mountain ascents, walks, and excursions for climbers and non-climbers. A mountain railway runs from Beatenbucht, the landing-stage for steamers on the Lake of Thoune. Good carriage route from Interlaken (two hours' drive). Post, telegraph, Protestant (English) and Catholic churches. Resident physicians. Excellent cooking. Moderate charges, and arrangements for prolonged stay.

Managed by the Proprietor, **THOS. UNGER-DONALDSON** (also of the HOTEL BELMONT, MONTREUX).

Telegraphic address: "VICTORIA, BEATENBERG."

BATHS OF HOMBURG

The Homburg WATERS are very **efficacious** and **salutary** in diseases of the **Stomach** and **Liver.** In attacks of **Gout, Gouty Disposition, Diabetes, Scrofula,** and certain diseases of the heart. The iron wells prove useful in cases of Anæmia and the consequences of Influenza.

Unrivalled Summer Climate. Sovereign cure in Nervous Debility. The pure and bracing air from the mountains contributes largely to invigorate the system.

Grand new Bathing Establishment, where baths of **Mineral** and soft water are given, under medical prescription, with addition of **Mother-lye, Extract of Pine,** Liver of **Sulphur, &c. Mud-baths,** highly recommended for Rheumatism and Gout.

Inhalation from **Vaporised Salt Water** for affections of the **Throat** and the **Lungs.**

Establishments for **Cold-water Cure.** Gymnastic-orthopædic Institutions.

Whey Cure and **Goats' Milk.** All kinds of Mineral Waters can be obtained.

First-class orchestra; regimental bands; balls; réunions; operas; grand concerts; illuminations; fireworks; fêtes champêtres, &c.; toupie hollandaise; bagatelle; **Cricket** and **Rounders; Lawn Tennis; Golf.**

Elegant **Kurhouse,** with **Ladies', Conversation,** and **Reading Rooms,** open all the year. **Café; Billiards.** Excellent **Kurhaus Restaurant.**

Beautiful **Park,** with shaded walks and comfortable seats. Extensive carriage drives through a vast pine forest. **Charming environs.**

Pure and **limpid Drinking-water.** Excellent drainage. Every condition of Hygiene fulfilled. Superior hotels and lodging-houses at moderate prices. Half-hour from Frankfort-on-the-Maine. **The Mineral Waters exported to all parts of the World.**

The sole Alkaline Thermal Springs in Germany.

40° C., CONTAINING ARSENIC AND LITHIA.

NEUENAHR.

BATH and DRINK CURES, Inhalation, Massage.

WATERS FORWARDED TO ANY PART.

Highly successful in the Treatment of the following Affections:—Catarrhs of the Larynx, of the Stomach, Intestines, and Bladder, Gall-stones, Influenza and its sequelæ, Affections of the Kidney and the Liver, Diabetes, Gout, Rheumatism, and Irregularities of the Female System.

Mild effects, invigorating.

PROSPECTUS FREE ON APPLICATION TO THE DIRECTORS.

Travelling Route:—COLOGNE—BONN—REMAGEN, OR COBLENZ—REMAGEN—NEUENAHR.

A Married Medical Man in practice within a short distance of London and living in a very suitable house (with garden, &c.) and only receiving one RESIDENT PATIENT has at present a vacancy for same. Accommodation for Attendant or Nurse if necessary. Highest references. Terms moderate according to requirements.—Address, No. 174, THE LANCET Office, 423, Strand, W.C.

Resident Patients.—A List of Medical Men in all parts willing to receive into their houses Resident Patients, together with a full description of the accommodation offered, terms, &c., can be had without charge from Mr. G. B. Stocker, 8, Lancaster-place, Strand, W.C.

Resident Patient.—An M.D. of special experience has a Vacancy for one case, Lady or Gentleman, certified or otherwise, suffering from nervous or mental disorder, &c. Large, well-appointed house, standing in an acre of secluded grounds in a favourite locality in Kent, gravel soil, high and bracing, twelve miles from town.—For terms, address, No. 145, THE LANCET Office, 423, Strand, W.C.

Lady Patient or Guest; accouchement, or child; own nurse or servant if desired. Terms low. Dr. Gordon's, Eythorne, near Canterbury; station, Shepherdswell; picturesque, bracing; post, telegraph, churches close; carriage, own grounds, prettily secluded.

Medical Men—A Doctor's Daughter living at home, having entire charge of a little Girl, desires the care of Two or Three more. Healthy village, large garden, excellent references.—Miss Moger, Delmynden, Carshalton, Surrey.

"Northlands," 10 and 12, Northstreet, Wandsworth, S.W.—HOME for Ladies requiring care, rest, or supervision. Inebriates received under the Act and privately. Established 30 years. Large garden, situation cheerful, near Wandsworth Common. Six miles from London on L. & S.W.R. Medical references. Moderate terms. Mrs. Blackmore.

TREATMENT OF INEBRIETY.

DALRYMPLE HOME,

RICKMANSWORTH, HERTS.

For Gentlemen under the Act and privately. Terms—2 to 5 guineas.

Apply to the Medical Superintendent.

FLOWER HOUSE,

CATFORD, S.E.

A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.

N.B.—Under the New Act voluntary boarders can be received on their own personal application.

Apply to Dr. MERCIER, Resident Medical Superintendent.

ACCOUCHEMENT.

Ladies received in the houses of a Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a skilled and practised Obstetrician.—For terms, &c., address M. O. S., care of Messrs. Gale & Co., 15, Bouverie-street, London, E.C.

WONFORD HOUSE.

HOSPITAL FOR THE INSANE, near EXETER.

A REGISTERED HOSPITAL FOR THE UPPER AND MIDDLE CLASSES.

This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter.

There is comfortable accomodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea air and a mild and salubrious climate.

Private Rooms and Special Attendants provided, if required.

Voluntary Patients or Boarders also received without certificates.

For terms &c., apply to

F. MAURY DRAS, M.B., M.S. Lond.,

Resident Medical Superintendent

TREATMENT OF INEBRIETY AND ABUSE OF DRUGS.

HIGH SHOT HOUSE,

ST. MARGARETS, TWICKENHAM.

For Gentlemen under the Acts and Privately.

For terms, &c., apply to

F. H. BROMHEAD, M.B. Camb., M.R.C.S. Eng., &c.,

Resident Medical Superintendent.

Private Home for the Care, Instruction, and Training of Backward, Delicate, and Feeble-minded Children, under Medical management. Special department for elder Girls and Boys. Resident Teachers. Home comforts. Cycling, gardening, basket-making, &c. taught. Seventeen years' experience. Large secluded grounds.—Apply, Lady Superintendent or Medical Director, Woodside Court, East Croydon. N.B.—Tram car from station to Addiscombe.

Brighton.—Establishment for those requiring Medical, Surgical, Nursing care, or Change and Rest after Illness. Medical Baths, Massage, Electricity. Resident and Visiting Doctors. Patients' own doctors can attend if desired; also friends can remain if wished. House is large, close to sea, overlooking ornamental gardens. Every attention to comfort, nursing, and diet. Terms from £2 2s.—Apply, Dr. Pendleton, Sellwood Lodge, Brighton.

Residence and Treatment provided for Epileptics and other Nervous Patients. Charges moderate. Beautiful grounds attached to the house; situated within easy access of London, and owned by an experienced physician.—Apply to the Resident Physician, the Old House, Aylesbury, Bucks.

A Medical Man of lengthened and very successful experience in the treatment of Mental Disease and Hysteria has a vacancy for a RESIDENT PATIENT. The house is beautifully situated in the Midland counties, and within a convenient distance of London. The domestic arrangements are liberal and refined. References to relatives of former patients.—Address, M. B. G., THE LANCET Office, 423, Strand, W.C.

The Women's Temperance Home at Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

OVERDALE ASYLUM

(Late CLIFTON HALL), WHITEFIELD, LANCASHIRE.

Licensed for a limited number of PATIENTS of the Upper and Middle Classes. It is beautifully situated in a retired neighbourhood, and has all the comforts of home life.—For terms, &c., apply to J. HOLMES, M.D., Resident Medical Superintendent.

CLIFTON GRAND SPA HYDRO., BRISTOL.

Near Suspension Bridge, Channel Steamers, and Downs.

Physician: C. J. WHITBY, M.D. Cantab.

Splendid New Turkish, Russian, and Hydropathic Baths. Nauheim Baths. Weir-Mitchell Treatment. Fine Terrace for Air-cure of Consumption. Address, MANAGER. Telegrams: "SPA, BRISTOL."

NORTHWOODS HOUSE,

Winterbourne, near Bristol.

PRIVATE ASYLUM for Ladies and Gentlemen, situated in a large Park in a healthy picturesque locality easily accessible by rail via Bristol, Patchway, or Yate Stations.

Voluntary Boarders can now be received. For further information, see "Medical Directory," page 2059; and for terms, &c., apply to DR. MAGER, Resident Physician.

BOURNEMOUTH HYDROPATHIC.

Ideal resort for Convalescents, Chronic Heart, Pulmonary, Liver, and Nerve Cases. Admittedly best position, West Cliff; Spa Waters, Turkish, Sea-water Baths, and Gymnasium free. Electric and all kinds of Baths. Massage, Nauheim and Aix Treatment. Lift.

Physician, W. Johnson Smyth, M.D. Telegrams: "Hydro, Bournemouth." Prospectus from Secty.

WORTHING.

ON THE SUSSEX COAST.

An unsurpassed Health Resort, with good train service. Drainage and water-supply excellent. Low rainfall, dry soil, plenty of sunshine. Protected from the North and East by the South Downs. First-rate Swimming Baths; Ozone Baths for Rheumatic Patients, Ladies' and Gentlemen's Slipper Baths. Terms on application to the Manager, Public Bath, Worthing.

CLAPHAM COMMON HOME FOR PAYING PATIENTS & NURSING INSTITUTION

(In connexion with 210, CLAPHAM ROAD).

PATIENTS received and TRAINED NURSES sent to all cases.

Apply, MRS. CHAPMAN, NIGHTINGALE HOUSE,

43, SOUTH SIDE, CLAPHAM COMMON, LONDON, S.W.

WYKE HOUSE,

ISLEWORTH, MIDDLESEX.

A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to

F. MURCHISON, M.A. M.B., Resident Proprietor.

ABERYSTWITH, "The Biarritz of Wales,"

is highly recommended for invalids. It possesses the most equable temperature, its shore being swept by the Gulf Stream and the S.W. breezes of the Atlantic. The drainage is perfect, and the town is supplied with the purest water from Plynlimmon.

The late Sir James Clarke, M.D., says: "A fortnight in Aberystwyth is equivalent to a month's residence in most watering places."

ASHWOOD HOUSE, KINGSWINFORD, STAFFORDSHIRE.

An old-established and modernised Institution for the Medical Treatment of Ladies and Gentlemen mentally afflicted.

The House, pleasantly situated, stands in picturesque grounds of forty acres in extent, with a surrounding country noted for the beauty of its walks and drives. The climate is genial and bracing. Occupation, in-door and out-door amusements, and carriage and other exercise amply provided.

Terms range from 2½ to 6 guineas per week, inclusive, according to requirements as to accommodation, special attendance, &c.

Railway Stations: Stourbridge Junction (G.W.R.), 3½ miles; Dudley (L. & N.W.R.), 4 miles; Wolverhampton (G.W.R. or L. & N.W.R.), 7 miles Intending visitors can be met at any of these stations.

For further particulars apply to the Medical Superintendent.

South Africa.—Wanted by a bachelor, aged thirty, accustomed to tutorial work and travel and about to revisit South Africa, the CHARGE of one or two youths or a gentleman in delicate health.—Reference kindly permitted to Dr. Colenso, 91, Cromwell-road, London, S.W., to whom apply.

Manchester Ear Hospital.—Clinical CLERKSHIP for a Senior Student. Appointment for six months. Honorarium 10 guineas. Applications to the Secretary by July 11th.

West Riding Asylum, Menston, near Leeds.—Wanted, a FOURTH ASSISTANT MEDICAL OFFICER, to enter on duty on or about the 20th July, 1898. Salary to commence at £100, rising £10 annually to £150, with board and apartments. Applications, with testimonials, to be sent to the Medical Superintendent, at the Asylum, on or before the 2nd July.

W. TOMLINSON, Clerk and Steward.

Bristol Royal Hospital for Sick CHILDREN and WOMEN.—Appointment of REGISTRAR.—The Committee of this Institution are prepared to receive applications for the appointment of Registrar (Honorary). Candidates must possess a registered Medical and Surgical qualification. Particulars of the duties may be obtained of the Secretary.

Applications, stating age, qualifications, accompanied by testimonials and references, and endorsed "Registrar," to be sent to the Secretary on or before Saturday, July 2nd

Liverpool Stanley Hospital.—Appointment of Honorary ASSISTANT SURGEON.—A vacancy having occurred for Honorary Assistant Surgeon on the staff of the above-named Institution, Candidates are requested to send their applications to the undersigned on or before 12 o'clock on July 8th.

"By the rules of the hospital the qualifications of the Honorary Surgeon and Honorary Assistant Surgeon to the Institution shall be a Master or Bachelor of Surgery of a British or Irish University, or a Fellow of one of the Royal Colleges of Surgeons of the United Kingdom."

ISAAC E. BENNETT, Hon. Sec

Doncaster General Infirmary and DISPENSARY.—RESIDENT DISPENSER and ASSISTANT to the House Surgeon wanted. Good opening for a student reading for his final. Board, lodging, and washing provided, and an honorarium at the rate of 20 guineas per annum will be given provided the duties are satisfactorily performed. Twenty-eight beds. Duties to commence soon after appointment.

Applications, stating age, with testimonials, should be addressed to the Hon. Secretary, the Infirmary, Doncaster, and should reach him not later than July 5th.

The appointment to be subject to one month's notice on either side.

Bradford Poor Law Union.—NIGHT SUPERINTENDENT NURSE.—The Guardians require the Services of a Lady qualified to act as Night Superintendent in the hospitals attached to their workhouse, which contain some 400 beds, with a staff of about 27 Nurses.

Candidates must be single persons, fully trained certificated Nurses, and qualified to instruct probationers. Those only need apply who have had considerable experience in some large hospital or infirmary. The appointment will be made subject to the approval of the Local Government Board, and the lady appointed will have to act under the direction of the Superintendent Nurse.

The salary will be £40 per annum, with prescribed rations, apartments, and washing.

Forms on which the application must be made will be forwarded on applying by letter to the undersigned, to whom the application on those forms are to be sent before 10 o'clock on Monday, the 4th of July next.

THOS. CROWTHER,
Clerk to the Guardians.

Poor Law Offices,
22, Manor-row, Bradford, June 18th, 1898.

University College, London.—The office of RESIDENT MEDICAL OFFICER in the Hospital will shortly be vacant.

Applications will be received up to 10 A.M. on Monday, June 27th.

J. M. HORSBURGH, M.A., Secretary.

Resident House Physicians.—Vacancies having occurred in the HOSPITAL for CONSUMPTION and DISEASES of the CHEST, those gentlemen desirous of becoming candidates for the vacant offices are requested to sent in their applications, with testimonials, on or before Wednesday, June 29th, and to attend the Medical Committee on the following Wednesday, July 6th, at 4 o'clock.

Testimonials as to moral character as well as to medical qualifications are required.

Further particulars may be obtained at the Hospital.

Brompton, June 15th, 1898. WILLIAM H. THEOBALD, Secretary.

The Cancer Hospital (Free), Fulham-road, S.W.—There will shortly be a vacancy at this Hospital for a HOUSE SURGEON, who must be qualified under the Medical Registration Act. The appointment will be for six months.

Salary at the rate of £50 per annum, board, and residence.

Applications, with testimonials, to be forwarded to the Secretary on or before July 9th, 1898.

Royal London Ophthalmic Hospital, Moorfields, E.C.—Applications are invited for the office of JUNIOR HOUSE SURGEON.

Candidates must be registered medical practitioners, and must be prepared to begin the duties on the 1st of August.

Salary £50, with board and residence in the Hospital.

Applications, stating age and qualifications, together with copies of testimonials in duplicate, must be received by the Secretary not later than the 4th of July.

By order of the Committee of Management.

14th June, 1898. ROBERT J. BLAND, Secretary.

Wolverhampton and Staffordshire GENERAL HOSPITAL.—The Board of Management will elect a HOUSE SURGEON, who will also be required to act as SURGICAL REGISTRAR, on Tuesday, the 5th July. Candidates must be Fellows or Members of the Royal College of Surgeons of England, Edinburgh, or Ireland, and be possessed of a medical qualification and be registered. Salary £100 a year, with board, lodging, and washing. Testimonials, sealed and addressed to the Chairman of the Medical Committee, must be received not later than the first post on Friday, July 1st. As the most eligible candidate will be elected anyone canvassing will be disqualified. By order.

EDWIN A. WHITE,
House Governor and Secretary.

Wolverhampton, June 7th, 1898.

Norfolk and Norwich Hospital, Norwich.—HOUSE PHYSICIAN required. Salary £80 per annum, with board, lodging and washing; tenable for two years. Candidates must be unmarried and not more than thirty years of age. They must produce evidence of possessing a double qualification and of being registered according to the provisions of the Medical Act.

Applications, with copies of not more than six testimonials, to be sent not later than Tuesday, 28th June, to the undersigned, from whom all further particulars may be obtained. By order.

June 7th, 1898. (Signed) POOLE GABBETT, Secretary.

Salisbury Infirmary.—Wanted, at the above Institution, an ASSISTANT HOUSE SURGEON, without salary. Honorarium of £10 will be given at the end of six months if found satisfactory. He will be provided with board, lodging, and washing.

Candidates must produce certificates of their being a Fellow or Member of one of the Colleges of Surgeons of Great Britain or Ireland, as well as possessing a qualification to practise medicine from some recognised body in the United Kingdom of Great Britain or Ireland. No married person is eligible for the appointment.

All applications, with testimonials and certificates of qualifications, must be sent to the Secretary on or before Thursday, the 23rd day of June instant.

The rules relative to the duties of the Assistant House Surgeon may be had on application to the undersigned.

The successful candidate will be required to enter on his duties forthwith.

Canvassing is strictly forbidden, and will disqualify the candidate.

Dated the 28th day of May, 1898.

S. BUCHANAN SMITH, Secretary.

Sunderland Infirmary.—The Committee, at their meeting on July 14th, will elect a HOUSE SURGEON from Candidates approved by the Medical Board.

Candidates must possess double qualifications (registered). The duties of the office are chiefly at the surgical side of the Infirmary, but the selected candidate will be expected to assist the House Physician in some of his work. As the vacancy is caused by sudden illness the successful candidate will be required to enter upon his duties immediately. He will give or receive two months' notice on relinquishing office. The salary is £80, rising £10 annually to £100, with board and residence.

Application, with testimonials, to be sent to the Chairman of the Medical Board on or before July 7th.

Further particulars may be obtained on application to the undersigned.

June 13th, 1898. THOS. ROBINSON, Secretary.

Victoria University.—The YORKSHIRE COLLEGE, LEEDS.—DEPARTMENT of MEDICINE.—The Council invite applications for the appointment of PROFESSOR of MATERIA MEDICA, PHARMACOLOGY, and THERAPEUTICS, which will become vacant at the end of the present session. The emoluments are derived from fees alone. Particulars may be obtained from the Registrar of the College.

Wanted, at Blackburn Infirmary, a LOCUM TENENS from July 1st, for six weeks, to perform the duties of House Surgeon. Terms, two guineas per week and travelling expenses paid.—Apply at once to the Senior House Surgeon.

Junior Medical Officer required at SHAFTESBURY HOUSE PRIVATE ASYLUM, Formby, near Liverpool. £50 per annum, with board, lodging and washing.—Apply, stating qualifications, together with recent testimonials to Stanley A. Gill, M.D., M.R.C.P. London.

Ripon Dispensary and Cottage HOSPITAL.—Wanted a duly qualified and registered Practitioner as RESIDENT HOUSE SURGEON and DISPENSER. The applicant must be a single man. The salary is £70 first year and advancement after with board and lodging. Duties to commence 1st July. Applications with testimonials as to professional ability and moral character must be sent forthwith (post free) to,

Ripon, June, 1898. F. D. WISE, Hon. Sec.

Surgeon for Cruise to Norway required for one month from July 11th; must be fully qualified and able to speak French fluently.—Apply, Secretary, Orient S.N. Co., 13, Fenchurch-avenue, E.C.

Cardiff Infirmary. — Wanted, an ASSISTANT HOUSE PHYSICIAN. Candidates must be registered in Medicine and Surgery under the Medical Act. The appointment will be for six months with board, washing, and apartments, and an honorarium of £10 at the completion of the period.

Applications, with copies of testimonials, to be sent to the undersigned on or before Wednesday, June 30th, 1898.

GEO. T. COLEMAN, Secretary.

Birkenhead and Wirral Children's HOSPITAL, Woodchurch-road, Birkenhead.—There is a vacancy for a HOUSE SURGEON duly qualified and registered at the above institution. Salary £50, with board, apartments, and laundry.—Applications, with testimonials (copies) to be sent in on or before July 4th, to F. Henton Carver, Hon. Sec., 5, Rumford-place, Liverpool.

The appointment will be made as soon after this date as possible.

The Guest Hospital, Dudley. — Wanted, a RESIDENT ASSISTANT HOUSE SURGEON. Applications, stating age, with testimonials, will be received from qualified men, or from fourth year students, up to Thursday, June 30th.

Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing in the Hospital.

Applications to be addressed to the Secretary, Guest Hospital, Dudley.

County of Lanark.—District of the MIDDLE WARD.—RESIDENT PHYSICIAN wanted for the Middle Ward Isolation Hospital (100 beds). Salary £140 per annum, with board, &c. Will have medical charge of the patients under the County Medical Officer and be responsible for the general management. Must be duly qualified and registered. One with previous Hospital experience and able to undertake all bacteriological work preferred.

Applications, with copies of testimonials, to be addressed to the subscriber on or before 7th July.

County Buildings, Hamilton, June 22nd, 1898. J. B. FERGUSON, District Clerk.

Royal Halifax Infirmary.—Wanted, a HOUSE SURGEON, who must be unmarried, doubly qualified, and registered. Salary £80 per annum, advancing £10 per year up to £100, with residence, board, and washing.

Particulars of the duties, &c., may be obtained from the undersigned, to whom applications, with copies of testimonials, must be sent not later than Wednesday, June 29th. OATES WEBSTER, Secretary,

Royal Halifax Infirmary, June 14th, 1898.

Wolverhampton and Staffordshire GENERAL HOSPITAL.—The office of ASSISTANT HOUSE SURGEON is now vacant. A qualified man required. The appointment is held for six months, and a small honorarium will be given at the expiration of the term of office. Board, lodging, and washing provided. Testimonials, sealed and addressed to the Chairman of the Medical Committee, must be received not later than the first post on Friday, the 1st July.

By order.

EDWIN A. WHITE,

Wolverhampton, June 7th, 1898. House Governor and Secretary.

Wandsworth (centre).—To be Sold, a Freehold HOUSE, 2 and 3, Church-row, with twenty rooms, coachhouse, stable, and grounds 40 ft. by 197 ft., let on repairing lease, expiring at Christmas, at the low rental of £85, to Dr. Smith. The late Dr. Nicholas carried on a practice there between thirty and forty years. The Executors, desirous of closing their accounts, are willing to accept any reasonable offer if made at once.—Particulars from W. Allder Ridley, Esq., Solicitor, Burgh, Lincolnshire, or Mr. Cooke, 16, Victoria-avenue, Surbiton.

Sutton-Courtenay on Thames.— Most charmingly furnished HOUSE, August and September; eight minutes from river; 4 reception-, 8 bedrooms, bath-room (h. and c.), good offices, stabling, excellent gardens, and tennis lawn. Private landing-stage and garden on one of the loveliest backwaters of the Thames, also let with house. Terms most moderate. Three stations two and a half miles. Photos if desired.—F. C. T., Sutton-Courtenay House, Berks.

To be Let Furnished.—Musselburgh, near Edinburgh, close to the celebrated golf links. The PARSONAGE HOUSE, for July and August; seven rooms and the usual offices and conveniences, and large, well-stocked garden. Stabling and coachhouse if required. Terms moderate.—Apply, Mrs. Kemp at above, or if desired particulars and photograph can be had at 18, Beaumont-street, W.

To be Let, Ground Floor of 3 rooms, viz., fitted surgery, large consulting-room, and third room. Corner house; two entrances. Busy neighbourhood. Low rent.—Apply, Walter R. Aldridge, Auctioneer, 93, Southampton-row, W.C.

To be Let or Sold, situated in main thoroughfare of market and residential town in Shropshire, an old-established DOCTOR'S HOUSE, double-fronted and detached. Contains four reception and seven bedrooms, one of which would be fitted up as bath-room, and house decorated to suit tenant. Garden, stable, coachhouse, &c. Hunting, fishing, and boating in neighbourhood. Early possession. References.—For particulars address Mrs. Oldham, 60, Clarendon-road, Whalley Range, near Manchester.

Mayfair, near Piccadilly.—Large, well-furnished CONSULTING-ROOM with use of waiting-room in private house of University man; bedroom with breakfast if desired.—Address, H. B. C., care of Willing's Advertising Offices, 162, Piccadilly, W.

To Invalids.—A dwarf detached town HOUSE and secluded Grounds (about half an acre). All the rooms and offices are on two floors and all the principal rooms overlook the garden. Good stabling and yard.—Full particulars and cards to view of the agents, Messrs. H. and A. Swain, 26, High-street, Notting-hill-gate, W.

Ground Floor, 11, Princes-street, Cavendish-square, W. Suitable for professional or business men. Manservant. Electric light. Special terms for permanency.—Mrs. Sutton.

Small Holdings for Gentlemen who can appreciate superior surroundings, a high, healthy elevation, and extensive nature pictures. About 40 acres, occupying the very acme of position in the most select of residential districts, adjoining game woods on one side and Hook Golf Common on another. A mile from Hook Station and 4½ from Basingstoke.

Smallest sections, £85 each, calculated at £120 per acre. For larger sections offers are invited.

A purchaser could pay his purchase money at our office, receive a properly filled-up printed conveyance free of law costs, and take possession of his Freehold Land all within two hours.

The Title is from a well-known titled county family.

Not many trains, but sufficient even for a daily City man.

Hunting, shooting and fishing around.

Four small BUNGALOWS being erected for sale.

Dowsett, Knight, & Co., 3, Lincoln's-inn-fields, London.

BIRMINGHAM MEDICAL AGENCY,

6, FREDERICK RD., FIVE WAYS, BIRMINGHAM.

(Late 164, Corporation Street.)

MESSRS. LEE & MARTIN

NEGOTIATE TRANSFERS OF PRACTICES AND PARTNERSHIPS WITH PROMPTITUDE AND CARE.

A LARGE NUMBER OF PURCHASERS ALWAYS ON THE BOOKS.

LOCUM TENENS AND ASSISTANTS

SUPPLIED AT SHORT NOTICE.

Additional qualified ASSISTANTS are now required.

Telegrams: "Locum, Birmingham." [Telephone 1289

THE MANCHESTER CLERICAL,

MEDICAL & SCHOLASTIC ASSN., LMTD.

8, KING STREET, MANCHESTER.

Telegrams: "STUDENT, MANCHESTER."

The Association negotiates the transfer of Medical Practices, Private Hospitals, Homes, &c.; introduces Partners, Assistants, Locum Tenens, Nurses, &c.; undertakes Accountancy, Investigations, Valuations, Collection of Debts, &c. Welsh Assistants provided. Prospectus, containing names of Directors (Medical and Scholastic), on application.

THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1880 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The Association undertakes the SALE of PRACTICES and PARTNERSHIPS; the Introduction of LOCUM TENENS and ASSISTANTS; MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will be sent on application to—MR. G. B. STOCKER,* MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London." Telephone No. 1854 (Gerrard).

FOR SALE.

(1) FASHIONABLE SEA-SIDE RESORT.—Cash receipts for 1897 £2382. Visiting fees 2s. 6d. to 7s., and occasionally more. One horse. Good house with stabling. Rent moderate. Introduction twelve months. Premium 2½ years' purchase.

(2) NORTH MIDLANDS.—Good-class PRACTICE in a large town. Cash receipts for 1897 £801. Visiting fees 3s. 6d. to £1 1s. Midwifery light. Very good house well situated, with garden and stabling, which must be purchased. Price for house and Practice £4000 (£1500 being allowed to remain on mortgage).

(3) MIDLANDS.—Within two hours of London. Middle and working-class PRACTICE in a good town. Cash receipts for last three years average over £1050 per annum, including appointments of over £500. An immediate arrangement is essential.

(4) PARTNERSHIP, with view to succession (after two years, in good working and middle-class Practice in a suburb of a large city. In present incumbent's hands over twenty-eight years. Cash receipts average £1811 per annum. Very good house; rent £90. Premium for half share, two years' purchase.

(5) PARTNERSHIP.—South-west of England. The third share of a rapidly increasing practice in a country town near the sea. Earnings last year £1200. The connexion elite of the neighbourhood. Price for third share £600.

(6) LONDON SUBURB.—JUNIOR PARTNER wanted for a mixed practice of about £1600. One-sixth share at first (price £400), with increase after two years. Not necessary for partner to take a house.

(7) HOME COUNTIES.—Unopposed PRACTICE. Cash receipts for three years ending May 1st, 1898, average £618 per annum, including appointments of about £80 per annum. Very good house and garden. Introduction as desired. Premium £1000. Scope for increase.

(8) SOUTH-WEST OF ENGLAND.—Unopposed Country PRACTICE. Cash receipts for twelve months ending April 1st, 1898, £504, including appointments of £97. Small detached house; rent £18. Premium £600.

(9) PARTNERSHIP. LONDON, N.W.—Private and Dispensary PRACTICE doing about £1500 per annum. One half share would be sold for £750.

(10) LANCASHIRE, manufacturing town.—Receipts for 1897 £2868. Lowest visiting fee 3s. 6d. No clubs. Very little Midwifery. Price £1300.

(11) PARTNERSHIP, LARGE MIDLAND CITY.—Middle and Working-class PRACTICE. Cash receipts for 1897 £1600. Midwifery fees £1 1s. upwards. Small house; rent £18. A One-half Share would be sold for two years' purchase.

(12) PARTNERSHIP, EASTERN COUNTIES.—Country PRACTICE of between £1300 to £1400 per annum. A Share of about £500 would be sold for £750. Purchaser should be able to ride.

(13) YORKS, WEST RIDING.—PRACTICE in a small Manufacturing town. Cash receipts average £1138 per annum, including appointments worth £20. Visiting fees 2s. 6d. to 5s. Good house with stabling; rent £60. Premium £1200. This practice has been investigated by Association's accountant.

(14) HOME COUNTIES.—Old-established unopposed Country PRACTICE. Cash receipts for 1897 £657, including appointments of about £170. Good house, with stabling, garden, &c. Rent £87. Good sport. Premium £1000.

(15) HOME COUNTIES.—A Middle- and Working-class PRACTICE. Cash receipts for 1897 £659, including appointments of £180. No resident opponent. Good house with large garden, rent £45. Premium £800.

(16) YORKS, WEST RIDING.—PRACTICE in the outskirts of a large manufacturing town. Cash receipts average £912 per annum. Visiting fees from 2s. 6d. Detached house; rent £35. Good introduction. Premium £1000. Drugs, fixtures, horse, harness, cart, and brougham at a valuation.

(17) NORTH OF ENGLAND.—Seaside Resort. Well-established PRACTICE. Cash receipts for 1897 £440, including club appointments of £50. Visiting fees 2s. 6d. to 10s. 6d. Well-situated house; rent £55. Premium £750.

(18) LARGE MANUFACTURING TOWN IN THE MIDLANDS.—Good middle-class PRACTICE. Cash receipts for 1897 £481, including appointments, clubs, &c., £165. Good house, with stabling. Rent £75. Six months' introduction. Premium, £500.

(19) YORKS, WEST RIDING.—PRACTICE in a small manufacturing town. Cash receipts for last three years average £766 per annum. One horse. Small house, rent £28. Premium £800.

FOR SALE (*continued*).

(20) PARTNERSHIP.—OUTLYING SUBURB, LONDON, N.—Middle- and Working-class PRACTICE. Cash receipts average £980, including appointments of £400. Price for one-third share one and a half year's purchase.

(21) MIDLANDS.—Large manufacturing town, CASH PRACTICE averaging £837 per annum. No appointments. Visiting fees 1s. 6d. to 5s. One horse. Rent £40. Premium £1050, to include surgery furniture, fittings, and drugs.

(22) LONDON, S.E.—An increasing mixed PRACTICE (chiefly working class). Cash receipts for twelve months ending March 31st, 1898, £920 including clubs and insurance appointments. No carriage required. Rent £36. Three or six months' introduction. Premium £800.

(23) PRACTICE in a Manufacturing District of about £400 per annum. Cash receipts. One horse kept. Premium £450.

(24) EASTERN COUNTIES.—PARTNERSHIP in a middle and working class PRACTICE doing at the rate of about £1000 per annum, including appointments of £420. Visiting fees 2s. 6d. to 3s. 6d. A one-third share would be sold for one and a half year's purchase upon the gross bookings.

(25) OUTLYING SUBURB to the East of London.—Cash receipts for last three years average £487 per annum. Midwifery fees 1 to 1½ guineas. Good house, with stabling and coach-house; rent £65. Premium £500.

(26) EASTERN COUNTIES.—Country PRACTICE near the Coast. Cash receipts for 1897 £322 including appointments of about £70. Small house. Rent £22. Premium £400.

(27) OUTLYING SUBURB TO EAST OF LONDON.—Cash receipts for 1897, £394, including appointments of about £40. Rent £34. Premium £400.

(28) NURSING HOME in a good residential town in the Home Counties. Gross receipts for last three years average £608 per annum. Premium £550, to include all furniture and effects.

(29) LONDON WEST.—Small PRACTICE. Cash receipt for 1897, £240. Visiting fees mostly 3s. 6d. and 5s. Good corner house. Rent £55. Premium £250.

(30) WITHIN EASY DISTANCE OF CHARING-CROSS.—Private and Dispensary Practice. Cash receipts for 1897 £540. Midwifery fees, £1 1s. upwards. Any reasonable introduction. Premium £520.

(31) LONDON (best part of the East-end).—Cash receipts for 1897, £981 including transferable appointments of £251. Midwifery fees 1 to 3 guineas. Well situated house. Rent £68. Premium £500.

(32) SOUTH WEST OF ENGLAND.—Small unopposed country PRACTICE. Earnings for year ending April, 1898, £345, including appointments of about £60. Detached house with garden and stabling. Rent £36. Premium £250.

WANTED TO PURCHASE.

(33) WANTED, a small PRACTICE in a good country district near London. Must have good house. Purchaser is experienced and has ample private means.

(34) WANTED to Purchase, in Nottingham or neighbourhood, or Scarborough, a good-class PARTNERSHIP or Practice by an F.R.C.S. Eng., &c., with large experience and ample capital.

(35) WANTED to Purchase a PARTNERSHIP in a good-class Practice. Purchaser is a Bart's. Man (M.R.C.S. Eng., L.R.C.P. Lond.); married and has had experience in good-class Practice.

(36) WANTED to Purchase, a Small PRACTICE or Nucleus in Reigate, Dorking, Redhill, Harpenden, or Watford. Purchaser is experienced and has private means.

(37) WANTED, a PRACTICE or PARTNERSHIP with view to succession, in Sunderland. No club preferred. Purchaser can invest up to £1000.

QUALIFIED ASSISTANTS WANTED.

(40) Essex, £100, in-. (41) Yorks, £100, in-. (42) London, S.E., £140, rooms, &c. (43) S. Devon, £150, out-. (44) Lancs., £150 to £200, out-. (45) Somerset, £100, in-. (46) London, S.E., in-; time for hospital.

A large number of other good Assistantships on the books.

LOCUM TENENS SUPPLIED.

* Author (jointly with Wm. Barnard, M.A., LL.B.), of "Medical Partnerships, Transfers, and Assistantships" (published by Stevens & Sons, Limited, 119, Chancery-lane, W.C.). Price, net 2s. 6d., or by post, 2s. 7d.

[ESTABLISHED 1875.]

MR. PERCIVAL TURNER

(Son of a well-known Practitioner, and Author of Guide to Medical and Dental Professions)

4, ADAM STREET, ADELPHI, LONDON, W.C.

(CLOSE TO "THE LANCET" OFFICE).

HOURS FOR CONSULTATION, 10 TO 5. SATURDAYS, 10 TO 1.

Telegraphic Address, "EPSOMIAN, LONDON."

Immediate.—£700 a year.—A good General PRACTICE in an Eastern Suburb. Fees 2s. 6d. to 5s. Midwifery chiefly 42s. No horse requisite. Ample scope. Long partnership introduction. Premium £1200.

London.—£600 Cash Practice in good thoroughfare. Old-established and recommended. Price one year's purchase.

Eastern County. — Immediate. — £200 a year. Increasing PRACTICE in good Town. Suited to young energetic man. Rent £25 or £36. Furniture at valuation if desired. Premium for goodwill £150.

London, W.—£250 a year.—Non- dispensing NUCLEUS. Corner house. Rent £55. No other expenses. Price £250.

Consulting City Practice in large Northern Town.—Income about £200. Attending a few hours daily. Rent £20. Fees 2s. 6d. to 21s.

Over £2000 a year cash receipts.— For Disposal, a good old-established General PRACTICE in a pleasant manufacturing district in north of England. Fees from 3s. 6d. upwards. Midwifery from 21s. Partnership introduction and every investigation. Hunting, &c., available. Premium 1½ years' purchase. Would suit two men in partnership. Mr. Percival Turner has seen vendor and can give all details.

£1400 a year.—Partnership and Succession in twelve months is offered to an old-established Middle-class Practice in a large Northern Town. No collieries. No appointments. Fees from 2s. 6d. a visit; midwifery 21s. Premium 1½ years' purchase. Personally investigated and recommended.

£450 a year.—Good-class Practice in best residential suburb of a large Northern town. No horse required. Mostly non-dispensing. Good house, rent £50. Price £450.

London Suburbs, £200 a year. An increasing NUCLEUS in a south-eastern suburb. Good 12-roomed corner house and garden, rent £50. Visiting fees usually 2s. 6d. and 3s. 6d. Appointments over £100. Premium £200.—Apply to Mr. Percival Turner, 4, Adam-street, Adelphi, London, W.C.

London.—Immediate.—Nearly £300 a year, half cash fees. PRACTICE in a respectable residential part of S. London. Fees from 1s. 6d. Nine-roomed house; rent £43. Every investigation. Price £175. Scope for large practice.

Over £1000 a year. — Within 20 miles of Manchester, a lucrative middle- and working-class PRACTICE. Appointments £100. No horse required; rent £40. Every investigation. Introduction as requisite. Premium £1050.

Eastern County. — An increasing PRACTICE, near a favourite Coast Town. Present value about £400 a year. Small house. Appointments £60. Not much opposition. Hunting, shooting, golf, &c.

ADAMS & PARKES (B.A.Cantab.),

UNIVERSITIES AND GENERAL MEDICAL AGENCY,

8, JOHN STREET, ADELPHI, STRAND, W.C.

This Agency is conducted by CAMBRIDGE GRADUATES. Highest references and testimonials. PARTNERSHIPS and Transfer of PRACTICES speedily arranged. LOCUM TENENS or ASSISTANTS; a large number of reliable, well-qualified men always available.

Open to all Medical Men. NO CHARGE to PURCHASERS or for ENQUIRIES.

Every application receives the immediate personal attention of the principals.

All communications treated as confidential.

List of terms (which are moderate) and references gratis on application.

Telegraphic Address: "Interjoin, London."

SELECTED FROM OUR REGISTER.

No.	Locality.	Class.	Income.	Premium.
1.	YORKS	MIDDLE-CLASS ...	... £335	... £200
2.	KENT COAST ...	MIDDLE-CLASS ...	... 200	... 150
3.	KENT	WORKING-CLASS	... 225	... 200
4.	SHEFFIELD	DISPENSARY ...	... 400	... 200
5.	LANCS	PARTNERSHIP ...	... 400	... 800
6.	HANTS COAST ...	MIXED	... 400	... 300
7.	LANCS	CASH	... 418	... 300
8.	LONDON, S.E. ...	D. V.	... 200	... —
9.	LANCS...	WORKING-CLASS	... 1006	... 1050
10.	ESSEX	MIXED	... 300	... 300
11.	SUSSEX COAST ...	GOOD-CLASS ...	... 208	... 330
12.	LONDON, E.	CASH	... 300	... 200
13.	LIVERPOOL	WORKING-CLASS	... 200	... 100
14.	LONDON, N.	CASH	... 250	... 250
15.	LEICESTER	DENTAL	... 520	... 450
16.	CAMBS	PARTNERSHIP ...	... 450	... 850
17.	CORNWALL	MIXED	... 224	... 100
18.	LONDON, N.W. ...	NON-DISPENSING	... 100	... 150
19.	MIDLANDS	D. V....	... 360	... 200
20.	DERBYSHIRE ...	COUNTY	... 390	... 500
21.	LONDON, E.	CASH	... 250	... 150
22.	SOMERSET	COUNTRY	... 345	... 350
23.	LONDON, E.	CASH	... 400	... 350

(See also this week's "British Medical Journal" List.)

Also a large number of Nuclei.

Several good ASSISTANTSHIPS (in- and out-door) to be filled immediately.

More than 1000 would-be purchasers with capital up to £6000.

Full particulars on application.

Messrs. H. Wilson & Son,

26, CHARLES STREET, ST. JAMES'S SQUARE, S.W.

Established Half a Century.

MEDICAL REFEREES, VALUERS AND ARBITRATORS.

LOCUM TENENS AND QUALIFIED ASSISTANTS PROVIDED.

1. NORTH OF ENGLAND.—A General PRACTICE about £1200 per annum. Visits 2s. 6d. to 3s. 6d.; midwifery 15s. to 21s. A small but convenient house. Suitable for a young, active practitioner, a Roman Catholic.
2. WESTERN SUBURB.—NUCLEUS.—Good corner house. Suitable for any gentleman commencing practice.
3. W. DISTRICT.—Mixed-class PRACTICE, about £650, including £250 from clubs, and about 100 midwifery cases from 21s. A convenient house. Rent £60. Premium, £850.
4. LANCASHIRE.—In a town, a PRACTICE about £500 per annum, capable of increase by taking midwifery. A long introduction. Good central position. Premium, £400. Ill health cause of relinquishing.
5. E. DISTRICT.—A very old-established SURGEON'S RETAIL for immediate disposal. Returns about £700 per annum. Convenient house in a main thoroughfare. Premium to an immediate purchaser, to include stock of drugs and bottles, £300.
6. WEST-END PARTNERSHIP.—The half-share of a private and Ready Money PRACTICE about £1000 per annum is offered to a gentleman who is thoroughly accustomed to London practice and well up in midwifery.
7. GOOD-CLASS PRIVATE PRACTICE, N.E. district. Income between £1400 and £1500 per annum. Good house and garden. Rent £110.
8. READY-MONEY FEE AND PRIVATE PRACTICE, N.E. SUBURBS.—£300 per annum, private house in a good road. Rent £32. Premium £300.
9. S.E. DISTRICT, within ten miles, private and cash PRACTICE, not a Dispensary. Income about £400, including £60 from clubs. Rent and taxes, £36. Premium, £300.
10. IMMEDIATE.—DISPENSARY, S.E. district, about £200; has done £600. Premium, £100, to include drugs and furniture.

PRACTICES REQUIRED.

WITHIN 100 MILES.—£700 to £1200. Immediately wanted.

NORTH of ENGLAND.—£600 to £1000. Wanted.

SUFFOLK or ESSEX.—£500 to £700.

WEST END.—£600 to £1500 by a gentleman of means.

MEDICAL VACANCIES.

House Surgeoncy, London. London, £80, in-door. London, £120, in-door. E. District, £100. Sussex, £80, in-door. Richmond, £80. Devon, £100, in-door.

Personal application only.

MEDICAL PARTNERSHIP AND CONVEYANCING AGENCY.

1, ADAM-STREET, ADELPHI, W.C.

The SALE of PRACTICES and PARTNERSHIPS NEGOTIATED.

Trustworthy LOCUM TENENS and ASSISTANTS can be had at a few hours' notice.

N.B.—No charge made to Purchasers.

Notice.—Mr. J. C. Needes, with an experience of over a quarter of a century, is in an exceptional position to give intending Purchasers independent information concerning most PRACTICES and PARTNERSHIPS. Those investments in the following List marked with an asterisk are well known to him, having been purchased through his Office by the present Incumbents years ago, and in many other cases an introduction can be given to gentlemen who have taken charge of the Practices during the absence of the Incumbents.

CASH PRACTICE situated in South London and averaging £12 per week. Premium £500. The rent and taxes of the House are only £30 a year and as the other expenses of the practice are very light, the purchase money could be easily saved in a couple of years.

PARTNERSHIP.—South-West of England.—The third share of a rapidly increasing practice situated in a pleasant country town containing nearly 12,000 inhabitants is for negotiation. The earnings of the practice last year amounted to £1200. The connexion includes the élite of the neighbourhood, and there is ample scope for further increasing the practice. Premium for third share £600. Hunting, fishing, shooting, &c.

PARTNERSHIP.—GUARANTEED INCOME.—An active Gentleman is required as Partner in a rapidly increasing PRACTICE, estimated to be worth about £1200 per annum. Situated in an important Town (over (100,000 inhabitants) in the Midland Counties. Appointments yield over £400. Third share for disposal. A minimum income of £400 a year will be guaranteed to the ingoing Partner. Premium two years' purchase.

SOUTH COAST.—In a large favourite Watering-place, a well-established PRACTICE, averaging about £500 per annum, is for negotiation. Appointments yield £60. Visiting fees 2s. 6d. to 7s. Midwifery has not been encouraged. Commodious house. Premium one and a half years' purchase. The incumbent has held the Practice twelve years and will give an efficient introduction.

IN A FLOURISHING NORTHERN TOWN (about 50,000 inhabitants close to the Sea, an old-established PRACTICE yielding about £700 last year is for Disposal owing to the retirement of the Incumbent. Appointments yield £120. Commodious family residence: rent £40 a year. Incumbent has held the Practice a number of years and will give an efficient introduction.

£1000 A YEAR.—The Succession to a good-class old-established country town PRACTICE of the above amount is offered to a married gentleman of age and experience. It is easily worked, the expenses are light, there is good society, and the town is within 100 miles of London. Six or twelve months' partnership introduction given. Personal application if possible.

MODERATE PREMIUM.—A Premium of £300 will be accepted for a well-established and increasing PRACTICE yielding last year over £1000 cash receipts. Situated in a country manufacturing town in Lancashire. Fees 2s. 6d. to 6s. 6d. Seventy cases of midwifery yearly. Convenient house containing two reception-rooms, five bedrooms, bathroom, &c. Horse not required. Books open to every investigation and satisfactory reasons for selling. An introduction of three months (or longer) will be given.

*CASH PRACTICE, easily worked and yielding £775 last year. Situated in a main thoroughfare within a mile of Charing cross. The Practice could be conducted without residence on the part of the principal if a qualified assistant were kept. Premium one year's purchase, to include drugs, fittings, and surgery furniture.

* LONDON, W.—Well-established CASH PRACTICE, yielding £650 a year and increasing. About fifty cases of Midwifery yearly at 1 to 2 guineas. Hours of attendance at the Surgery, 11 till 1 and 7.30 to 9.30. Vendor occupies an excellent family residence (rent £85) within a few hundred yards of the Surgery. An efficient introduction given.

Apply to J. C. NEEDES, 1, Adam-street, Adelphi, W.C.

Assistantship.—A qualified Gentle- man, about twenty-eight years of age, accustomed to good society, required to ASSIST in a first-class Practice in a fashionable watering-place. Duties light. Liberal terms (in-door) to a suitable gentleman.—Apply to J. C. Needes, 1, Adam-street, Adelphi, W.C.

Locum Tenens and Temporary ASSISTANTS.—Practitioners requiring the above can immediately obtain thoroughly reliable qualified Gentlemen upon application to 1, Adam-street, Adelphi, W.C. Every Gentleman engaged by the Office in either of the above capacities is personally known to Mr. J. C. Needes. An office fee of half a guinea is payable by the Principal

Telegraphic Address, "Acquirement, London."

MEDICAL TRANSFER AGENCY AND ACCOUNTANCY OFFICES. (Established 1868.)

19, CRAVEN-STREET, STRAND, W.C.

Messrs. Peacock & Hadley nego- TIATE the TRANSFER of PRACTICES and PARTNERSHIPS also undertake ARBITRATIONS, INVESTIGATION and VALUATION of Practices and all other business connected with MEDICAL AGENCY and ACCOUNTANCY.

LOCUM TENENS and ASSISTANTS with satisfactory testimonials can be engaged at very short notice.

BOOKS kept, ACCOUNTS made out, and DEBTS promptly collected in Town and Country.

No charge made to Purchasers or for enquiries.

Telegraphic address: "Herbaria, London."

London, S.W.—A high-class, entirely non-dispensing private PRACTICE in a good residential district. Visiting fees from 3s 6d. to 10s. 6d., no midwifery under £5 5s. Large good house, well situated. Receipts last year were £330, but could be easily increased as the vendor has not been able to devote more than a few hours daily to the practice. Premium £500. A thorough introduction, as long as desired, will be given.

London Suburb, Essex.—A well- established steadily increasing PRACTICE, worth about £500 a year. Surgery fees, 1s and upwards; Visits, 2s. and 2s. 6d.; Midwifery, 21s. Convenient corner house, with stabling; rent £35. No horse necessary. Vendor selling on account of illness. Premium £600 and a good introduction given.

Yorkshire.—West Riding. Small Town. PRACTICE to be sold immediately. Receipts without midwifery or night-work, which the vendor has not undertaken, are about £500 a year, including an appointment of £40. Opposition slight. Good residence with stabling, rent £35. Serious accident cause of selling. Premium £300 cash.

Western County.—A small country PRACTICE capable of being greatly increased, situated in a beautiful district. The cash receipts are about £250 a year; good fees. Nearest resident opponent is four miles distant. Convenient house, with good garden, stabling, and orchard; rent £36. Vendor having succeeded to a larger practice is desirous of selling at once and will accept £250 from a prompt purchaser.

Convalescent and Nursing Home for sale. Situated within 12 miles of London. Established seven years. Yearly Receipts are over £1600, and the nett profits are about £400. Large good house with about four acres of ground, admirably suited for the purpose. Premium for good will, furniture, fixtures, &c., £1200. This would suit a doctor and his wife or two nurses.

South Coast.—A good-class, well- established NUCLEUS in a popular watering-place. Receipts last year £350, visiting fees 2s. 6d. to 10s. 6d., partly non-dispensing. Good house, well-situated, rent £70, suitable for resident patients. Premium £400.

Liverpool. — Cash Practice.— Receipts for 1897 were £450, under management of an Assistant, but were previously £800 a year. Visiting fees 2s. 6d. upwards; no Midwifery under 21s. In order to effect an immediate transfer a very small premium will be accepted and payable by easy instalments.

Cash Practice. — Old-established. Situated in a populous district of London. Receipts average about £700 a year, and if actively worked could be considerably increased. Rent of house £60. Premium, to include drugs and fittings, £600; and if desired three months' introduction will be given.

Wales.—In a beautiful Country District, an old-established PRACTICE, held by vendor twelve years. Receipts, including transferable club appointments, are about £850 per annum. Visiting fees 2s. 6d. to 10s. 6d.; midwifery 21s. upwards. Good house, garden, and stabling. Rent under £30. Premium £400, and a good introduction will be given. One horse required.

Partnership.—London, S.E. — Cash PRACTICE, established and held by present owner five years. The annual receipts are about £650, but with the aid of an active Partner could be increased. Surgery fees from 1s. upwards, midwifery from 15s. to 21s. The house could be shared by the partners, or another house obtained in the neighbourhood. Premium for half-share £450, or the whole practice could be bought if desired.

Locum Tenens promptly provided. Several reliable, well-qualified gentlemen have been selected and are available at short notice.

Apply to PEACOCK & HADLEY, 19, Craven-street, Strand, W.C.

MR. F. G. KEMBLE, F.S.A.A.
(INCORPORATED ACCOUNTANT).
8 GRAY'S-INN-PLACE, GRAY'S-INN, W.C.
MEDICAL ACCOUNTANCY.
INVESTIGATION of PRACTICES for PURCHASERS.
DEBTS COLLECTED, BOOKS POSTED and AUDITED.
PARTNERSHIP ACCOUNTS ADJUSTED, &c.

MEDICAL ACCOUNTANCY.
In connexion with the S. C. and Medical Association, Limited.
INVESTIGATION OF PRACTICES.
ARBITRATIONS.
DEBTS COLLECTED
BOOKS POSTED AND AUDITED.
PARTNERSHIP ACCOUNTS ADJUSTED.
Mr. MORRIS, F.S.A.A., 8, Lancaster-place, W.C.

To Purchasers of Practices.—Before concluding arrangements the books should be examined and the numerous necessary inquiries as to bonâ-fides made by a Medical Accountant specially versed in such matters. With twenty years' experience and special facilities for making such inquiries Mr. Percival Turner will be happy to act for purchasers at short notice. Terms and full particulars on application, 4, Adam-street, Strand, London, W.C.

MEDICAL TRANSFER AND PARTNERSHIP,
32, Ludgate-hill.
Messrs. Orridge & Co., Medical Transfer Agents, Referees, and Valuers, in offering their services to the Profession, have pleasure in referring to the fact that for ABOUT HALF A CENTURY the name of Mr. ORRIDGE has been known in the advertising columns of the leading medical journals, and that a very large proportion of the Medical Men throughout the kingdom have confided their interests in the adjustment of PARTNERSHIPS and TRANSFERS to their care.
Purchasers who will communicate (confidentially) the NATURE and EXTENT of their wishes regarding investment can be apprised of appropriate opportunities as they occur.
On occasions where ADVICE is required in forming a correct conclusion as to the worth or eligibility of a Practice, Messrs. ORRIDGE & Co. trust that their familiarity with the various contingencies that govern value will be found of considerable service to those by whom they are employed. N.B.—No charge is made to purchasers.

MEDICAL TRANSFER AGENCY (ESTAB. 1860),
168, EUSTON-ROAD, N.W.
Mr. Herbert Needes (son of the late Mrs. Needes, and for more than ten years associated with her in the management of this old Agency) is still carrying on the Business, and will be glad to negotiate the Transfer of PRACTICES and PARTNERSHIPS on the usual terms. No connexion with any other office.
LOCUM TENENS.—Reliable Gentlemen always on the Books.
ASSISTANTS provided free of charge to Principals.
1. WITHIN 10 MILES OF LONDON, in a rapidly increasing locality, a well-established PRACTICE, returning in cash during the past 12 months £350 and capable of considerable extension. Capital house, built for a doctor; rent on lease £50. Premium, with a good introduction, £350.
2. MIDLAND COUNTY.—£1500 a year. Very old-established PRACTICE in a pleasant Country Town with but limited opposition and averaging for the past twenty years from £1300 to £1500 per annum including appointments. An efficient partnership introduction will be given and a premium of £3000 required, which will include a freehold property valued at about £1000. Mr. Needes is personally acquainted with the Vendor.
3. EXCHANGE—A Gentleman practising in a good residential Suburb and earning about £300 a year, with very good scope for increase, is desirous of effecting its Exchange for a Connexion in the Western district of London, or in a Seaside place within reasonable distance.—All details received in confidence by Mr. Herbert Needes.
4. YORKS.—Owing to permanent incapacity an old-established PRACTICE situate in a pleasant district and held by the Vendor sixteen years offers for immediate Sale. Average receipts £500 per annum. Midwifery and night work declined. Capital scope for a man of energy, as the opposition is slight. Good residence and stabling; rent £35. Price to a prompt buyer only £350.
5. UNOPPOSED PRACTICE within 40 miles of London, situate in a pleasant country village, with a population of over 3000 within a mile and a half; nearest resident doctor 4½ miles. Union and club appointments. Convenient cottage residence with garden, rent £18. An energetic man might soon make a good income. Premium £160.
6. LONDON SUBURB, W.—Non-Dispensing NUCLEUS of an old-established connexion, returning about £250 per annum, with good scope for extension. Capital corner house, specially arranged for a doctor, rent on lease only £55. Vendor, who possesses private means and has held possession some years, will give an efficient introduction. Premium £250.
7. LONDON SUBURB.—Very old-established PRACTICE at present returning about £350 a year, including £50 from an appointment. The income was formerly much larger and it is believed an energetic incumbent could considerably extend the connexion. Commanding corner residence on lease. Premium, with an efficient introduction, £500.
8. LOCUM SHASON, 1898.—Mr. Herbert Needes has various Vacancies on his Staff for the above.—Apply personally where possible.
Telegrams: "CURANDUS," LONDON.

Wanted, Practice, Partnership, or suitable opening at home or abroad, by M.D. Lond., aged forty, unmarried. Capital to £6500. An investment of £300 to £800 per annum preferred, but one for a larger amount would receive consideration.—Address, No. 312, THE LANCET Office, 423, Strand, W.C.

A Medical Man of 21 years' standing, having sold his Practice in London in consequence of his wife's ill-health, is desirous of purchasing a small PRACTICE or Partnership with a view to succession, in a Hill District, with dry climate.—Address, No. 325, THE LANCET Office, 423, Strand, W.C.

Practice wanted, Town or Country. Unopposed Country Practice preferred, but any good offer of Practice or Partnership entertained. Income of £400 or more desired. —Address, No. 328, THE LANCET Office, 423, Strand, W.C.

Wanted, by M.B. and C.M., a good-class PRACTICE or PARTNERSHIP in a large country town. Advertiser is experienced in hospital and private practice. A preference given to the Midlands.—Address, No. 331, THE LANCET Office, 423, Strand, W.C.

Wanted, a Practice, with house, or Partnership with view to succession, in Newcastle-on-Tyne. Purchaser is experienced and has the necessary capital.—Address, No. 335, THE LANCET Office, 423, Strand, W.C.

Wanted, by M.B., B.C.Cantab., a good-class PRACTICE in large Country Town or Seaside within easy access of London. Good house and garden essential. Advertiser is married, experienced, and has ample capital.—Address, No. 259, THE LANCET Office, 423, Strand, W.C.

Required, an active, energetic Widower or Bachelor with some means to help to make a General Practice in one of the best parts of the West-end. House, furniture, and servant provided; all taxes paid Divide fees. Board and residence 2 guineas a week; no other expense. Suit a practitioner reading for a degree. One with connexions in Kensington or Bayswater preferred.—For an appointment address No. 307, THE LANCET Office, 423, Strand, W.C.

Partner wanted after a few months' Assistancy, in a good increasing general Practice of about £1400 a year, within two hours of London in a good residential town. One-third Share will be offered on usual terms. Partner must be experienced and a graduate preferred. Every investigation.—Address, No. 338, THE LANCET Office, 423, Strand, W.C.

For Sale, an unopposed Country PRACTICE, doing over £300 per annum. Appointments about £160. Price, to include drugs, £350.—For particulars, address No. 280, THE LANCET Office, 423, Strand, W.C.

Valuable Nucleus, Cheap.—In the rising neighbourhood of Highgate, London, N., a Branch SURGERY, with Furniture, for Disposal. Rent only on lease 10s. per week. A bachelor could live on the premises or have apartments near. A splendid opportunity for developing a Practice. Neglected by the present principal. The parent Practice can be sold by arrangement, vendor retiring.—Apply by letter, A. W. Knox & Company, 22, Eldon-street, Broad-street, City, London.

For Sale, Nucleus of Practice in Western Suburb of London. House furnished or unfurnished; no horse required. Small premium; satisfactory reason for disposal.—Apply, Livingston and Dickson, W.S., 54, Queen-street, Edinburgh.

North Wales.—A well-established COUNTRY PRACTICE is for immediate disposal owing to family reasons. Receipts last twelve months £360, but as population is increasing rapidly there is room for increase. Rent £35 and all other expenses very light. Premium £325.—Address, No. 322, THE LANCET Office, 423, Strand, W.C.

Practice for Disposal near Oxford-street. The owner being obliged to relinquish practice is willing to accept £110 for the goodwill. Receipts are now at the rate of £15 per month, but have been much greater. Fees at surgery 1s. and upwards; Visits 2s. 6d. and 3s. 6d.; Midwifery 21s., mostly ready-money. Expenses light.—Address, No. 321, THE LANCET Office, 423, Strand, W.C.

Death Vacancy.—Manchester.—An old-established PRACTICE in a good suburb. Receipts about £350 a year; formerly much more. Small house; rent £25. Fees at Surgery 1s. and upwards, medicine extra. An energetic man would soon increase the Practice. Premium £200.—Address, No. 423, THE LANCET Office, 423, Strand, W.C.

A General Practice of nearly £300 a year, thoroughly genuine and capable of considerable increase, is to be sold. Locality—a residential suburb in Essex. Premium £250 or reasonable offer—Address, No. 308, THE LANCET Office, 423, Strand, W.C.

For Sale.—A Nucleus in populous country district within twenty miles of London. Established seventeen months. Receipts for last twelve months £150, including £50 from transferable clubs. Premium £50, including fixtures and drugs.—Address, No. 330, THE LANCET Office, 423, Strand, W.C.

First-class Nucleus on borders of W. and N.W. districts for disposal at once. Vendor leaving London. Only moderate sum asked. Excellent corner house and garden. Exceptionable opportunity and suitable for young practitioner with some capital.—Haste, care of Wilson and Co., 26, Charles-street, Pall Mall, S.W.

A Bargain.—Dispensary Practice, together with Drugs and all necessary Furniture, for Sale. Well established. Thorough investigation offered. As incumbent wishes to leave at once the price asked is only £125. Only those intending prompt interview are requested to apply.—Address, No. 332, THE LANCET Office, 423, Strand, W.C.

West-end Practice for Disposal.—A general PRACTICE returning £700 to £800 a year for Sale, with partnership introduction. No appointments. Fees 1s. 6d. to 10s. 6d. Midwifery 25s. to 105s. Corner house in excellent position. Every investigation. Patients all classes, none very poor. Premium £1100.—Address, No. 337, THE LANCET Office, 423, Strand, W.C.

Qualified Assistant in busy London Practice. Abstainer preferred. £100, in-door, with increase to suitable man. Dispenser kept.—Address, No. 318, THE LANCET Office, 423, Strand, W.C.

Advertiser, 5 years' experience, desires ASSISTANTSHIP, with view to leading to something better, in a high or middle-class Practice in London or suburbs. Age about thirty; excellently received; well up and tactical. Interview and references. No agents.—Address, No. 315, THE LANCET Office, 423, Strand, W.C.

Advertiser—in practice 30 years, now recovered protracted influenza, married—wants ASSISTANCY (or Locum). Small house, good and progressive salary. Little night work. Or would take charge of Institution or School or accompany patient to Cape.—Address, No. 317, THE LANCET Office, 423, Strand, W.C.

An M.R.C.S. Eng., L.R.C.P. Lond., aged thirty-five, desires an ENGAGEMENT from Sept. 29th. Terms: Board and lodging or an equivalent for self, wife, and child, and £60 a year. Testimonials as required.—Address, No. 258, THE LANCET Office, 423, Strand, W.C.

The Medical Officer of Health for a large town can take a PUPIL. Must be qualified. Term six months.—Full particulars on application to No. 210, THE LANCET Office, 423, Strand, W.C.

Assistants and Medical Men failing to obtain what they require should apply to ADAMS & PARKES (B.A. Cantab.), Medical Agents, 8, John-street, Adelphi, Strand. Telegraphic address: "Interjoin, London." No charges are made for unsuccessful service.

Qualified Assistant wanted at the end of July in South-West Yorkshire, to Visit, Dispense and help with the Books. Salary £80. Indoor. Enclose photo. Izal, care of Messrs. Woolley, Sons, and Co., Limited, Victoria Bridge, Manchester.

North of England.—Wanted, an ASSISTANT, with a view to immediate Partnership. To work a Branch Practice. The present terms would be at the rate of £70 yearly and half profits above that sum. This place is in a pleasant and rapidly rising district and to a suitable gentleman an immediate chance of doing well is offered.—Address, No. 311, THE LANCET Office, 423, Strand, W.C.

To a thoroughly qualified Gentle- man who wishes a Holiday on the South Coast board and residence is offered in exchange for services, which are exceptionally light, during principal's absence. Good golf, bathing, &c. Time last fortnight in July.—Address, No. 310, THE LANCET Office, 423, Strand, W.C.

To Medical Men requiring relaxa- tion, &c.—A thoroughly experienced Practitioner, L.R.C.P. Lond., &c., having sold large practice and now reading for higher qualification, is willing to give a brother practitioner a certain amount of HELP in return for comfortable quarters for himself and wife. A man can thus be relieved from the monotony of never going out without losing patients, and can refresh his mind for work by visiting his friends, the theatre, &c. in comfort. The neighbourhood must be respectable and within easy reach of Strand. Advertiser is strictly temperate, reliable, and honourable, aged thirty-seven, of good appearance and address, and used to good-class practice.—Address, No. 336, THE LANCET Office, 423, Strand, W.C.

Locum Tenens now disengaged.—An experienced Locum Tenens can be despatched at short notice on application to Mr. Percival Turner, who has organised a large staff of trustworthy gentlemen personally known to him. Fees from £3 3s. a week. No office fee charged to Principal.—Apply, Percival Turner, 4, Adam-street, Adelphi, London, W.C.
Telegraphic address—Epeomian, London.

Locum Tenens supplied on short notice. Apply to G. B. Stocker, Esq., Secretary, Medical &c. Assn., Ld., 8, Lancaster-place, Strand, W.C. The rule of the Association is that no Assistant or Locum Tenens shall be recommended till direct inquiries have been made as to his antecedents. Names of the Committee of Management and Medical Advising Board and descriptive pamphlet on application.—Telegraphic Address: "Triform, London." Telephone 1854 Gerrard.

Locum Tenens, M.R.C.S. Eng., L.R.C.P. Lond., desires Engagements from the end of June. Good experience in both hospital and general work. Abstainer. Aged twenty-nine. Well received. Good references. Usual terms.—Address, W. W., care of Dr. Daglish, New Romney, Kent.

Locum Tenens.—A doubly qualified Gentleman is open to an Engagement as such for long or short period. Experienced. Highest testimonials. Last reference given.—Address, stating terms, to No. 304, THE LANCET Office, 423, Strand, W.C.

Locum Tenens.—An M.D., M.S., is open to engagements from June 25th. Experienced in town and country work. Good references. Usual terms.—Address, No. 324, THE LANCET Office, 423, Strand, W.C.

M.B., B.S., &c, desires an engage- ment as LOCUM TENENS. Accustomed to good-class practice. Exceptional references. Can ride and drive. Disengaged June 30th.—Dr. F., care of Dr. Dixon, Eccleshall.

Locum Tenens.—Practitioner resid- ing near Manchester-square, W., is open to take charge of Practice few afternoons or evenings weekly or week ends and for a term during summer months. Experienced in select and all kinds of practices.—Address, No. 327, THE LANCET Office, 423, Strand, W.C.

Holidays.—A Practitioner pleas- antly situated on Cornish coast wants a LOCUM TENENS for July. Very light duties in exchange for board. Good boating and fishing.—Address, No. 329, THE LANCET Office, 423, Strand, W.C.

Locum Tenens. — M.R.C.S. Eng., L.R.C.P. London., now disengaged till middle of July. Considerable experience in general practice and as locum tenens. Late hospital resident. Usual terms. Highest references.—Address, H. B. Long, 53, Haydon-park-road, Wimbledon, Surrey.

Wanted, a qualified Assistant, in- door, Country Practice; able to cycle; reliable in every way. Salary £100, with view to Partnership. Usual bond.—Address, with testimonials, qualifications, and photo, No. 305, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified Assistant, in- door, salary from £80 to £100, for good-class Country Practice. Work very light. Must be a gentleman accustomed to good society.—Address, enclosing testimonials and photo to be returned, No. 303, THE LANCET Office, 423, Strand, W.C.

Wanted, in Lancashire Practice, an ASSISTANT, experienced in General Practice, to reside at Branch worth £700 per annum with a view to early Partnership or Purchase. No clubs. Salary £150 per annum and free house.—Address, stating age, references, height, weight, and enclosing carte in all cases, No. 316, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified Assistant, out- door. Usual bond.—Apply, stating age, references, experience, qualification, salary required, and enclosing photo (to be returned), to R. W. Jones, M.B., Penrhiwceiber, S.O., Glamorgan.

Wanted, registered out-door Assist- ANT. Single. Usual bond. Lancashire. Salary £130, with rooms and attendance.—Address, No. 313, THE LANCET Office, 423, Strand, W.C.

Wanted, a fully-qualified in-door ASSISTANT in Camberwell. Salary £100 per annum.—Address, No. 320, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified Assistant, in- door. Salary £120. London, W.C. — Address, No. 319, THE LANCET Office, 423, Strand, W.C.

Wanted, a fully well-qualified out-door ASSISTANT, to Visit, Dispense, and attend Midwifery. Must be steady and not afraid of work. Usual bond. Salary £150, with house unfurnished. A desirable chance for good man. Enclose photo and recent testimonials.—Dr. Aikin, Denton, near Manchester.

Wanted, qualified Assistant, in a health resort. Duties light.—Testimonials and photo to No. 309, THE LANCET Office, 423, Strand, W.C.

Wanted, a qualified in-door Assistant in a Country Practice, to Visit, Dispense, and attend Midwifery. Must be a gentleman of good appearance and address and reliable in every way. Ride and drive.—Apply, with recent reference, to Dr. Shortridge, Honiton, Devon.

Wanted, by the end of the month, a qualified out-door ASSISTANT, to Visit, Dispense, and assist with the books. Usual bond.—Photo, references, and salary required to Dr. Dunn, Preston.

Wanted, qualified in-door Assistant, to Visit, Dispense, and attend Midwifery. No bookkeeping. Good salary to an experienced and reliable gentleman.—Apply, Dr. March, Bradford.

Wanted, an in-door Assistant, qualified. Total abstainer preferred. Salary, £100 per annum.—Address, No. 306, THE LANCET Office, 423, Strand, W.C.

Wanted, in a London Practice, Qualified ASSISTANT, to Visit, Dispense, and attend occasional Midwifery case. The duties are light. Salary, to commence, £85 to £90.—Address, No. 326, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified in-door Assistant, to Visit, Dispense, attend Midwifery, and assist in Bookkeeping.—Apply, A. B., care of Mr. Newsholme, Chemist, Sheffield.

Wanted, qualified Assistant in a Manufacturing Town in Lancashire, where Bookkeeper and Dispenser are kept. To commence at £100 a year, in-door.—Address, No. 333, THE LANCET Office, 423, Strand, W.C.

Wanted, an out-door Assistancy or Management of a Branch by a well-qualified, experienced man. Tall, aged thirty-four. Well received by patients and accustomed to all kinds of practice. Home Counties or London preferred. A good accoucheur and can ride and drive. Excellent recent references. Personal interview preferred.—Address, No. 334, THE LANCET Office, 423, Strand, W.C.

Wanted, a qualified out-door Assistant, single, to reside at a Branch in a pleasant Colliery Village. Usual bond. Salary £120 a year. Rooms and attendance. State age, experience, and references to No. 295, THE LANCET Office, 423, Strand, W.C.

Wanted, qualified out-door Assistant, single, for Colliery Practice in co. Durham. Usual bond. Salary £130 a year, with rooms and attendance.—Address, giving references, No. 222, THE LANCET Office, 423, Strand, W.C.

Wanted, by an experienced Medical Man (Scotch qual.), in- or out-door ASSISTANTSHIP in London, Liverpool, or Manchester, with time for Hospital.—Address, Dr. M., 24, Sydney-street, Fulham-road, S.W.

Wanted, an in-door qualified Assistant. Salary £100 increasing to £120; also Out-door. Good salary.—Apply, E., 8, King-street, Manchester.

Usual Bond.—Richardson's Medical ASSISTANT'S AGREEMENT for SERVICES contains all the conditions of the usual bond as well as several other useful and necessary clauses. Stamped copies 11s. each. Entered at the Stationers' Hall and can only be obtained from The Liverpool Medical Agency, Richardson Bros. & Co., 11, West Albert-road, Ullet-road. Locum Tenens and Assistants supplied free of charge to Principals.—Telegrams, Diploma, Liverpool.

Wanted, a Dispenser and Bookkeeper. One accustomed to the Surgery work of a country Practice preferred.—State age, previous experience, and salary required, to No. 314, THE LANCET Office, 423, Strand, W.C.

Dispenser and Bookkeeper, situation wanted as; six years' experience; age twenty-one; knowledge of Radiography. Good references.—Harper, Newbury Park, Ledbury.

Wanted, Dispenser, out-door, 11 to 1.30 A.M., 7 to 9.30 P.M., 12 to 2 Sundays. 15s. a week.—Address, No. 339, THE LANCET Office, 423, Strand, W.C.

Tennis.—Splendid £4 4s. Outfit, consisting of pair 25s. self-supporting polished Posts, enamelled iron ground plates, ratchet, &c., complete, 14s. 6d.; full-sized waterproof Net, bound top, 7s. 6d.; twelve best covered unused Balls, 5s. 6d.; four splendid 10s. 6d. beautifully strung Racquets, various weights, 5s. 6d. each.
All new condition. Lot for 39s. 6d.; or divide. Approval.—Box 1758, Gilyard's Library, Bradford.



CULLETON'S HERALDIC OFFICE,
25, Cranbourn-st., St. Martin's-lane, London, W.C.
(Established Half a Century.)
For SEARCHES and HERALDIC INFORMATION.

The **HERALDIC & GENEALOGICAL LIBRARY** contains over a Thousand Volumes of English and Foreign Printed Works and MSS., being Indexes of Armorial Bearings and References to Family Descents. Also Indexes and References to Pedigrees and Arms in many of the Public Archives.
PEDIGREES TRACED, Genealogical Searches made, and existing Pedigrees corrected. Pedigrees drawn up in Tabulated Form from Family Papers and Engrossed on Parchment.
SEARCHES MADE FOR ARMS, CRESTS, AND MOTTOES. ARMORIAL BEARINGS EXAMINED AND VERIFIED.
ARMS OF HUSBAND AND WIFE BLENDED.
LIVERY INFORMATION: Colours for Servants' Liveries; what Buttons to be used according to Heraldic rules.
SKETCHES and PAINTINGS of ARMS by FIRST-CLASS ARTISTS.
HATCHMENTS CORRECTLY PAINTED. Arms painted on Silk, Banners for Sheriffs, also for all other Official purposes.
N.B.—Armorial Bearings incorrectly depicted bring ridicule upon the bearer.

ILLUMINATED ADDRESSES
Painted and Engrossed. Designs for Official Seals for Boroughs, Corporations, Public Companies, &c.

Livery Button-dies, engraved with crest, 42s. the pair. Livery Buttons, plated or gilt. Harness crests.

BRASS DOOR PLATES
supplied ready for fixing. A Brass Plate engraved with name only on mahogany block, complete, 10s. 6d.; with name and profession, 17s. 6d. MEMORIAL BRASSES. Stencil Plates.

Medical Account Forms (copy of own handwriting), 16s. for 500.

Stationery.—Culleton's Guinea Box—contains half ream of BEST QUALITY paper and SQUARE ENVELOPES, all stamped IN COLOUR with Crest, Monogram, or Address. No charge for engraving steel die.

Seal Engraving.—Crests and Monograms engraved on Seals, Rings, and on Steel Dies for stamping notepaper.

Gold Seals, from £1 1s. to £6 6s. A large collection of Genuine old Gold Seals.

Signet Rings, all 18-carat. Large variety to select from:—£2 2s. to £10 10s. Send size of finger by fitting piece of wire. Rings made to order at same prices.

General Engraving.—Names and Inscriptions engraved on presentation cups, medals, watches, ivory, &c. Crests engraved on spoons and family plate, 6s. per dozen.

Book Plates (ex libris) designed and engraved in ancient and modern styles.

Visiting Cards.—Fifty, best quality, 2s. 8d., Ladies' 3s., including the engraving of copper plate. Wedding cards, all the latest styles. Memorial cards, Return Thanks, Invitations.

Embossing Press, for Stamping Crests, &c., on own paper, 10s. 6d. Die extra.

T. CULLETON, Heraldic Stationer and Engraver, 25, Cranbourn-street, St. Martin's-lane, London, W.C. Five minutes from Piccadilly and Charing-cross. (P.O. orders payable at Bedford-street, W.C.)

CLOTH CASES FOR BINDING
THE HALF-YEARLY VOLUMES OF
"THE LANCET"
Can be obtained of any Bookseller, in town or country,
Or from THE LANCET Office.
Price 2s. each; by post 2s. 3d.
Volumes for the second half of the year 1897 can also be had, bound in cloth, gilt lettered, price 18s.
Office: 423, Strand, W.C.; and 1 & 2, Bedford-street, adjoining.

Established **1839.**

THE

PERFECTION OF SCOTCH WHISKEY.

For a long series of years we have devoted much attention to the selection of the finest of Scotch Whiskies and to their thorough maturing, as these, when skilfully blended, produce a **Liqueur** which is at once

PURE, DELICATE, and HEALTHFUL.

In the knowledge of its perfect purity, we with unfaltering confidence recommend it to all who are in search of a pleasing and wholesome stimulant.

THE LANCET, after analysing our whiskey, said:—

"It is excellent in every respect, smooth in taste and delicate in flavour."

Price FORTY-ONE SHILLINGS per DOZEN,

Inclusive of Bottles and Case, and Carriage paid to any Railway Station in England in quantities of Two Dozen.

A SAMPLE WILL BE SENT PER POST ON RECEIPT OF SIX STAMPS.

DOUGLAS & MASON,

DISTILLERS & WINE MERCHANTS, EDINBURGH.

THERE are two **distinct Springs**; the LEVICO **Mild**, and one much richer, both in Arsenious Acid and in Iron, obtained from the well, the LEVICO **Strong.** These waters are bottled without dilution as they issue from the two springs, and do not undergo any process whatever.

USES.

LEVICO Water, from its unique arsenio-ferric composition, is indicated in all cases where the administration of Arsenic in combination with Iron is required; that is to say, in all diseases which owe their origin to the unhealthy state of the Blood, **Scrofula, Anæmia, Chlorosis, Catamenia, Chorea, Phthisis, Syphilis, Chronic Skin Diseases, Neuralgia, Hysteria, Ague, and Malarial Fevers, &c.**

Price **1/8** *per Bottle.*

LEVICO. **The Best and Richest Arsenio-Ferric Natural Water.** From the South of Tyrol, Austria.

Children and Convalescents, as well as the aged, are able to take it without the occurrence of any unpleasant symptoms, so that it is peculiarly well suited for **chronic cases.**

LEVICO WATER, Mild and Strong, is sold in Great Britain and the Colonies with an English Label, giving the full address of the Sole Consignees—

A. & M. ZIMMERMANN, 9 & 10, ST. MARY-AT-HILL, LONDON, E.C.

Kindly note that any other Label, not in English and without this address, is not permitted to be sold in this country or its Colonies.

FREE SAMPLES TO THE MEDICAL PROFESSION ON APPLICATION.

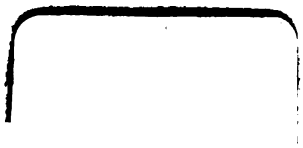
PRINTED and PUBLISHED by the REGISTERED PROPRIETORS, at No. 423, Strand, and Nos 1 and 2, Bedford-street, adjoining, in the Parish of St. Martin-in-the-Fields, Westminster, in the County of London, and sold by all Booksellers and Newsvendors in Great Britain and Ireland and the Colonies.—Saturday, June 25th, 1898.

B.P.L. Bindery,
NOV 28 1898

[redacted]

B.P.L. Bindery,
NOV 39 1898





B.P.L. Bindery,
NOV 30 1898

3 2044 103 079 430